DAIKIN McQUAY™

Pathfinder™ Air-Cooled Chillers

Catalog 600-5

Model AWS • Standard, High, & Premium Efficiencies • Includes models withVFD

150 to 530 tons • 550 to 1860 kW • R-134a • 60Hz

Engineered for flexibility and performance™

Contents

Hazard Identification

⚠ DANGER

Dangers indicate a hazardous situation which will result in death or serious injury if not avoided.

⚠ WARNING

Warnings indicate potentially hazardous situations, which can result in property damage, severe personal injury, or death if not avoided.

⚠ CAUTION

Cautions indicate potentially hazardous situations, which can result in personal injury or equipment damage if not avoided.

Modbus BACnet International ETL LISTED ETL LISTED LONMARK 3.4

This catalog covers all 60Hz Pathfinder models. For 50 Hz models, see Catalog 606, available at www.mcquay.com.

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Daikin McQuay Pathfinder Chillers

The Daikin McQuay Pathfinder™ air-cooled chillers continue McQuay's legacy of high quality, high efficiency, advanced technology and quiet operation. Pathfinder chillers utilize McQuay's single screw compressor design with a reputation for quiet operation and have a new ultra-quiet fan, making them “neighborhood friendly”. Superior control is provided by the innovative McQuay MicroTech® III family of controllers. They can easily interface with your building's automation system using the optional McQuay Open Choice feature, which uses factory- (or field-) installed LONWORKS, BACnet or Modbus communication modules. These chillers are furnished with solid state starters as standard and have wye-delta starters available as a lower cost option. Pathfinder chillers continue Pathfinder chillers provide the best overall value in air-cooled screw chillers available today!

Customer Benefits

Superior Efficiency

- Standard, High and Premium efficiency models available
- Optional compressor VFD for optimized efficiency
- Electronic expansion valve control
- True counter flow evaporator design
- High efficiency lanced condenser fins
- Potential contribution to LEED® Points

Quiet Operation

- Single-rotor compressor design
- New patented ultra-quiet, low-speed fans
- Virtually vibration-free operation

Superior Controls Logic

- Easy to read 4-line by 20-character LCD display
- Supports standard open protocols: LONTALK, BACnet or Modbus
- Superior reliability under extreme operating conditions

Outstanding Reliability

- Multiple compressors with independent circuits
- Rugged compressor design using advanced composite compressor gaterotor material
- Proactive controls logic
- Full factory-run-testing to optimize trouble-free operation
- Factory authorized supervision of startup

Options

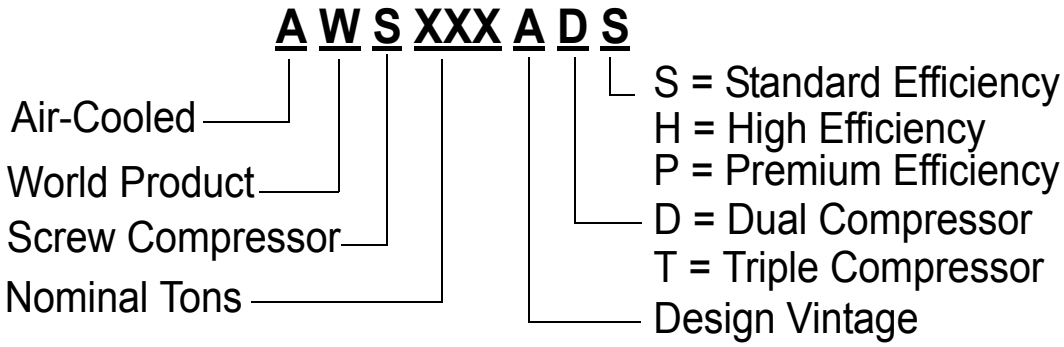
Efficiency options available with Pathfinder chillers:

- Standard Efficiency models are designed to meet ASHRAE 90.1 efficiency standard and provide the lowest dollar per ton price. Ratings begin on page 18.
- High and Premium Efficiency models utilize an economizer for improved efficiency. Ratings begin on page 18.
- Variable Frequency Drive (VFD) for each compressor to provide the most efficient compressor speed matched to cooling load and ambient air temperature.
- High Ambient Option: A factory-installed option that allows operation in high ambient temperature locations having operating temperatures above 100°F up to 125°F (38°C to 51°C).

Other Options:

- Single-point power connections
- Choice of Solid State or Wye-Delta starter
- Double evaporator insulation for ice-making systems
- Remote User Interface
- RapidRestore™ (available on models with VFD only)

Pathfinder Chiller Nomenclature



Summary

Three major benefits separate the Pathfinder chiller from most air-cooled screw chillers:

- Low operating costs with our high and premium efficiency designs
- Very quiet operation allowing for flexible location
- Superior control with the MicroTech III family of controls

Low Operating Costs and High Efficiency Operation

Pathfinder chillers use the McQuay single rotor screw compressor design. Composite gate rotors intermesh with a single rotor and are inherently quieter and more efficient than the older design dual rotor compressors with multiple steel rotors. Large condenser coil surface areas are employed for maximum heat transfer and lower discharge pressures. Advanced technology condenser fans are used to move large volumes of air across the heat exchangers. A single-pass, pure counter-flow, low refrigerant pressure drop, direct-expansion evaporator provides superior performance. Standard Efficiency units all meet ASHRAE 90.1 Standards. High and Premium Efficiency units offer even lower energy costs.

Quiet Operation - Neighborhood Friendly

One of the features that set the Pathfinder chillers apart from other screw chillers is the low operating sound levels at any load point. The quiet operation is the result of single-screw compressor design. The latest McQuay compressor design continues to use a single main rotor with two adjacent rotating composite gaterotors making gas flow velocities and subsequent noise levels among the lowest available. This compressor design is unique and proven by years of excellent service.

Fans are the other sound generator on air-cooled chillers. McQuay utilizes a unique new fan that features a one-piece, molded design and low speed operation. The fan moves large volumes of air at exceptionally low sound levels and is immune to rust, broken rivets and other ills possible with conventional fans. The advanced composite material has been tested to withstand UV light, heat, and humidity corrosion in some of the most severe climates in the world.

Pathfinder chillers are among the quietest air-cooled screw chiller on the market today. Use McQuay's Acoustic Analyzer program to see how this attribute can benefit your project. The chiller sound data is published in this catalog beginning on page 174.

MicroTech III Controls

The MicroTech III unit controller provides an easy to use control environment. The control logic is designed to provide maximum efficiency, to continue operation in unusual operating conditions and to provide a history of unit operation.

Perhaps the greatest control benefit is McQuay's Open Choices™ feature that allows easy interfacing with your BAS of choice using LONWORKS, BACnet, or Modbus communications without costly gateways.

Environmentally Responsible Refrigerant

All Daikin McQuay Pathfinder chillers use R-134a, which has no ozone depletion potential and no phase-out date; a refrigerant for today and the future.

Contributing to LEED® Points

The Pathfinder chiller leads the industry in energy efficiency and responsible refrigerant management. For building owners who wish to pursue Leadership in Energy and Environmental Design (LEED) Green Building Certification, the performance of the Pathfinder chiller can contribute to the following LEED points:

- Energy and Atmosphere Credit 1, Opmtimize Energy Efficiency (1-19 possible points)
- Energy and Atmosphere Credit 4, Enhanced Refrigerant Management (2 points)

Proven Reliability

Full factory testing of every unit with water hookup helps provide a trouble-free start-up. Extensive quality control checks during testing means that each equipment protection and operating control is properly adjusted and operates correctly before it leaves the factory. Factory-installed options such as single point power connections and low-ambient control may minimize field expenses and startup labor.

Excellent Serviceability

Field serviceability has not been sacrificed to meet design performance objectives. Compressors are equipped with combination discharge check and shutoff valves. Suction service valves are available as an option. Compressors and serviceable components such as filter-driers are located on the outside edges of the base allowing ready access.The “W” shaped coil provides excellent headroom under the unit for inspection and service.The MicroTech III controller gives detailed information on the causes of an alarm or fault.

Compressor

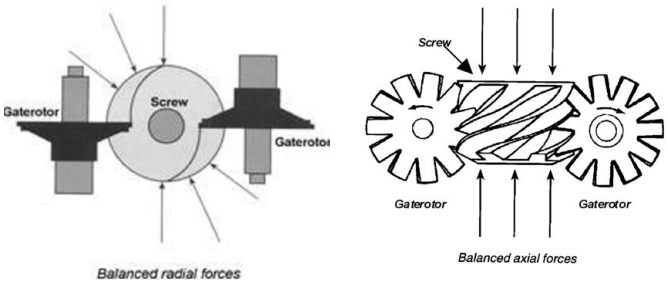
A zero clearance fit between the two gaterotors and main screw rotor virtually eliminates leakage between the high and low-pressure sides during compression. Special gaterotor material made from an advanced composite, temperature stable material makes a zero clearance design possible with no detrimental metal-to-metal contact.

The Pathfinder air cooled chiller is equipped with the most advanced means of refrigerant flow control available. An electronic expansion valve coupled with the MicroTech III controller's logic provides excellent operating efficiencies at both full and part load operation.

Modulated stepless unloading matches compressor capacity exactly to the cooling load. The rugged design of the single-screw compressor allows it to be tolerant of liquid slugging. The Pathfinder chiller will start and operate under conditions that would often damage other compressors.

Very low loading enhances the bearing and compressor reliability. Due to symmetrical compression taking place on both sides of the main screw rotor, balanced forces result in the elimination of the radial force loads inherent in twin-screw compressors.

Figure 1: Screw Compressor - balanced forces



Evaporator

Pathfinder units are equipped with a direct expansion evaporator with copper tubes rolled into steel tubesheets. The evaporators are single-pass on both the refrigerant and water sides for pure counter-flow heat exchange and low refrigerant pressure drop. Both attributes contribute to the heat exchanger effectiveness and total unit's outstanding efficiency.

Condenser

The McQuay designed “W”-shaped, 16 fin-per-inch, condenser coil provides the maximum condenser heat transfer per foot of unit length. This translates to a smaller footprint, fewer structural elements and smaller pad size. The fins are slotted to provide even air distribution across and through the coil. Various fin materials and coatings are available for extreme conditions.

115 Volt Convenience Outlet

A 10.0 amp, 115-volt convenience outlet mounted inside the control panel is standard on all 60-Hz units.

Solid State Starters (Standard)

Having solid-state starters as standard on the Pathfinder units takes a giant step forward in compressor protection and sets a standard for the rest of the industry. Our solid-state starters include self-diagnostics, metering and display and include ground fault and phase/voltage protection.

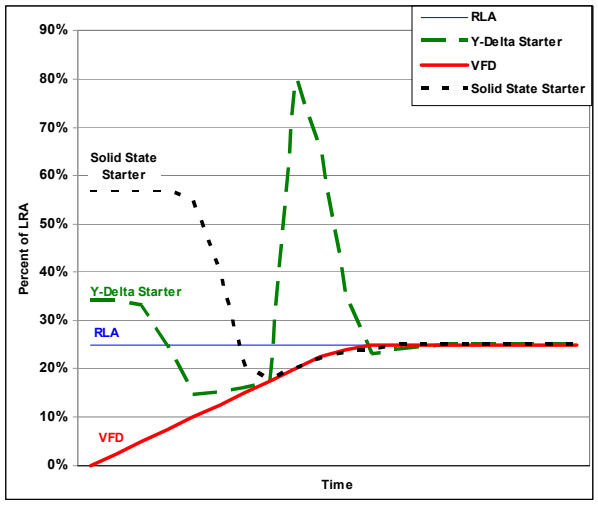
A primary benefit is that the compressors are started slowly, requiring from three to seven seconds to go from a stop to full-speed condition. The smooth, stepless acceleration and controlled slow deceleration, reduces mechanical and electrical stress for even greater compressor/motor life.If liquid refrigerant is present at the compressor, the liquid can usually be pumped out without damage to the compressor. The controlled deceleration reduces shut down stress. Solid state starters offer additional motor protection features and over twenty LED operating and fault messages.

Variable Frequency Drive (VFD) (Option)

The variable frequency drive option is a technology that has been used for decades to control motor speed on a wide variety of motor-drive applications. When applied to screw compressor motors, significant gains in compressor part load efficiency can be realized by reducing motor speed in conjunction with reduced cooling requirements.

The improvement in efficiency and reduction of annual energy costs are maximized when there are long periods of part-load operation and lower ambient temperature conditions. Based on AHRI Standard 550/590-2003, chillers will typically run 99% of the time at part load conditions so energy savings will be seen in most applications.

Figure 2: Comparison of inrush amps during start-up



VFD's also provide benefits on the electrical characteristics of the unit. VFD's provide lower starting current compared to typical starters such that the inrush current does not exceed the full load operating current. This feature can help to reduce electrical installation costs, especially if the chiller is powered from emergency generators. Lower inrush current requirements typically allow the owner to downsize the capacity of the generator.

Pathfinder chillers with the VFD option provide a high power factor rating without the use of expensive capacitors. The power factor for high and premium efficiency Pathfinder VFD models is 0.94-0.95 depending on the model size and voltage.

Power Factor Correction Capacitors (Option)

Many local utility companies require high power factor systems to improve power utilization. McQuay is the only major manufacturer to offer Power Factor Correction Capacitors as a standard option on air-cooled screw chillers. These capacitors, when applied to non-vfd units, will improve the power factor to a minimum of 95%. Pathfinder models with VFD naturally feature power factors in this range. The PFCC option provides a great benefit compared to field installed capacitors, and will carry ETL certification and be fully backed by manufacturer's warranty.

RapidRestore™ (Option)

Data center and other critical installations often require a rapid restart after a power interruption. McQuay's RapidRestore option provides a 30-second restart capability (available only on units with compressor VFDs). The power interruption must be longer than one second and the Start-to-Start timer timed out.

Wye-Delta Reduced-Voltage Starter (Option)

McQuay also offers the option of wye-delta reduced voltage instead of standard solid state starters. In the "Y" configuration, each set of phase windings is brought together at a common point reducing the current and torque to 33% of full in-rush. Three contactors and a timer are used to switch the six leads brought out of the motor from the Y-connection to the Delta configuration in a two-step starting process.

These starters are useful in reducing the motor's starting inrush and negative effect on the power supply, however they have some disadvantages. They still cause mechanical shock to the compressor between steps, have high contactor maintenance and do not control deceleration.

D-Net™ Performance Service Capable

All Pathfinder Chillers shipped within North America are D-Net Performance Service capable. D-Net, based upon Daikin customer support technology, provides McQuay a direct electronic connection to your Pathfinder chiller, giving McQuay Factory Service the ability to provide an enhanced level of support to keep your system running efficiently and reliably.

For more information about D-Net Performance Service, contact your McQuay Factory Service office.

Note: For complete installation information, see IM 997 (60Hz) or IM 1002 (50Hz), available on www.mcquay.com.

Table 1: Operating Limits

Maximum standby ambient temperature	130°F (55°C)
Maximum operating ambient temperature	100°F (38°C)
with optional high ambient package (see detailed information on page 3	125°F (52°C)
Minimum operating ambient temperature (standard control)	35°F (2°C)
Minimum operating ambient temperature (with optional low-ambient control)	0°F (-18°C)
Leaving chilled water temperature	40°F to 60°F (4.4°C to 15.6°C)
Leaving chilled fluid temperatures (with anti-freeze) - Unloading is not permitted with fluid leaving temperatures below 30°F (-1°C).	20°F to 60°F (-7°C to 16°C)
Operating chilled water delta-T range	6 to 18°F (-14 to -8°C)
Maximum evaporator operating inlet fluid temperature	76°F (24°C)
Maximum evaporator non-operating inlet fluid temperature	100°F (38°C)

Installation and Start-Up

Installation and maintenance are to be performed only by qualified personnel who are familiar with local codes and regulations, and experienced with this type of equipment.

⚠ WARNING

Sharp edges and coil surfaces are a potential injury hazard. Avoid contact with them.

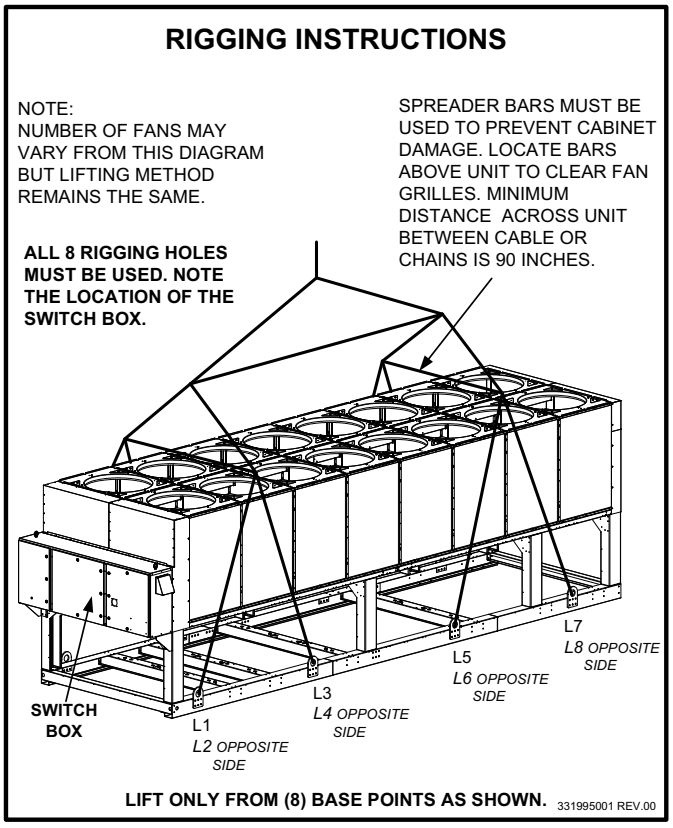
Start-up by McQuay Factory Service is included on all Pathfinder units sold for installation within the U.S. and Canada and must be performed by them to initiate the standard Limited Product Warranty. Start-up by any party other than McQuay Factory Service or a McQuay Authorized Service Representative will void the Limited Product Warranty. Two-week prior notification of start-up is required. The contractor should obtain a copy of the Start-up Scheduled Request Form from the sales representative or from the nearest McQuay Factory Service office.

Handling

Avoid rough handling shock due to impact or dropping the unit. Do not push or pull the unit. Never allow any part of the unit to fall during unloading or moving, as this can result in serious damage.

To lift the unit, lifting tabs with 3" (76 mm) diameter holes are provided on the base of the unit. All lifting holes must be used when lifting the unit. Spreader bars and cables should be arranged to prevent damage to the condenser coils or unit cabinet (see Figure 3).

Figure 3: Required Lifting Method



NOTES:

1. Unit with 8 lifting points illustrated above; the number of condenser sections, fans, and lifting points can vary from this diagram. See lifting/mounting drawings beginning on page page 137 to identfy the number of lifting points for a specific unit.
2. All rigging points must be used. See weights at lifting points beginning on page 133 for each specific size unit.
3. Crosswise and lengthwise spreader bars must be used to avoid damage to unit.

Figure 4: Refrigerant Diagram - All Standard Efficiency Models (one circuit shown of two or three possible circuits)

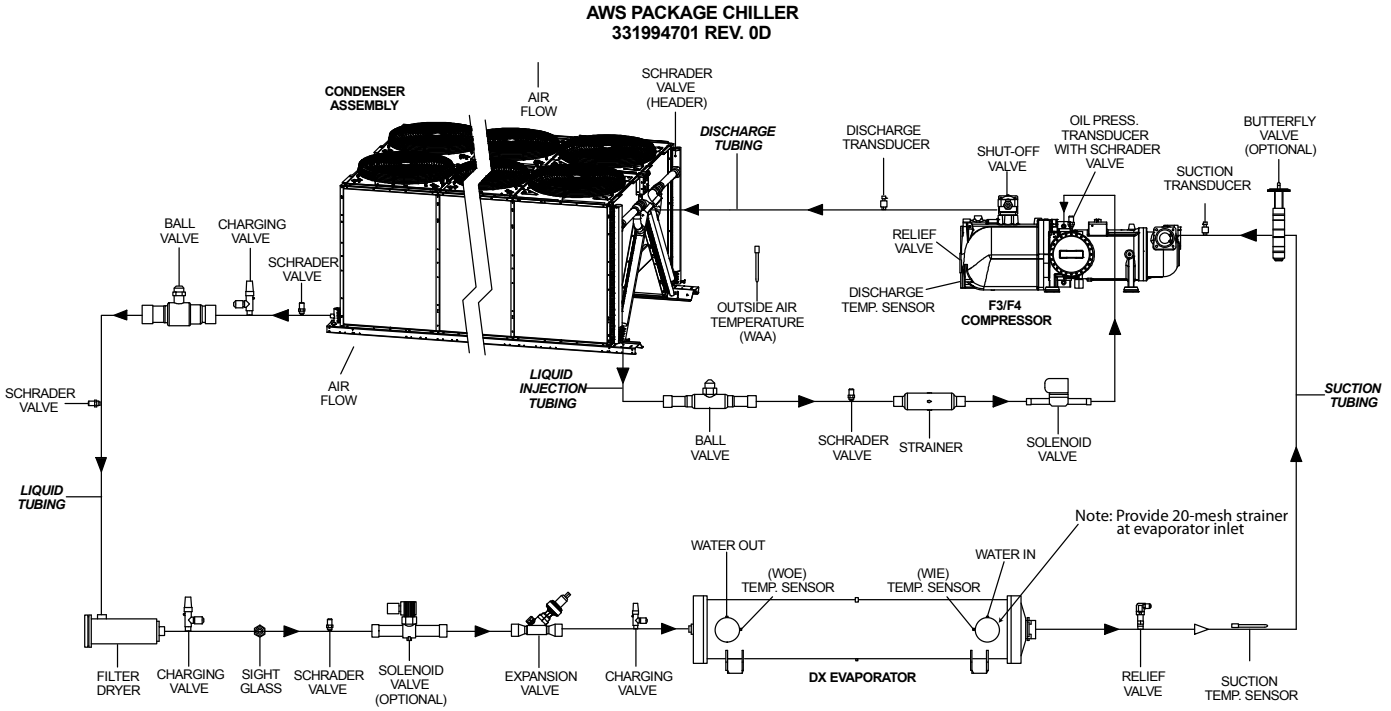
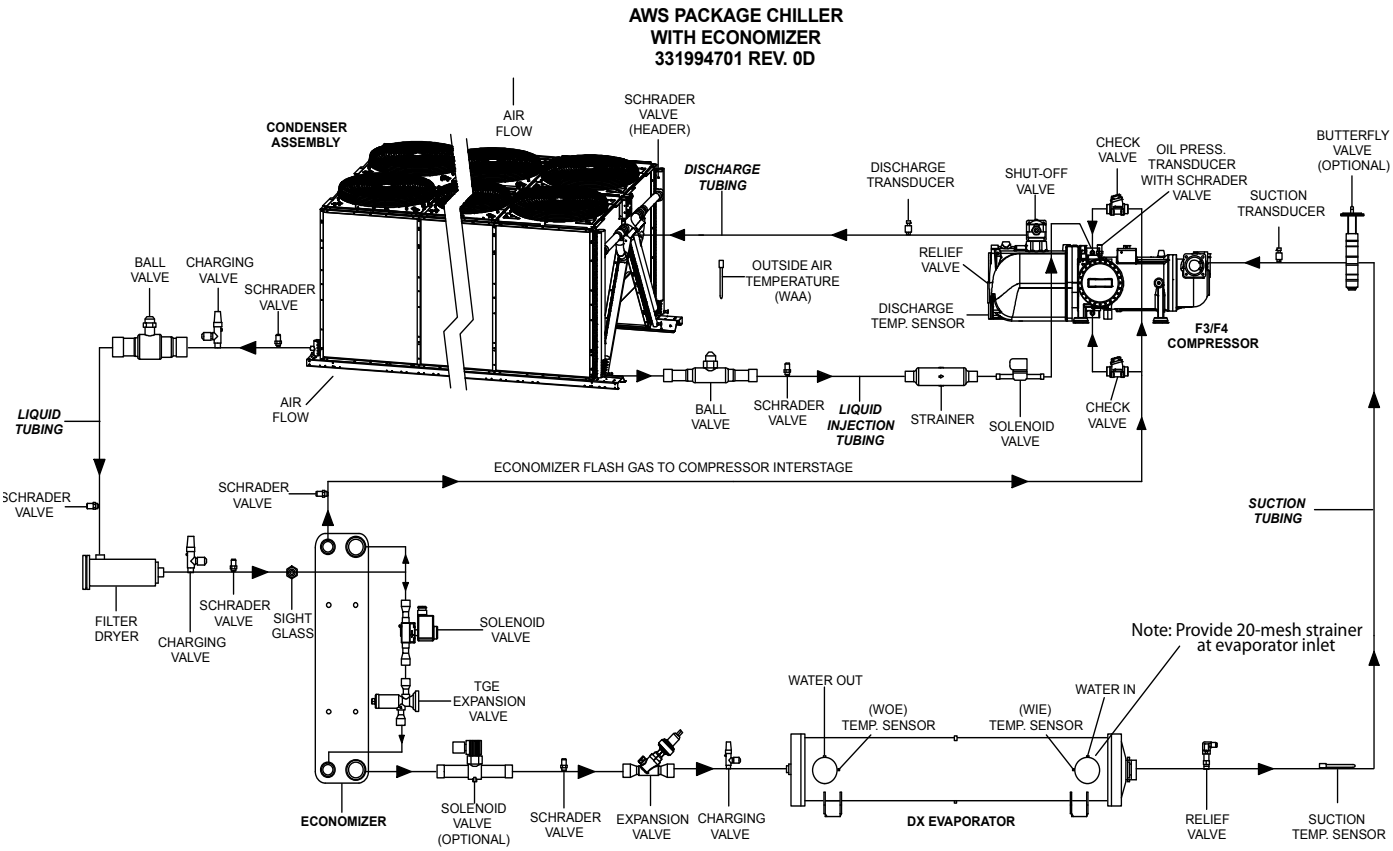


Figure 5: Refrigerant Diagram-All High and PremiumEfficiency Models (one circuit shown of two - three possible circuits)



Unit Placement

For roof-mounted applications, the unit must be installed on a steel channel or I-beam frame to support the unit above the roof. Vibration isolators are recommended for all roof-mounted installations or wherever vibration transmission is a consideration. Isolator loads and kit numbers can be found in the Pathfinder Installation Manual on www.mcquay.com.

For ground level applications, the unit must be installed on a substantial base that will not settle. McQuay recommends a one-piece concrete slab with footings extended below the frost line, and the installation engineer should determine its necessity. The foundation must be level within 13 mm (1/2 inch) over its length and width and strong enough to support the unit's operating weight as listed in the Physical Data tables. The addition of neoprene waffle pads (supplied by customer) under the frame allows water to drain from inside the frame, which can act as a dam.

On ground level applications, protection against vandalism is recommended; either by the optional factory-installed lower wire mesh guards or louvers, or by a field installed screening fence. Note that the fence must allow free flow of air to the condenser coil for proper unit operation. Upper wire mesh coil guards are standard.

Ice Mode

Optional double evaporator insulation is recommended for ice mode operation. The standard controller software will require “ice” setpoint changes and a digital signal into the controller is required to change to the ice mode and back to standard cooling. See the Field Wiring Diagram on page 183 for the connection location. In ice mode, the unit will operate at full load until the shutoff temperature setpoint is reached.

Clearances

Air-cooled units require free air flow to and from the condenser coils. Install units per noted installation clearances below and requirements outlined in IM 997 (IM 1002 for 50Hz models) available on www.mcquay.com. There must be **no obstructions** above the fan discharge that can cause air recirculation. Air restriction and recirculation can cause high-pressure trips and will reduce capacity, efficiency, and compressor life. Do not install ductwork on condenser fans.

Structures, other equipment, fencing, plants, and trees must be considered for air flow interference. Ventilators and any sources of contaminated or heated discharges gases and air will affect system performance. Pit type installation must meet McQuay requirements as outlined on page 12.

Service Access

Compressors, filter-driers, and manual liquid line shutoff valves are accessible on each side or end of the unit. The evaporator heater is located on the barrel.

The control panels are located on the end of the chiller. The left-hand control box contains the unit and circuit microprocessors as well as transformers, fuses and terminal. The right-hand panel contains a circuit breaker. A minimum of four feet of clearance is required in front of the panels. The side clearance required for airflow provides sufficient service clearance.

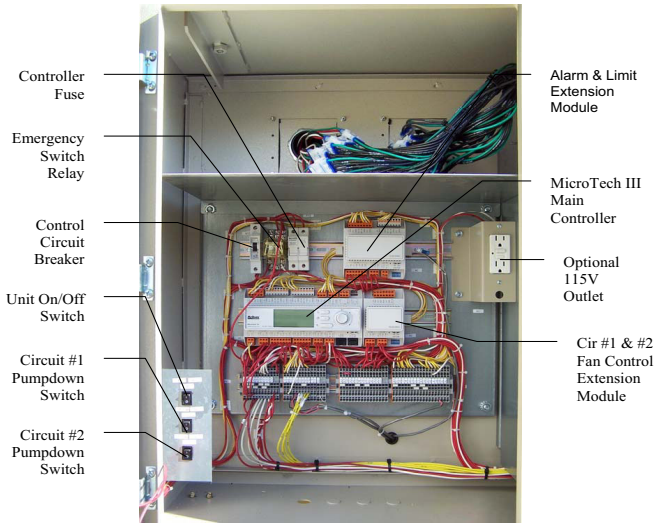
On all Pathfinder units, the condenser fans and motors can be removed from the top of the unit. The complete fan/motor assembly can be removed for service. The fan blade must be removed for access to wiring terminals at the top of the motor.

⚠ DANGER

Disconnect, lockout and tag all power to the unit before servicing condenser fan motors or compressors. Failure to do so can cause bodily injury or death.

Do not block access to the sides or ends of the unit with piping or conduit. These areas must be open for service access. Do not block access to the control panels with field-mounted disconnect switches.

Figure 6: Control Panel Component Location



NOTES:
1. The Emergency Switch Relay de-energizes circuit #1 and #2 control power when activated, causing an immediate compressor and fan shutdown. The red emergency button switch is located on the bottom front of the control panel door.
2. The control power transformer is located in the power panel adjacent to the control panel.
3. Additional extension (aka extension) modules are located elsewhere on the chiller.

Clearance Requirements

Notes:

1 Minimum side clearance between two units is 12 feet (3.7 meters).

2 Unit must not be installed in a pit or enclosure that is deeper or taller than the height of the unit unless extra clearance is provided per note 4.

3 Minimum clearance on each side is 8 feet (2.4 meters) when installed in a pit no deeper than the unit height.

4 Minimum side clearance to a side wall or building taller than the unit height is 6 feet (1.8 meters), provided no

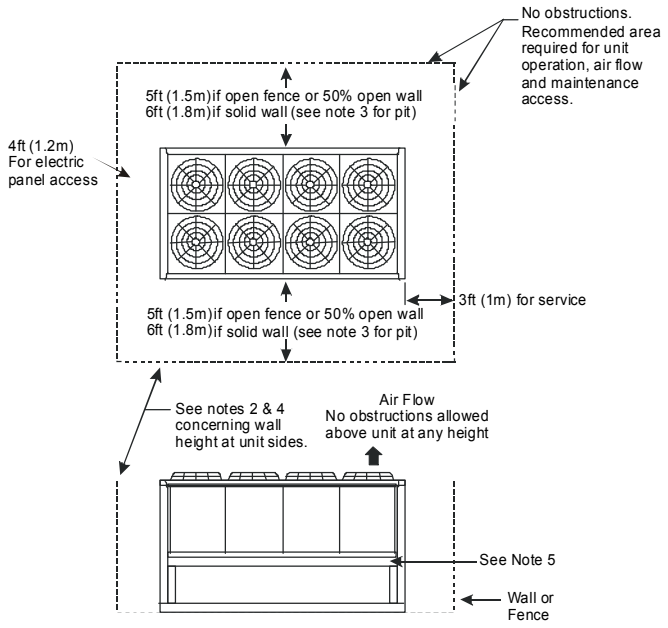
solid wall above 6 feet (1.8 meters) is closer than 12 feet (3.7 meters) to the opposite side of the unit.

5 Do not mount electrical conduits where they can block service access to compressor controls, refrigerant driers or valves.

6 There must be no obstruction of the fan discharge.

7 Field installed switches must not interfere with service access or airflow.

Figure 7: Clearance Requirements



Restricted Air Flow

General

The clearances required for design operation of Pathfinder air-cooled chillers are described in the previous section. Occasionally, these clearances cannot be maintained due to site restrictions such as units being too close together or a fence or wall restricting airflow, or both. Pathfinder chillers have several features that may help mitigate the penalties attributable to restricted airflow.

"The condenser section is "W" shaped, allowing inlet air for these coils to come in from both sides and the bottom. All the coils in one "V" section serve one compressor. Each compressor has its own independent refrigerant circuit.

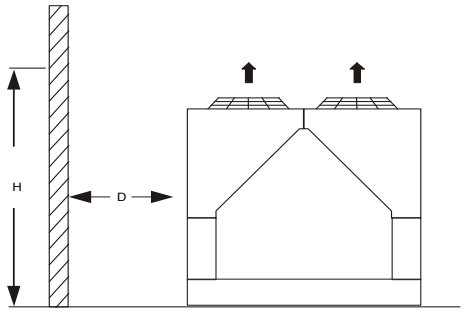
"The MicroTech III control is proactive in response to "off-design conditions". In the case of single or compounded influences restricting airflow to the unit, the microprocessor will act to keep the unit running (at reduced capacity), rather than allowing a shut-off on high discharge pressure.

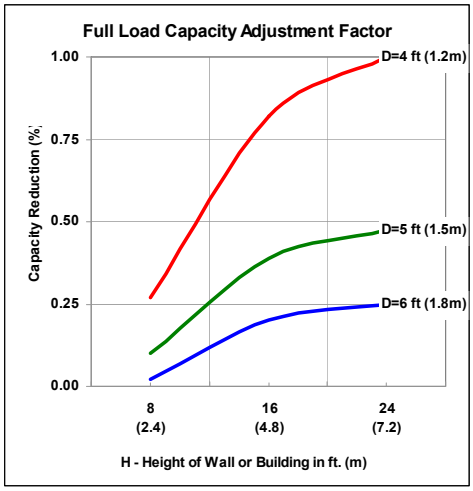
Case 1: Building or Wall on One Side of One Unit

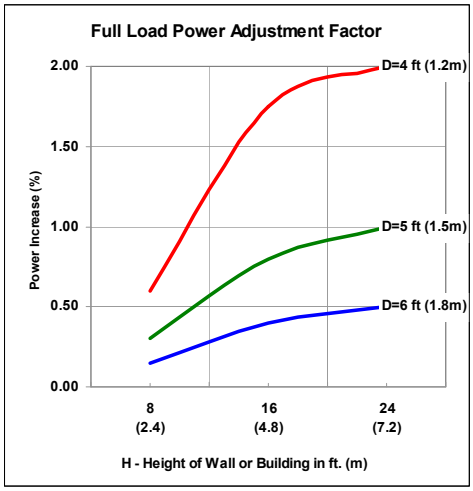
The existence of a screening wall or the wall of a building in close proximity to an air-cooled chiller is common in both rooftop and ground level applications. Hot air recirculation on the coils adjoining the wall will increase compressor discharge pressure, decreasing capacity and increasing power consumption.

When close to a wall, it is desirable to place chillers on the north or east side of them. It is also desirable to have prevailing winds blowing parallel to the unit's long axis. The worst case is to have wind blowing hot discharge air into the wall.

Figure 8: Unit Adjacent to Wall - Adjustment Factors





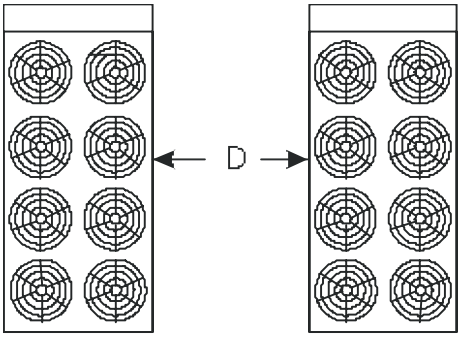


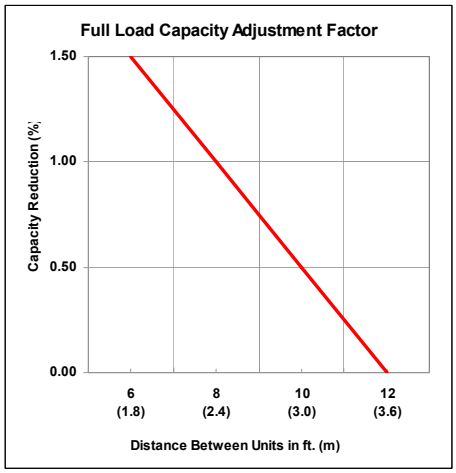
Case 2: Two Units Side By Side

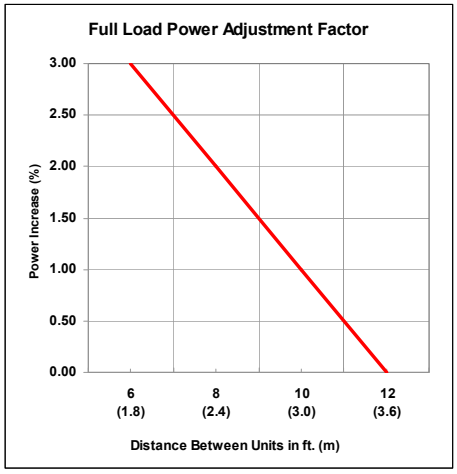
Two or more units sited side by side are common. If spaced closer than 12 feet (3.7 meters) it is necessary to adjust the performance of each unit; circuits adjoining each other are affected. If one of the two units also has a wall adjoining it, see Case 1. Add the two adjustment factors together and apply to the unit located between the wall and the other unit.

Mounting units end to end will not necessitate adjusting performance. Do not use pit or solid wall surrounds where the ambient air temperature exceeds 100°F (38°C).

Figure 9: Two Units Side by Side - Adjustment Factors



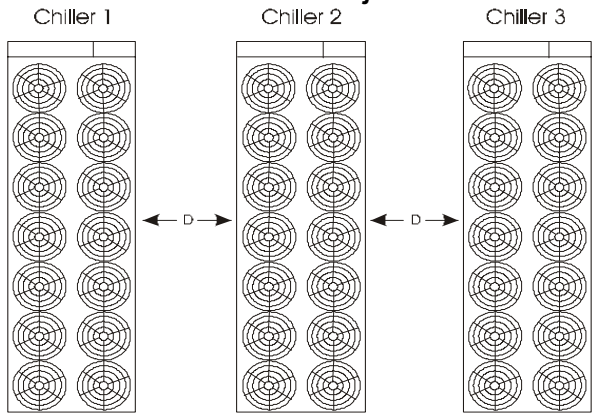


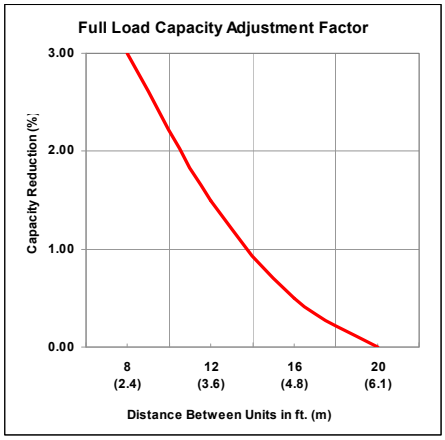


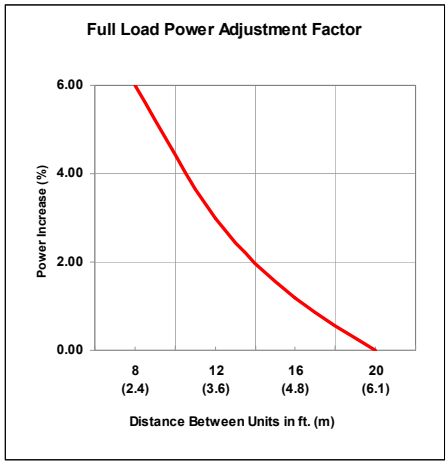
Case 3: Three or More Units Side By Side

When three or more units are side by side, the outside chillers (1 and 3 in this case) are influenced by the middle unit only on their inside circuits. Their adjustment factors will be the same as Case 2. All inside units (only number 2 in this case) are influenced on both sides and must be adjusted by the factors shown below.

Figure 10: Three or More Units - Adjustment Factor







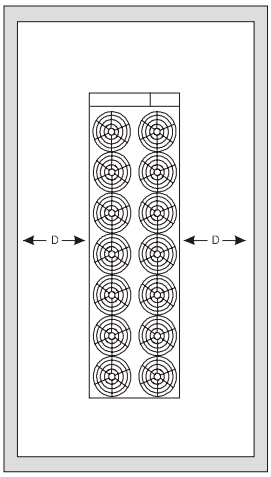
Case 4: Open Screening Walls

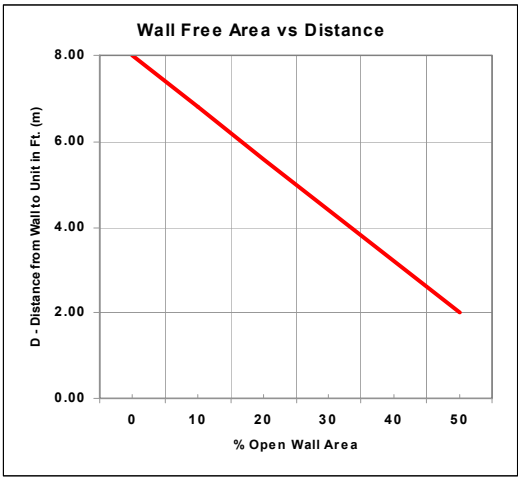
Decorative screening walls are often used to help conceal a unit either on grade or on a rooftop. Design these walls such that the combination of their open area and distance from the unit do not require performance adjustment. It is assumed that the wall height is equal to or less than the unit height when mounted on its base support. This is usually satisfactory for concealment. If the wall height is greater than the unit height, see Case 5, Pit Installation.

The distance from the sides of the unit to the side walls must be sufficient for service, such as opening control panel doors.

If each side wall is a different distance from the unit, the distances can be averaged providing either wall is not less than 8 feet (2.4 meters) from the unit. For example, do not average 4 feet and 20 feet to equal 12 feet (1 meter and 5 meters to equal 3 meters).

Figure 11: Open Screening Walls - Adjustment Factors



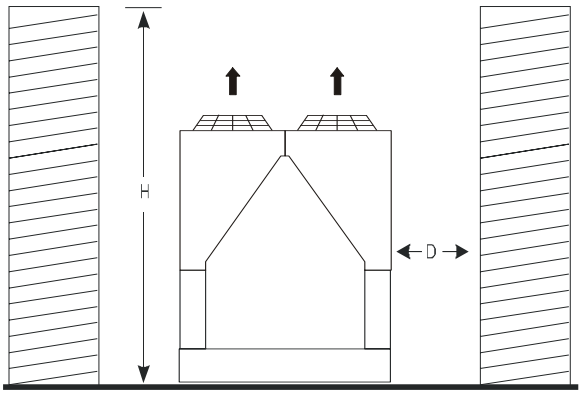


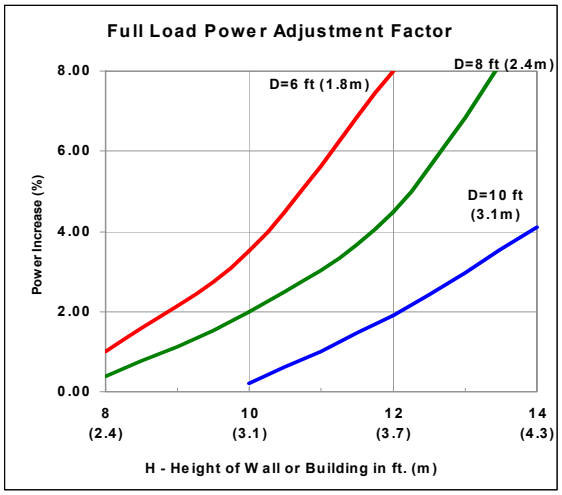
Case 5: Pit/Solid Wall Installation

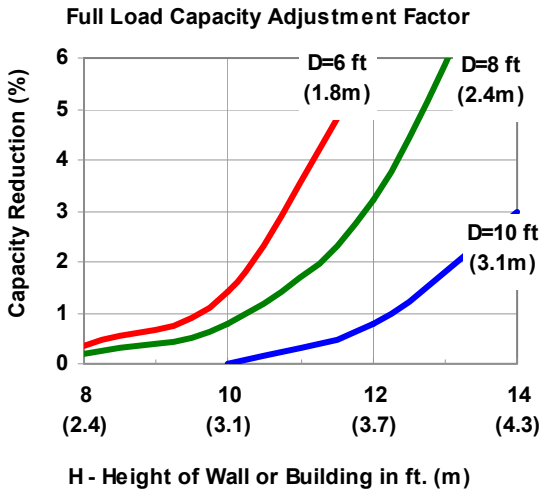
Pit installations can cause operating problems resulting from recirculation and restriction can both occur. A solid wall surrounding a unit is substantially the same as a pit and the data presented here should be used.

Steel grating is sometimes used to cover a pit to prevent accidental falls or trips into the pit. The grating material and installation design must be strong enough to prevent such accidents, yet provide abundant open area to avoid serious recirculation problems. Have any pit installation reviewed by the McQuay sales representative prior to installation to make sure it has sufficient air-flow characteristics, and approved by the installation design engineer avoid risk of accident.

Figure 12: Pit Installation - Adjustment Factors







Chilled Water Systems

The following sections offer supplemental information to that discussed in ASHRAE handbooks, which are a recommended source.

Water Flow

Chilled water systems are normally designed with leaving chilled water temperatures of 40°F to 50°F (4.4°C to 10°C), a 10°F (5.6°C) water temperature difference and 0.0001 ft^2•hr•°F/BTU (0.0176•m^2•°C/kW) fouling factor. Catalog performance tables display data for the chillers at these conditions. Actual design can be different, and McQuay catalogs include adjustment factors or special rating tables to account for other conditions.

- Addition of secondary coolants such as ethylene glycol
- Variances from 10°F (5.6°C) water temperature differences
- Greater than standard water fouling
- Elevation and ambient air temperatures

Specifications and start-up procedures should confirm that the chilled water piping system had been properly flushed out before being connected to the chiller vessel.

Confirm that the piping contains:

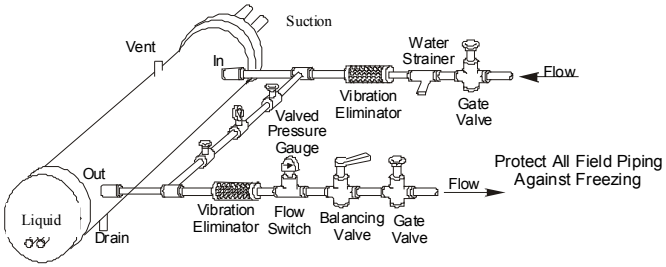
- A cleanable 20-mesh strainer, installed at the evaporator inlet, to remove impurities before they reach the chiller vessel
- An expansion tank in the piping
- An air vent located at the system high point to purge trapped air in the piping system. An air vent is also located at the top of each water head of the evaporator. Each evaporator water head is also provided with a drain connection.

All water systems include air in solution with the water. The percentage of air that can be retained in solution is a function of the water temperature and water pressure. Since these two values change in both chilled and hot water systems, an expansion tank is vital to the successful operation of the system.

A 20-mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator. Care should be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Many chiller installations today are replacements for older less efficient machines or chillers with obsolete refrigerants. Existing piping is drained down, opened to atmosphere, and reconnected to the new chiller vessel. Rust formed over the years can break loose during the replacement process, pass through a conventional strainer, and settle in the chiller vessel. Use a higher capacity filter and chemical treatment of the water for these installations.

Figure 13: Typical Chilled Water Piping



Note: The cross piping for the pressure gauge can be as small as ¼ inch. The purpose of this arrangement is to provide an easy method to use one gauge to accurately measure the evaporator pressure drop.

Optional Inlet Strainer

An inlet water strainer kit is available as a shipped-loose option, sized per Table • and with the pressure drop shown in Figure 14. The kit is field installed and consists of:

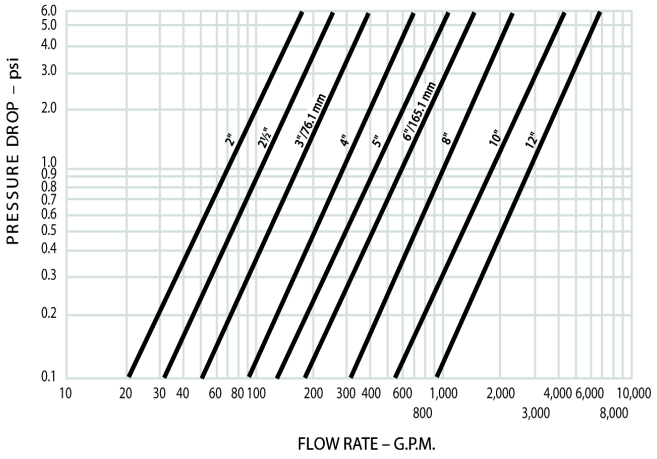
- Y-type 40% open area strainer with 304 stainless steel perforated basket, Victaulic pipe connections and strainer cap
- Extension pipe with two Schrader fittings that can be used for a pressure gauge and thermal dispersion flow switch. The pipe provides sufficient clearance from the evaporator for strainer basket removal.
- ½-inch blowdown valve
- Two Victaulic clamps

Table 2: Strainer Sizing Data

AWS Model	Strainer Size (in.)	Strainer Plus Pipe Length (in.)	Strainer Weight (lbs)
175ADS-250ADS 210ADH-250ADH	6	30.5	72
280ADS-350ADS 280ADH-405ADH	8	36.0	125
375ADS-530ADS 445ADH-530ADH	10	43.0	205

Figure 14: Strainer Pressure Drop

The chart below expresses the flow of water at 65˚F/18˚ C.



Checking Water Flow

The simplest method of checking water flow in a clean system (the chiller vessel has not been fouled nor is air bound), is to read the entering and leaving pressures and compare the actual pressure drop to the value published in the product catalog.

Pressure drops at the job are read in psi or feet of water. Published values are displayed in feet of water. Use the following formula to convert from one to another.

Feet of water x 2.31 = psi

System Water Volume

All chilled water systems need adequate time to recognize a load change, respond to that load change and stabilize, without undesirable short cycling of the compressors or loss of temperature control. In air conditioning systems, the potential for short cycling usually exists when the building load falls below the minimum chiller plant capacity or on close-coupled systems with very small water volumes.

Some things to consider when looking at water volume are the minimum cooling load, the minimum chiller plant capacity during the low load period and the desired cycle time for the compressors.

Assuming that there are no sudden load changes and that the chiller plant has reasonable turndown, a rule of thumb of "gallons of water volume equal to two to three times the chilled water gpm flow rate" is often used.

A properly designed storage tank should be added if the system components do not provide sufficient water volume.

Flow Switch

A flow switch must be included in the chilled water system to prove that there is adequate water flow to the evaporator before the unit can start or to shut down the unit if water flow is interrupted.

A solid state, thermal dispersion flow switch that is factory-mounted in the chiller leaving water nozzle and factory-wired is available as an option. A field-installed version is also available as an option.

Evaporator Freeze Protection

Evaporator freeze-up can be a concern in the application of air-cooled water chillers in areas experiencing below freezing temperatures. To protect against freeze-up, insulation and an electric heater cable are furnished with the evaporator. This helps protect the evaporator down to -20°F (-29°C) ambient air temperature. Although the evaporator is equipped with freeze protection, it does not protect water piping external to the unit or the evaporator itself if there is a power failure or heater burnout. Use one of the following recommendations for additional protection:

- If the unit will not be operated during the winter, drain evaporator and chilled water piping and flush with glycol. Drain and vent connections are provided on the evaporator for this purpose.
- Add a year-round glycol solution to the chilled water system to provide freeze protection. Freeze point should be approximately 10°F(5.6°C) below minimum design ambient temperature. Anti-freeze is generally considered the safest protection against freeze-up. See page 16 for recommended glycol concentration.
- The field addition of thermostatically controlled heat tracing and insulation to exposed piping. Factory insulation will have to be removed and replaced after installation of the tracing. (Dependent on power availability)
- Continuous circulation of water through the chilled water piping and evaporator. (Dependent on power availability).
- The evaporator heater cable is factory wired to the 115-volt circuit in the control box. This power can be supplied from a separate source, or it can be supplied from the control circuit. Operation of the heater cable is automatic through the ambient sensing thermostat that energizes the evaporator heater cable for protection against freeze-up. Unless the evaporator is drained in the winter, the disconnect switch to the evaporator heater must be closed. Conversely, do not apply heat to the evaporator if it is drained.

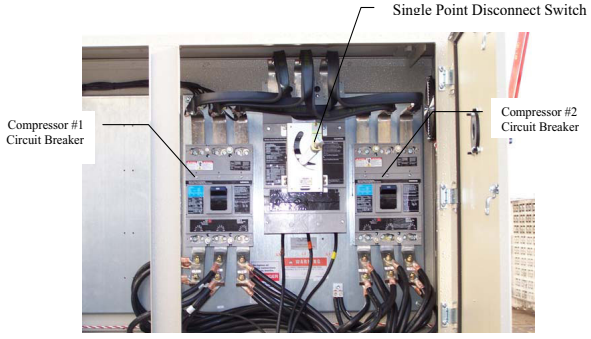
Chilled Water Pump

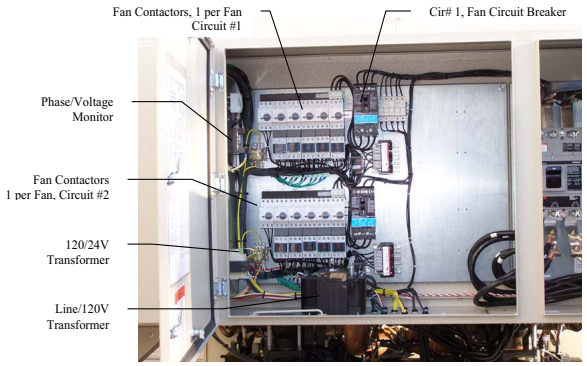
The starters for chilled water pumps should be wired to, and controlled by, the chiller's microprocessor. The controller will energize the pump whenever at least one circuit on the chiller is *enabled* to run, whether there is a call for cooling or not. The pump will also be turned on when the water temperature reaches 1°F below the Freeze Setpoint. Connection points are shown in the Field Wiring Diagram on page 183.

Variable Speed Pumping

McQuay chillers are designed for variable water flow duty provided that the rate of change is less than 10 percent of the change (design flow minus minimum flow) per minute *and*, the minimum and maximum flow rates for the evaporator, listed on page 38, are not exceeded

Figure 15: Power Panel Components (Left &Right)





Electrical Connections

All wiring must be done in accordance with applicable local and national codes. Pathfinder units can be ordered with either standard multi-point power or optional single point power connections and with various disconnect and circuit breaker options. Wiring within the unit is sized in accordance with the U.S.A. National Electrical Code. Field-supplied disconnect switches are required if not factory-supplied with the unit.

Table 3: Electric Power Connection Option

Multi-Point Power Connection	Single-Point Power Connection
Standard: Disconnect switch per circuit, no compressor isolation circuit breakers	Optional: one power block, compressor isolation circuit breakers
Optional: High short circuit current rated panel with disconnect switch and no isolation circuit breakers	Optional: One disconnect switch replacing the power block, compressor isolation circuit breakers
	Optional: High short circuit current rated panel with disconnect switch and compressor isolation circuit breakers

Notes: Disconnect switches are molded case construction with lockable through-the-door handles. They can be used to remove the unit/ circuit from the power system.

The individual compressor isolation circuit breakers for each circuit isolate the compressor and do not have through-the-door handles. They are operable only after the panel doors are opened.

The high short circuit rated panel means that a short circuit current up to the ratings shown in Table 4, Interrupt Ratings (kAmps)will be contained in the panel. There is a short period of time when the circuit breaker will short circuit before opening a circuit that can damage downstream components. In other words, the enclosure is stronger than a standard enclosure. It has a high interrupt rated disconnect switch.

The factory-mounted control power transformer is protected by fuses.

Condenser fans are protected and isolated by circuit breakers.

Table 4: Interrupt Ratings (kAmps)

VOLTAGE	STANDARD SHORT CIRCUIT PANEL RATING	HIGH SHORT CIRCUIT RATED PANEL
208-230	10kA	100kA
380	10kA	65kA
460	10kA	65kA
575	5kA	25kA
400	10kA	65kA

Disconnecting means are addressed by Article 440 of the U.S.A. National Electrical Code (NEC), which requires “disconnecting means capable of disconnecting air conditioning and refrigerating equipment including motor-compressors, and controllers from the circuit feeder.” Select and locate the disconnect switch per the NEC guidelines. Maximum recommended fuse sizes are given in the electrical data tables of this catalog for help in sizing the disconnect.

Terminals are provided in a unit control panel for optional field hookup of the control circuit to a separate fused 115-volt power supply in lieu of the standard factory installed control transformer.

Selection Procedure

General

Ratings are based on R-134a, an evaporator fouling factor of 0.0001 ft^2•hr•°F/BTU (0.0176•m^2•°C/kW), 10°F (5.6°C) delta-T, evaporator flow of 2.4 gpm/ton (0.15 l/s) and sea level altitude. KW input and EER or COP are for the entire unit, including compressors, fan motors and control power. Interpolation between ratings is allowed, extrapolation is not permitted. See Table 8 for other fouling factors or elevations. For applications outside the catalog ratings, contact your local McQuay sales office.

There are separate performance tables for the standard and high efficiency models. The performance data is based on a 10°F (5.6°C) delta-T through the evaporator. The minimum leaving chilled water temperature without glycol is 40.0°F (4.4°C). Refer to Table 5 or Table 6 for ethylene or propylene glycol adjustment factors.

Performance Adjustment Factors

Ethylene and Propylene Glycol Factors

AWS chiller units are designed to operate with leaving chilled fluid temperatures of 20.0°F to 60.0°F (-6.7°C to 15.6°C). Consult the local McQuay sales office for performance outside these temperatures. Leaving chilled fluid temperatures below 40°F (4.4°C) result in evaporating temperatures at or below the freezing point of water and a glycol solution is required. MicroTech III control inhibits compressor unloading at leaving fluid temperatures below 30°F (-1°C).
McQuay also recommends optional double insulation, and the system designer should determine its necessity. The use of glycol will reduce the performance of the unit depending on its concentration. Take this into consideration during initial system design. On glycol applications, the supplier typically recommends that a minimum of 25% solution by weight be used for protection against corrosion, or additional inhibitors will be required.

Table 5: Ethylene Glycol Correction Factors

% E.G	Freeze Point		Capacity	Power	Flow	PD
	°F	°C				
10	26	-3.3	0.996	0.998	1.036	1.097
20	18	-7.8	0.988	0.994	1.061	1.219
30	7	-13.9	0.979	0.991	1.092	1.352
40	-7	-21.7	0.969	0.986	1.132	1.532
50	-28	-33.3	0.958	0.981	1.182	1.748

Table 6: Propylene Glycol Correction Factors

% P.G	Freeze Point		Capacity	Power	Flow	PD
	°F	°C				
10	26	-3.3	0.991	0.996	1.016	1.092
20	19	-7.2	0.981	0.991	1.032	1.195
30	9	-12.8	0.966	0.985	1.056	1.345
40	-5	-20.6	0.947	0.977	1.092	1.544
50	-27	-32.8	0.932	0.969	1.14	1.906

Table 7: Ambient Freeze Protection

Temperature °F (°C)	Percent Volume Glycol Concentration Required			
	For Freeze Protection		For Burst Protection	
	Ethylene Glycol	Propylene Glycol	Ethylene Glycol	Propylene Glycol
20 (6.7)	16	18	11	12
10 (-12.2)	25	29	17	20
0 (-17.8)	33	36	22	24
-10 (-23.3)	39	42	26	28
-20 (-28.9)	44	46	30	30
-30 (-34.4)	48	50	30	33
-40 (-40.0)	52	54	30	35
-50 (-45.6)	56	57	30	35
-60 (-51.1)	60	60	30	35

Note: "Freeze protection" maintains the solution ina pumpable, usable liquid state. "Burst protection" prevents pipes from rupturing, but the solution may be in a gel state and not pumpable. In most applications, "burst" protection is sufficient; concentrations over 30% Ethylene Glycol or 35% Propylene Glycol will result in efficiency and capacity losses with negligible protection increases.

Note: These figures are examples only and may not be appropriate to every situation. Generally, for an extended margin of protection, select a temperature at least 15°F (-12°C) lower than the expected lowest ambient temperature. Adjust inhibitor levels for solutions less than 25% glycol

Note: Glycol of less than 25% concentration is not recommended because of the potential for bacterial growth and subsequent loss of heat transfer efficiency. Additional inhibitors may be required.

Altitude Correction Factors

Performance tables are based on sea-level altitude. At elevations higher than sea level, the performance of the unit will be decreased due to the lower air density. For performance at elevations other than sea level, refer to Table 8.

Table 8: Altitude Correction Factors

Feet	Meters	Capacity	Power
0	0	1.000	1.000
984	300	0.993	1.005
1969	600	0.986	1.009
2000	610	0.986	1.009
2953	900	0.979	1.015
3937	1200	0.973	1.021
4000	1219	0.973	1.021
4921	1500	0.967	1.026
5906	1800	0.960	1.031
6000	1829	0.960	1.031

Evaporator Temperature Drop Factors

Performance tables are based on a 10°F (5.6°C) temperature drop through the evaporator. Temperature drops outside a 6°F to 18°F (3.3°C to 10°C) range can adversely affect the system's capability to maintain acceptable control and are not recommended.

Table 9: Evaporator Delta-T Correction Factors

°F	Capacity	Power
6	0.983	0.993
8	0.992	0.997
10	1.000	1.000
12	1.007	1.003
14	1.012	1.005
16	1.018	1.008
18	1.024	1.011

The maximum water temperature that can be circulated through the evaporator in a non-operating mode is 100°F (37.8°C). High temperatures can result in poor performance and damage to the equipment.

Fouling Factor

Performance tables are based on water with a fouling factor of 0.0001 ft^2•hr•°F/BTU (0.0176•m^2•°C/kW) per AHRI 550/590. As fouling is increased, performance decreases. For performance at other fouling factors use capacity adjustment factors in Table 10

Foreign matter in the chilled water system will adversely affect the heat transfer capability of the evaporator and could increase the pressure drop and reduce the water flow. For optimum unit operation, proper water treatment and filtration must be maintained.

Table 10: Evaporator Fouling Factors

IP	SI	Capacity	Power
0.00010	0.0176	1.000	1.000
0.00025	0.0440	0.978	0.986
0.00050	0.0880	0.957	0.974
0.00075	0.1320	0.938	0.962

Selection Example

Specification:325 tons cooling 650 gpm, 56°F to 44°F, 95°F ambient air temperature, 2000 feet elevation, 0.0001 evaporator fouling factor, minimum EER of 9.6

Use the following formula (for water only) to calculate any missing elements: Tons = (gpm x delta-T) / 24

The unit performance must be corrected for both altitude and delta-T. From performance data in Table 11an AWS 320DS at the given temperatures will produce 327.3 tons of cooling with a unit power input of 400.8 kW and a unit EER of 9.8. Correcting for 2000 feet altitude and 12 °F delta-T fromTable 8 and Table 9:

Capacity: 327.3 x 0.986 (altitude) x 1.007 (delta-T) = 325 tons
Power: 400.8 x 1.009 (altitude) x 1.003 (delta-T) = 405.6 kW
EER = 12 x 325 (capacity) / 405.6 (power) = 9.6 EER

Determine the evaporator pressure drop using the pressure drop data in Figure 17, page 38. Enter the graph at 650 gpm and move up to the AWS 320 line intersection. Read horizontally to obtain an evaporator pressure drop of 9.6 feet.

Selection example utilizing ethylene glycol

325 tons, 95°F ambient temperature, sea level

780 gpm (based on water), 54°F to 44°F chilled fluid temperature

0.0001 evaporator fouling factor.

Protect against freezing to 20°F with ethylene glycol.

Provide a minimum EER of 9.5.

1.From Table 5 select an ethylene glycol concentration of 20% to protect to 18°F.

Adjustment factors at 20% glycol:

Capacity = 0.982, Power = 0.992, Flow = 1.040, Pressure Drop=1.129.

Select an AWS 320DS with a capacity of 327.3 tons, 400.8 kW power input and correct performance for any non-standard conditions prevailing. (This example is based on all standard rating conditions) Then correct with the 20% ethylene glycol factors.

Correct capacity: 327.3 tons x 0.982= 321.4 tons

Correct unit power: 400.8 kW x 0.992 = 397.6 kW

Correct the EER using the capacity and power correction factors, 9.8 EER x 0.982 / 0.992 = 9.7 EER

Correct chilled fluid flow:

Fluid flow required with 20% EG solution:

780 gpm (water) x 1.040 flow correction factor = 811 gpm of ethylene glycol required

Determine the evaporator pressure drop using the pressure drop data in Figure 17, page 38. Enter the graph at 780 gpm (water flow rate, not the glycol flow rate) and follow to the AWS 320DS line intersect. Read horizontally to obtain an evaporator pressure drop of 14.1 ft.

Correct the pressure drop for 20% EG solution:

14.1 ft. x 1.129 pressure drop correction factor = 15.9 ft. for ethylene glycol.

Performance Data (non-VFD)

Table 11: Performance Data 60 Hz Standard Efficiency non-VFD Models AWS175-300ADS(I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER
175ADS	60 Hz	10.4	40°F	180	174.2	12.4	171	190.7	10.8	161	209.4	9.2	150	231.7	7.8	136	257.6	6.3
			42°F	187	177.4	12.6	177	193.9	11.0	167	212.6	9.4	155	234.9	7.9	141	260.7	6.5
			44°F	193	180.7	12.8	183	197.3	11.2	**173**	**216.0**	**9.6**	161	238.2	8.1	147	263.9	6.7
			46°F	199	183.9	13.0	189	200.6	11.3	179	219.3	9.8	166	241.4	8.3	152	267.1	6.8
			48°F	206	187.4	13.2	196	204.0	11.5	185	222.8	10.0	172	244.9	8.4	157	270.3	7.0
			50°F	212	190.8	13.3	202	207.6	11.7	191	226.5	10.1	178	248.5	8.6	163	273.9	7.1
190ADS	60 Hz	12.5	40°F	204	198.8	12.3	194	217.6	10.7	183	238.8	9.2	171	264.2	7.7	156	293.8	6.4
			42°F	211	202.1	12.5	201	221.0	10.9	190	242.3	9.4	177	267.7	7.9	162	297.1	6.5
			44°F	218	205.7	12.7	207	224.7	11.1	**196**	**246.0**	**9.6**	183	271.4	8.1	168	300.8	6.7
			46°F	225	209.2	12.9	214	228.2	11.3	203	249.6	9.7	189	274.9	8.3	174	304.3	6.9
			48°F	232	212.8	13.1	221	231.9	11.4	209	253.5	9.9	196	278.8	8.4	180	308.0	7.0
			50°F	239	216.5	13.2	228	235.7	11.6	216	257.3	10.1	202	282.7	8.6	186	311.9	7.2
210ADS	60 Hz	12.5	40°F	226	218.6	12.4	214	239.2	10.7	201	262.4	9.2	187	290.3	7.7	170	322.8	6.3
			42°F	234	222.6	12.6	222	243.3	10.9	209	266.6	9.4	194	294.5	7.9	176	326.8	6.5
			44°F	242	226.9	12.8	230	247.6	11.1	**216**	**271.0**	**9.6**	201	298.8	8.1	183	331.1	6.6
			46°F	250	231.1	13.0	237	251.8	11.3	223	275.3	9.7	207	303.0	8.2	189	335.3	6.8
			48°F	258	235.2	13.1	245	256.2	11.5	231	279.7	9.9	214	307.6	8.4	196	339.7	6.9
			50°F	266	239.6	13.3	253	260.7	11.6	238	284.4	10.1	222	312.3	8.5	202	344.3	7.1
230ADS	60 Hz	14.6	40°F	239	231.8	12.4	227	253.6	10.8	214	278.2	9.2	199	307.7	7.8	181	342.1	6.4
			42°F	248	236.0	12.6	235	257.9	10.9	222	282.4	9.4	206	311.9	7.9	188	346.1	6.5
			44°F	256	240.3	12.8	244	262.3	11.1	**230**	**287.0**	**9.6**	214	316.4	8.1	195	350.5	6.7
			46°F	264	244.6	13.0	251	266.6	11.3	237	291.4	9.8	221	320.8	8.3	202	354.8	6.8
			48°F	273	248.8	13.2	260	271.1	11.5	245	296.1	9.9	229	325.4	8.4	209	359.4	7.0
			50°F	281	253.4	13.3	268	275.7	11.7	253	300.7	10.1	236	330.2	8.6	217	364.1	7.1
250ADS	60 Hz	14.6	40°F	263	255.4	12.4	250	279.8	10.7	236	307.5	9.2	219	340.6	7.7	200	379.2	6.3
			42°F	272	259.9	12.6	259	284.4	10.9	244	312.1	9.4	227	345.3	7.9	207	383.8	6.5
			44°F	281	264.5	12.8	268	289.2	11.1	**253**	**317.0**	**9.6**	235	350.2	8.1	215	388.6	6.6
			46°F	290	268.9	12.9	276	293.9	11.3	261	321.8	9.7	243	354.9	8.2	222	393.4	6.8
			48°F	299	273.7	13.1	285	298.7	11.4	269	326.8	9.9	251	360.0	8.4	230	374.4	7.4
			50°F	308	278.7	13.3	293	303.6	11.6	278	331.9	10.0	259	365.2	8.5	238	403.5	7.1
280ADS	60 Hz	16.6	40°F	286	279.6	12.3	271	304.6	10.7	255	331.7	9.2	236	362.1	7.8	214	395.9	6.5
			42°F	296	284.8	12.5	281	310.1	10.9	264	337.4	9.4	245	368.3	8.0	223	402.4	6.6
			44°F	306	290.2	12.7	290	315.8	11.0	**274**	**343.5**	**9.6**	254	374.7	8.1	231	409.1	6.8
			46°F	316	295.4	12.8	300	321.2	11.2	283	349.3	9.7	263	380.8	8.3	240	415.8	6.9
			48°F	326	300.9	13.0	310	327.1	11.4	292	355.3	9.9	272	387.3	8.4	248	422.7	7.1
			50°F	336	306.6	13.2	319	333.0	11.5	301	361.6	10.0	280	393.7	8.5	257	429.5	7.2
300ADS	60 Hz	23.5	40°F	305	293.7	12.5	289	321.7	10.8	272	351.2	9.3	252	382.3	7.9	228	414.9	6.6
			42°F	315	299.7	12.6	299	328.0	10.9	281	357.9	9.4	261	390.2	8.0	237	423.3	6.7
			44°F	326	305.8	12.8	309	334.4	11.1	**291**	**364.7**	**9.6**	270	397.6	8.1	246	432.0	6.8
			46°F	336	311.9	12.9	319	341.1	11.2	300	371.7	9.7	279	405.2	8.3	254	440.8	6.9
			48°F	347	318.2	13.1	329	347.9	11.4	309	378.9	9.8	288	412.9	8.4	263	449.8	7.0
			50°F	358	324.6	13.2	340	354.8	11.5	319	386.5	9.9	297	420.7	8.5	272	457.9	7.1

Table 12: Performance Data 60 Hz Standard Efficiency non-VFD Models AWS320-470ADS (I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER
320ADS	60 Hz	20.8	40°F	342	322.5	12.7	324	353.4	11.0	305	385.8	9.5	284	420.3	8.1	259	457.3	6.8
			42°F	354	328.8	12.9	336	360.3	11.2	316	393.2	9.7	294	428.5	8.2	269	466.0	6.9
			44°F	366	335.1	13.1	347	367.3	11.3	**327**	**400.8**	**9.8**	305	436.8	8.4	279	474.9	7.0
			46°F	378	341.5	13.3	359	374.3	11.5	339	408.5	9.9	315	444.9	8.5	289	483.9	7.2
			48°F	390	348.2	13.5	371	381.4	11.7	350	416.3	10.1	326	453.5	8.6	299	493.1	7.3
			50°F	403	354.7	13.6	383	388.7	11.8	361	424.1	10.2	337	462.1	8.8	309	502.3	7.4
350ADS	60 Hz	20.8	40°F	366	353.2	12.4	347	386.8	10.8	327	422.1	9.3	303	459.8	7.9	276	500.3	6.6
			42°F	378	360.2	12.6	359	394.5	10.9	338	430.4	9.4	314	468.9	8.0	286	510.0	6.7
			44°F	391	367.2	12.8	371	402.3	11.1	**350**	**438.8**	**9.6**	325	478.0	8.2	296	519.9	6.8
			46°F	404	374.4	12.9	383	410.0	11.2	361	447.3	9.7	336	487.3	8.3	307	529.8	6.9
			48°F	416	381.7	13.1	396	418.0	11.4	373	456.0	9.8	347	496.6	8.4	317	540.0	7.0
			50°F	429	388.9	13.2	408	425.9	11.5	385	464.6	9.9	358	506.1	8.5	328	550.3	7.2
375ATS	60 Hz	22.9	40°F	393	379.5	12.4	373	415.6	10.8	351	456.6	9.2	326	505.8	7.7	298	563.3	6.3
			42°F	406	386.0	12.6	386	422.5	11.0	364	463.6	9.4	338	512.7	7.9	309	569.9	6.5
			44°F	419	392.9	12.8	399	429.6	11.1	**377**	**471.0**	**9.6**	350	520.0	8.1	320	577.0	6.7
			46°F	432	399.6	13.0	411	436.4	11.3	389	478.0	9.8	362	527.1	8.2	331	583.9	6.8
			48°F	446	406.6	13.2	424	443.6	11.5	401	485.3	9.9	374	534.7	8.4	342	591.3	6.9
			50°F	459	414.0	13.3	437	451.0	11.6	414	492.8	10.1	386	542.3	8.5	354	599.1	7.1
400ATS	60 Hz	22.9	40°F	418	405.2	12.4	396	442.1	10.7	371	483.1	9.2	344	530.4	7.8	312	584.2	6.4
			42°F	433	413.0	12.6	410	450.2	10.9	385	491.4	9.4	356	539.0	7.9	323	592.8	6.5
			44°F	448	421.0	12.8	424	458.8	11.1	**398**	**500.1**	**9.6**	369	548.0	8.1	335	602.0	6.7
			46°F	462	428.9	12.9	438	466.8	11.3	412	508.7	9.7	381	556.6	8.2	347	610.8	6.8
			48°F	477	437.1	13.1	452	475.4	11.4	425	517.6	9.9	394	565.8	8.4	359	620.4	6.9
			50°F	493	445.6	13.3	467	484.2	11.6	439	526.7	10.0	408	575.3	8.5	371	629.9	7.1
425ATS	60 Hz	25.0	40°F	438	428.1	12.3	415	466.3	10.7	391	507.2	9.2	362	553.0	7.9	330	603.6	6.6
			42°F	453	436.0	12.5	430	474.7	10.9	404	516.2	9.4	375	562.4	8.0	342	613.6	6.7
			44°F	468	444.0	12.7	445	483.6	11.0	**419**	**525.7**	**9.6**	389	572.4	8.2	355	623.9	6.8
			46°F	483	451.9	12.8	459	491.9	11.2	432	534.7	9.7	402	581.9	8.3	367	634.1	6.9
			48°F	498	460.2	13.0	473	500.7	11.3	446	544.2	9.8	415	592.0	8.4	380	644.7	7.1
			50°F	514	468.6	13.2	488	509.7	11.5	461	553.7	10.0	429	602.3	8.5	392	655.4	7.2
445ATS	60 Hz	25.0	40°F	470	458.4	12.3	445	498.7	10.7	418	541.0	9.3	388	586.8	7.9	353	636.1	6.7
			42°F	486	466.7	12.5	461	508.0	10.9	433	551.2	9.4	401	597.7	8.1	366	647.8	6.8
			44°F	502	475.3	12.7	476	517.7	11.0	**448**	**561.8**	**9.6**	415	609.0	8.2	379	660.0	6.9
			46°F	517	483.6	12.8	491	526.7	11.2	462	571.8	9.7	429	619.9	8.3	391	671.6	7.0
			48°F	533	492.4	13.0	506	536.2	11.3	477	582.4	9.8	443	631.4	8.4	405	683.9	7.1
			50°F	549	501.3	13.1	522	545.8	11.5	492	592.7	10.0	457	643.0	8.5	418	696.3	7.2
470ATS	60 Hz	27.0	40°F	500	488.4	12.3	475	532.2	10.7	447	578.2	9.3	416	627.8	7.9	380	681.2	6.7
			42°F	516	497.0	12.5	490	541.8	10.9	462	588.5	9.4	430	639.1	8.1	393	693.3	6.8
			44°F	533	505.9	12.6	507	551.6	11.0	**478**	**599.3**	**9.6**	445	650.8	8.2	407	706.0	6.9
			46°F	549	514.4	12.8	522	560.9	11.2	493	609.7	9.7	459	662.0	8.3	421	718.2	7.0
			48°F	566	523.5	13.0	539	570.6	11.3	509	620.3	9.8	474	673.6	8.5	435	730.7	7.1
			50°F	584	532.7	13.1	555	580.6	11.5	525	631.1	10.0	490	685.5	8.6	449	743.6	7.2

Performance Data (non-VFD)

Table 13: Performance Data 60 Hz Standard Efficiency non-VFD Models AWS500-530 (I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature													
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER
500ATS	60 Hz	29.1	40°F	534	522.9	12.3	507	570.1	10.7	479	619.8	9.3	446	673.4	7.9	407	730.7	6.7
			42°F	551	532.0	12.4	524	580.1	10.8	495	630.7	9.4	461	685.3	8.1	421	743.8	6.8
			44°F	569	541.6	12.6	542	590.7	11.0	**511**	**642.0**	**9.6**	476	697.7	8.2	436	757.4	6.9
			46°F	586	550.8	12.8	558	600.6	11.2	527	652.9	9.7	491	709.5	8.3	451	770.4	7.0
			48°F	605	560.4	12.9	575	611.0	11.3	544	664.3	9.8	507	721.8	8.4	466	783.7	7.1
			50°F	623	570.1	13.1	593	621.6	11.4	561	675.8	10.0	523	734.4	8.5	480	797.2	7.2
530ATS	60 Hz	31.2	40°F	564	552.6	12.2	536	603.0	10.7	507	656.1	9.3	473	713.4	7.9	432	774.4	6.7
			42°F	582	562.2	12.4	554	613.4	10.8	523	667.3	9.4	489	725.9	8.1	447	788.2	6.8
			44°F	601	572.1	12.6	572	624.2	11.0	**541**	**679.1**	**9.6**	505	738.7	8.2	463	802.4	6.9
			46°F	619	581.6	12.8	589	634.5	11.1	557	690.3	9.7	521	750.8	8.3	479	816.1	7.0
			48°F	638	591.7	12.9	608	645.3	11.3	575	702.0	9.8	537	763.5	8.4	494	829.9	7.1
			50°F	657	601.8	13.1	626	656.4	11.4	592	714.0	10.0	554	776.4	8.6	510	843.8	7.2

Table 14: Performance Data 60 Hz High Efficiency non-VFD Models AWS210-280 (I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature													
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER
210ADH	60 Hz	12.5	40°F	206	176.6	14.0	200	201.0	12.0	194	224.4	10.4	186	249.7	8.9	175	279.8	7.5
			42°F	213	178.8	14.3	207	203.7	12.2	200	227.3	10.6	192	252.7	9.1	181	282.5	7.7
			44°F	220	181.4	14.6	214	206.6	12.4	**207**	**230.5**	**10.8**	198	255.8	9.3	187	285.4	7.9
			46°F	227	183.7	14.8	221	209.4	12.6	213	233.5	11.0	204	258.9	9.5	193	288.3	8.0
			48°F	234	186.2	15.1	228	212.5	12.9	220	236.8	11.2	211	262.2	9.6	199	291.4	8.2
			50°F	242	188.8	15.4	235	215.5	13.1	227	240.2	11.3	217	265.6	9.8	205	294.6	8.4
230ADH	60 Hz	14.6	40°F	233	199.1	14.0	226	226.7	11.9	218	253.1	10.4	209	281.7	8.9	197	315.6	7.5
			42°F	240	201.6	14.3	233	229.8	12.2	226	256.4	10.6	216	285.0	9.1	204	318.7	7.7
			44°F	248	204.1	14.6	241	232.9	12.4	**233**	**260.0**	**10.8**	223	288.6	9.3	211	322.0	7.9
			46°F	256	206.6	14.9	248	236.1	12.6	240	263.3	11.0	230	292.0	9.5	218	325.3	8.0
			48°F	264	209.4	15.1	256	239.3	12.9	248	267.0	11.2	238	295.8	9.6	224	328.7	8.2
			50°F	272	212.1	15.4	264	242.6	13.1	256	270.7	11.3	245	299.5	9.8	232	332.4	8.4
250ADH	60 Hz	14.6	40°F	254	223.7	13.6	246	252.6	11.7	238	281.1	10.2	227	313.3	8.7	213	352.3	7.3
			42°F	262	226.7	13.9	254	256.2	11.9	246	285.0	10.3	235	317.1	8.9	220	355.8	7.4
			44°F	271	230.0	14.1	263	260.0	12.1	**254**	**289.0**	**10.5**	242	321.1	9.1	228	359.5	7.6
			46°F	279	233.2	14.3	270	263.6	12.3	261	292.9	10.7	250	325.1	9.2	235	363.3	7.8
			48°F	287	236.5	14.6	279	267.5	12.5	269	297.2	10.9	257	329.3	9.4	242	367.2	7.9
			50°F	296	240.0	14.8	287	271.4	12.7	278	301.4	11.1	265	333.7	9.5	250	371.4	8.1
280ADH	60 Hz	16.6	40°F	272	236.5	13.8	264	267.7	11.8	255	298.0	10.2	243	331.3	8.8	227	371.4	7.3
			42°F	281	239.9	14.1	272	271.6	12.0	263	302.1	10.4	251	335.7	9.0	235	375.3	7.5
			44°F	290	243.4	14.3	282	275.6	12.3	**272**	**306.5**	**10.6**	260	340.0	9.2	244	379.5	7.7
			46°F	299	246.8	14.6	290	279.6	12.5	280	310.7	10.8	268	344.3	9.3	252	383.7	7.9
			48°F	309	250.4	14.8	299	283.8	12.7	289	315.3	11.0	276	349.0	9.5	260	388.2	8.0
			50°F	318	254.1	15.0	309	288.0	12.9	298	319.9	11.2	285	353.8	9.7	268	392.7	8.2

Table 15: Performance Data 60 Hz High Efficiency non-VFD Models AWS300-470 (I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER
300ADH	60 Hz	16.6	40°F	294	264.5	13.3	285	297.7	11.5	275	331.0	10.0	262	368.9	8.5	244	414.9	7.1
			42°F	303	268.4	13.5	294	302.1	11.7	284	335.5	10.2	271	373.7	8.7	252	419.2	7.2
			44°F	312	272.4	13.8	303	306.6	11.9	**293**	**340.4**	**10.3**	279	378.6	8.9	261	424.0	7.4
			46°F	322	276.4	14.0	312	311.0	12.0	302	345.2	10.5	288	383.3	9.0	270	428.7	7.6
			48°F	332	281.0	14.2	322	315.8	12.2	311	350.1	10.6	296	388.3	9.2	278	405.6	8.2
			50°F	342	285.5	14.4	332	320.9	12.4	320	355.3	10.8	305	393.5	9.3	286	438.6	7.8
320ADH	60 Hz	20.8	40°F	327	294.8	13.3	317	331.2	11.5	306	366.3	10.0	293	403.2	8.7	276	445.1	7.4
			42°F	338	298.9	13.6	327	336.1	11.7	317	371.8	10.2	303	409.1	8.9	285	451.0	7.6
			44°F	349	303.4	13.8	339	341.3	11.9	**327**	**377.5**	**10.4**	313	415.3	9.1	295	457.3	7.7
			46°F	360	307.8	14.0	349	346.2	12.1	338	383.0	10.6	323	421.2	9.2	305	463.5	7.9
			48°F	371	312.2	14.3	360	351.4	12.3	348	388.9	10.7	333	427.4	9.4	314	469.9	8.0
			50°F	383	316.7	14.5	371	356.8	12.5	359	394.9	10.9	344	433.7	9.5	324	476.5	8.2
350ADH	60 Hz	20.8	40°F	337	299.0	13.5	327	334.6	11.7	315	370.0	10.2	301	407.6	8.9	283	448.6	7.6
			42°F	348	304.2	13.7	337	340.4	11.9	326	376.6	10.4	311	414.8	9.0	292	456.3	7.7
			44°F	359	309.5	13.9	348	346.3	12.1	**336**	**383.2**	**10.5**	321	422.0	9.1	302	464.1	7.8
			46°F	370	314.9	14.1	359	352.4	12.2	347	390.0	10.7	332	429.4	9.3	312	471.9	7.9
			48°F	381	320.2	14.3	370	358.5	12.4	358	396.7	10.8	342	436.7	9.4	322	480.0	8.0
			50°F	393	325.8	14.5	381	364.7	12.6	369	403.6	11.0	352	444.3	9.5	331	488.2	8.1
380ADH	60 Hz	22.9	40°F	366	325.0	13.5	355	363.6	11.7	343	402.5	10.2	328	443.6	8.9	309	488.5	7.6
			42°F	377	330.4	13.7	367	369.8	11.9	354	409.4	10.4	339	451.2	9.0	319	496.8	7.7
			44°F	389	336.0	13.9	378	376.1	12.1	**366**	**416.3**	**10.5**	350	458.9	9.1	329	505.1	7.8
			46°F	401	341.7	14.1	390	382.5	12.2	377	423.5	10.7	361	466.7	9.3	340	513.6	7.9
			48°F	413	347.2	14.3	401	388.8	12.4	388	430.6	10.8	371	474.4	9.4	350	522.1	8.0
			50°F	425	353.1	14.5	413	395.4	12.5	400	437.8	11.0	383	482.4	9.5	361	530.7	8.2
405ADH	60 Hz	25.0	40°F	395	352.2	13.5	384	394.2	11.7	371	436.4	10.2	355	481.3	8.9	335	530.5	7.6
			42°F	407	358.0	13.7	396	400.7	11.8	383	443.7	10.4	367	489.4	9.0	345	539.2	7.7
			44°F	420	363.9	13.8	408	407.4	12.0	**395**	**451.2**	**10.5**	378	497.6	9.1	356	548.1	7.8
			46°F	432	369.7	14.0	420	414.1	12.2	407	458.7	10.6	390	505.8	9.2	367	557.1	7.9
			48°F	445	375.7	14.2	432	420.8	12.3	419	466.1	10.8	401	514.1	9.4	378	566.1	8.0
			50°F	458	381.8	14.4	445	427.7	12.5	431	473.7	10.9	413	522.5	9.5	390	575.1	8.1
445ATH	60 Hz	25.0	40°F	439	384.6	13.7	425	432.7	11.8	410	480.9	10.2	391	536.7	8.7	365	604.7	7.3
			42°F	453	390.4	13.9	439	439.1	12.0	424	487.7	10.4	404	543.3	8.9	378	610.7	7.4
			44°F	468	396.6	14.2	454	446.0	12.2	**438**	**495.0**	**10.6**	417	550.5	9.1	390	617.3	7.6
			46°F	483	402.5	14.4	468	452.6	12.4	451	502.1	10.8	430	557.4	9.3	402	623.7	7.7
			48°F	497	408.8	14.6	483	459.8	12.6	466	509.6	11.0	443	565.0	9.4	415	630.7	7.9
			50°F	512	415.1	14.8	497	466.8	12.8	480	517.3	11.1	457	572.7	9.6	428	638.1	8.0
470ATH	60 Hz	27.0	40°F	468	415.3	13.5	454	464.9	11.7	439	514.8	10.2	419	570.8	8.8	393	636.9	7.4
			42°F	483	421.4	13.8	469	471.8	11.9	453	522.2	10.4	433	578.4	9.0	406	644.4	7.6
			44°F	499	428.0	14.0	484	479.1	12.1	**468**	**530.0**	**10.6**	447	586.5	9.1	420	652.4	7.7
			46°F	514	434.3	14.2	499	486.1	12.3	482	537.6	10.8	460	594.3	9.3	432	660.2	7.9
			48°F	529	440.6	14.4	514	493.5	12.5	496	545.7	10.9	474	602.6	9.4	446	668.4	8.0
			50°F	544	447.4	14.6	529	501.0	12.7	511	553.9	11.1	488	611.2	9.6	459	676.9	8.1

Performance Data (non-VFD)

Table 16: Performance Data 60 Hz High Efficiency non-VFD Models AWS500-530 (I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature													
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER
500ATH	60 Hz	29.1	40°F	493	452.4	13.1	479	504.1	11.4	464	556.0	10.0	443	609.7	8.7	426	680.5	7.5
			42°F	509	459.1	13.3	494	511.6	11.6	478	564.3	10.2	457	578.1	9.5	432	730.2	7.1
			44°F	525	466.1	13.5	510	519.5	11.8	**493**	**573.0**	**10.3**	472	631.0	9.0	444	696.5	7.7
			46°F	540	472.8	13.7	525	527.2	11.9	508	581.3	10.5	486	639.8	9.1	458	705.8	7.8
			48°F	556	479.9	13.9	541	535.1	12.1	523	590.0	10.6	500	649.2	9.2	471	715.5	7.9
			50°F	572	487.0	14.1	556	543.1	12.3	538	599.0	10.8	515	658.7	9.4	485	725.4	8.0
530ATH	60 Hz	31.2	40°F	524	490.7	12.8	510	544.6	11.2	494	598.7	9.9	473	656.1	8.6	445	718.8	7.4
			42°F	540	497.9	13.0	525	552.7	11.4	509	607.7	10.0	488	666.3	8.8	460	730.0	7.6
			44°F	557	505.5	13.2	542	561.3	11.6	**525**	**617.2**	**10.2**	503	676.8	8.9	475	741.7	7.7
			46°F	573	512.7	13.4	558	569.5	11.7	540	626.3	10.3	518	686.6	9.0	489	752.7	7.8
			48°F	590	520.4	13.6	574	578.0	11.9	556	635.8	10.5	533	697.1	9.2	503	763.9	7.9
			50°F	607	528.1	13.8	591	586.7	12.1	572	645.5	10.6	548	707.6	9.3	518	775.3	8.0

Table 17: Performance Data 60 Hz Premium Efficiency non-VFD Models AWS210-280ADP(I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature													
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER
210ADP	60 Hz	16.6	40°F	209	168.0	14.9	205	191.5	12.8	200	214.2	11.2	194	238.6	9.8	186	267.8	8.3
			42°F	216	170.1	15.2	211	194.1	13.1	206	217.0	11.4	201	241.5	10.0	192	270.4	8.5
			44°F	223	172.6	15.5	218	196.9	13.3	**213**	**220.0**	**11.6**	207	244.5	10.2	199	273.1	8.7
			46°F	230	174.7	15.8	225	199.6	13.5	220	222.8	11.8	214	247.5	10.4	205	276.0	8.9
			48°F	237	177.1	16.1	232	202.5	13.8	227	226.0	12.0	220	250.6	10.6	212	278.9	9.1
			50°F	244	179.6	16.3	240	205.4	14.0	234	229.2	12.2	227	253.8	10.7	218	282.0	9.3
230ADP	60 Hz	18.7	40°F	234	190.0	14.8	229	216.8	12.7	224	242.4	11.1	217	270.1	9.7	209	303.1	8.3
			42°F	242	192.4	15.1	237	219.7	12.9	231	245.6	11.3	225	273.3	9.9	216	306.1	8.5
			44°F	250	194.8	15.4	245	222.7	13.2	**239**	**249.0**	**11.5**	232	276.7	10.1	223	309.2	8.7
			46°F	258	197.2	15.7	252	225.7	13.4	246	252.2	11.7	239	280.0	10.3	230	58.7	47.1
			48°F	266	199.9	15.9	260	228.8	13.7	254	255.7	11.9	247	283.6	10.5	238	360.2	7.9
			50°F	274	202.4	16.2	268	231.9	13.9	262	259.3	12.1	255	287.2	10.6	245	319.2	9.2
250ADP	60 Hz	18.7	40°F	256	213.7	14.4	250	241.7	12.4	244	269.5	10.9	236	300.7	9.4	226	338.6	8.0
			42°F	264	216.6	14.6	258	245.1	12.6	252	273.2	11.1	244	304.4	9.6	233	342.0	8.2
			44°F	273	219.7	14.9	267	248.8	12.9	**260**	**277.0**	**11.3**	252	308.2	9.8	241	345.6	8.4
			46°F	281	222.8	15.1	275	252.3	13.1	268	280.7	11.5	260	312.0	10.0	249	349.2	8.6
			48°F	289	226.0	15.4	283	256.0	13.3	276	284.9	11.6	268	316.0	10.2	257	352.9	8.7
			50°F	298	229.3	15.6	292	259.7	13.5	285	288.9	11.8	276	320.3	10.3	265	357.0	8.9
280ADP	60 Hz	20.8	40°F	277	229.1	14.5	270	259.8	12.5	264	289.7	10.9	255	322.5	9.5	243	362.1	8.1
			42°F	286	232.4	14.8	279	263.5	12.7	272	293.7	11.1	264	326.7	9.7	252	365.8	8.3
			44°F	295	235.8	15.0	289	267.5	13.0	**282**	**298.0**	**11.3**	273	331.0	9.9	261	370.0	8.5
			46°F	304	239.1	15.3	298	271.4	13.2	290	302.1	11.5	281	335.2	10.1	269	374.1	8.6
			48°F	314	242.6	15.5	307	275.4	13.4	300	306.5	11.7	290	339.7	10.3	278	378.4	8.8
			50°F	323	246.2	15.8	317	279.5	13.6	309	311.0	11.9	299	344.3	10.4	287	382.9	9.0

Table 18: Performance Data 60 Hz Premium Efficiency non-VFD Models AWS300-350 (I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kW	Unit EER	Unit Tons	Power kW	Unit EER	Unit Tons	Power kW	Unit EER	Unit Tons	Power kW	Unit EER	Unit Tons	Power kW	Unit EER
300ADP	60 Hz	20.8	40°F	297	253.8	14.0	291	286.1	12.2	283	318.6	10.7	273	355.6	9.2	260	400.5	7.8
			42°F	306	257.5	14.3	300	290.3	12.4	292	323.0	10.9	283	360.2	9.4	269	404.7	8.0
			44°F	316	261.3	14.5	309	294.6	12.6	**302**	**327.6**	**11.0**	292	364.9	9.6	278	409.3	8.2
			46°F	325	265.2	14.7	319	298.9	12.8	310	332.2	11.2	300	369.5	9.8	287	413.9	8.3
			48°F	336	269.6	14.9	328	303.5	13.0	320	337.0	11.4	309	374.2	9.9	296	391.6	9.1
			50°F	346	273.9	15.2	338	308.4	13.2	329	342.0	11.6	319	379.2	10.1	305	423.4	8.6
320ADP	60 Hz	22.9	40°F	330	279.9	14.2	323	315.0	12.3	315	348.9	10.8	306	384.6	9.5	293	425.2	8.3
			42°F	341	283.8	14.4	334	319.7	12.5	326	354.2	11.0	316	390.2	9.7	303	430.8	8.5
			44°F	353	288.0	14.7	345	324.6	12.8	**337**	**359.6**	**11.2**	327	396.1	9.9	314	436.9	8.6
			46°F	364	292.2	14.9	356	329.3	13.0	347	364.9	11.4	337	401.7	10.1	324	442.8	8.8
			48°F	375	296.4	15.2	367	334.3	13.2	358	370.5	11.6	348	407.7	10.2	334	448.9	8.9
			50°F	387	300.7	15.4	379	339.4	13.4	370	376.2	11.8	359	413.7	10.4	345	455.2	9.1
350ADP	60 Hz	25.0	40°F	362	316.1	13.7	354	351.1	12.1	345	386.1	10.7	334	423.1	9.5	320	463.7	8.3
			42°F	374	321.0	14.0	366	356.7	12.3	357	392.5	10.9	345	409.7	10.1	331	471.2	8.4
			44°F	386	326.4	14.2	378	362.6	12.5	**368**	**399.1**	**11.1**	357	413.6	10.4	342	479.0	8.6
			46°F	398	331.4	14.4	389	368.3	12.7	380	405.4	11.2	368	420.5	10.5	352	486.4	8.7
			48°F	410	336.6	14.6	402	374.3	12.9	391	412.0	11.4	379	455.9	10.0	364	494.3	8.8
			50°F	422	342.0	14.8	414	380.3	13.1	403	418.7	11.6	391	458.8	10.2	375	502.2	9.0

Performance Data (non-VFD)

Table 19: Performance Data 60 Hz Standard Efficiency non-VFD Models AWS175-300 (SI Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
175ADS	60 Hz	10.4	5°C	638	179.1	3.6	609	194.1	3.1	577	211.0	2.7	541	230.7	2.3	498	254.0	2.0
			6°C	658	182.0	3.6	628	197.1	3.2	595	214.0	2.8	558	233.7	2.4	515	256.8	2.0
			7°C	679	185.0	3.7	648	200.2	3.2	614	217.0	2.8	576	236.6	2.4	532	259.7	2.0
			8°C	698	187.9	3.7	667	203.2	3.3	633	220.0	2.9	594	239.6	2.5	548	262.6	2.1
			9°C	719	191.1	3.8	687	206.3	3.3	652	223.2	2.9	612	242.8	2.5	565	265.6	2.1
			10°C	739	194.2	3.8	706	209.5	3.4	671	226.5	3.0	630	246.0	2.6	583	268.8	2.2
190ADS	60 Hz	12.5	5°C	722	204.2	3.5	690	221.4	3.1	655	240.6	2.7	616	263.0	2.3	569	289.6	2.0
			6°C	744	207.4	3.6	711	224.6	3.2	676	243.8	2.8	636	266.3	2.4	589	292.7	2.0
			7°C	766	210.6	3.6	733	227.9	3.2	697	247.1	2.8	656	269.5	2.4	608	296.0	2.1
			8°C	787	213.7	3.7	754	231.1	3.3	717	250.4	2.9	676	272.8	2.5	627	299.2	2.1
			9°C	810	217.0	3.7	775	234.5	3.3	738	253.9	2.9	696	276.3	2.5	646	302.6	2.1
			10°C	832	220.4	3.8	797	237.9	3.4	760	257.3	3.0	716	279.7	2.6	666	306.1	2.2
210ADS	60 Hz	12.5	5°C	800	224.7	3.6	762	243.6	3.1	721	264.5	2.7	675	289.2	2.3	620	318.3	1.9
			6°C	825	228.5	3.6	786	247.4	3.2	744	268.4	2.8	697	293.0	2.4	641	322.1	2.0
			7°C	850	232.3	3.7	811	251.2	3.2	768	272.3	2.8	719	296.8	2.4	662	325.9	2.0
			8°C	875	236.1	3.7	834	255.0	3.3	791	276.2	2.9	740	300.7	2.5	683	329.7	2.1
			9°C	900	239.8	3.8	859	259.0	3.3	814	280.2	2.9	763	304.8	2.5	704	333.7	2.1
			10°C	925	243.9	3.8	883	263.1	3.4	838	284.4	2.9	786	309.1	2.5	725	337.9	2.1
230ADS	60 Hz	14.6	5°C	848	238.3	3.6	809	258.2	3.1	766	280.3	2.7	718	306.4	2.3	662	337.2	2.0
			6°C	874	242.1	3.6	834	262.1	3.2	791	284.3	2.8	742	310.3	2.4	685	341.1	2.0
			7°C	901	246.0	3.7	860	266.1	3.2	816	288.3	2.8	766	314.3	2.4	707	345.0	2.0
			8°C	926	249.8	3.7	885	270.0	3.3	840	292.3	2.9	789	318.3	2.5	729	348.9	2.1
			9°C	953	253.8	3.8	911	274.1	3.3	865	296.5	2.9	813	322.5	2.5	752	353.1	2.1
			10°C	980	257.9	3.8	937	278.2	3.4	891	300.7	3.0	838	326.8	2.6	775	357.3	2.2
250ADS	60 Hz	14.6	5°C	932	262.5	3.5	889	284.9	3.1	843	309.8	2.7	791	339.1	2.3	729	373.8	1.9
			6°C	960	266.7	3.6	917	289.1	3.2	870	314.1	2.8	816	343.4	2.4	753	378.0	2.0
			7°C	988	270.8	3.6	944	293.4	3.2	897	318.4	2.8	842	347.7	2.4	778	382.4	2.0
			8°C	1016	274.9	3.7	971	297.6	3.3	923	322.8	2.9	867	352.6	2.5	802	382.9	2.1
			9°C	1044	279.2	3.7	999	302.0	3.3	950	327.3	2.9	893	358.9	2.5	826	374.0	2.2
			10°C	1073	283.7	3.8	1027	306.5	3.3	976	331.9	2.9	919	361.3	2.5	851	395.8	2.2
280ADS	60 Hz	16.6	5°C	1013	287.2	3.5	965	310.1	3.1	913	334.5	2.7	854	361.8	2.4	784	392.3	2.0
			6°C	1044	292.0	3.6	995	315.1	3.2	942	339.9	2.8	882	367.5	2.4	811	398.2	2.0
			7°C	1075	296.9	3.6	1025	320.2	3.2	972	345.3	2.8	910	373.1	2.4	838	404.2	2.1
			8°C	1106	301.7	3.7	1055	325.2	3.2	1000	350.5	2.9	938	378.6	2.5	865	410.1	2.1
			9°C	1138	306.7	3.7	1086	330.5	3.3	1029	355.9	2.9	966	384.4	2.5	893	416.3	2.1
			10°C	1171	311.9	3.8	1117	335.8	3.3	1059	361.6	2.9	995	390.2	2.5	920	422.3	2.2
300ADS	60 Hz	23.5	5°C	1079	302.4	3.6	1028	327.8	3.1	974	354.6	2.7	911	383.0	2.4	835	412.5	2.0
			6°C	1112	307.8	3.6	1059	333.6	3.2	1002	360.7	2.8	940	389.8	2.4	862	420.0	2.1
			7°C	1145	313.4	3.7	1090	339.5	3.2	1032	366.8	2.8	967	396.4	2.4	890	427.7	2.1
			8°C	1178	319.1	3.7	1122	345.6	3.2	1061	373.1	2.8	995	403.1	2.5	918	435.4	2.1
			9°C	1212	324.8	3.7	1154	351.7	3.3	1092	379.6	2.9	1023	410.0	2.5	947	443.2	2.1
			10°C	1246	330.6	3.8	1187	357.9	3.3	1123	386.5	2.9	1052	417.0	2.5	973	450.4	2.2

Table 20: Performance Data 60 Hz Standard Efficiency non-VFD Models AWS320-470 (SI Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
320ADS	60 Hz	20.8	5°C	1211	331.9	3.6	1154	360.1	3.2	1093	389.5	2.8	1025	420.7	2.4	945	454.2	2.1
			6°C	1249	337.6	3.7	1190	366.4	3.2	1128	396.2	2.8	1058	428.0	2.5	977	462.0	2.1
			7°C	1286	343.5	3.7	1227	372.8	3.3	1163	403.1	2.9	1091	435.4	2.5	1009	469.9	2.1
			8°C	1325	349.4	3.8	1264	379.2	3.3	1199	410.1	2.9	1125	442.8	2.5	1041	477.9	2.2
			9°C	1363	355.5	3.8	1301	385.7	3.4	1235	417.1	3.0	1160	450.4	2.6	1074	486.1	2.2
			10°C	1402	361.5	3.9	1339	392.2	3.4	1271	424.1	3.0	1195	458.0	2.6	1107	494.3	2.2
350ADS	60 Hz	20.8	5°C	1296	363.5	3.6	1234	394.2	3.1	1169	426.2	2.7	1094	460.3	2.4	1007	497.0	2.0
			6°C	1335	369.9	3.6	1272	401.2	3.2	1205	433.8	2.8	1129	468.4	2.4	1040	505.7	2.1
			7°C	1374	376.4	3.7	1311	408.3	3.2	1242	441.4	2.8	1164	476.6	2.4	1073	514.4	2.1
			8°C	1414	383.0	3.7	1349	415.3	3.2	1279	449.0	2.8	1199	484.9	2.5	1106	523.3	2.1
			9°C	1455	389.7	3.7	1388	422.6	3.3	1316	456.9	2.9	1235	493.2	2.5	1140	532.4	2.1
			10°C	1495	396.3	3.8	1427	429.8	3.3	1354	464.6	2.9	1271	501.7	2.5	1175	541.4	2.2
375ADS	60 Hz	22.9	5°C	1390	390.0	3.6	1327	423.1	3.1	1257	460.1	2.7	1179	503.5	2.3	1087	555.1	2.0
			6°C	1432	396.1	3.6	1367	429.4	3.2	1297	466.5	2.8	1216	509.9	2.4	1122	561.3	2.0
			7°C	1473	402.3	3.7	1408	435.8	3.2	1337	473.1	2.8	1255	516.4	2.4	1158	567.7	2.0
			8°C	1514	408.4	3.7	1448	442.0	3.3	1376	479.5	2.9	1292	522.9	2.5	1193	574.1	2.1
			9°C	1557	414.8	3.8	1489	448.5	3.3	1415	486.1	2.9	1331	529.8	2.5	1230	580.8	2.1
			10°C	1600	421.4	3.8	1530	455.2	3.4	1455	492.8	3.0	1369	536.7	2.6	1267	587.8	2.2
400ATS	60 Hz	22.9	5°C	1480	416.5	3.6	1407	450.3	3.1	1330	487.2	2.7	1242	529.3	2.3	1139	577.7	2.0
			6°C	1526	423.7	3.6	1452	457.8	3.2	1372	494.9	2.8	1282	537.2	2.4	1177	585.7	2.0
			7°C	1573	430.9	3.7	1497	465.3	3.2	1415	502.7	2.8	1323	545.2	2.4	1215	593.8	2.0
			8°C	1619	438.1	3.7	1541	472.7	3.3	1457	510.4	2.9	1362	553.0	2.5	1253	601.9	2.1
			9°C	1667	445.6	3.7	1587	480.5	3.3	1501	518.5	2.9	1404	561.3	2.5	1292	610.4	2.1
			10°C	1715	453.3	3.8	1633	488.5	3.3	1545	526.7	2.9	1446	569.9	2.5	1332	619.0	2.2
425ATS	60 Hz	25.0	5°C	1551	439.8	3.5	1478	474.6	3.1	1398	511.7	2.7	1309	552.6	2.4	1206	598.4	2.0
			6°C	1599	447.0	3.6	1524	482.4	3.2	1442	520.0	2.8	1351	561.3	2.4	1245	607.5	2.0
			7°C	1646	454.3	3.6	1570	490.3	3.2	1487	528.4	2.8	1393	570.1	2.4	1285	616.6	2.1
			8°C	1692	461.6	3.7	1614	497.9	3.2	1530	536.6	2.9	1434	578.7	2.5	1324	625.7	2.1
			9°C	1741	469.2	3.7	1661	506.0	3.3	1575	545.1	2.9	1477	587.7	2.5	1364	635.2	2.1
			10°C	1789	476.8	3.8	1708	514.1	3.3	1620	553.7	2.9	1521	597.0	2.5	1405	644.8	2.2
445ATS	60 Hz	25.0	5°C	1664	470.7	3.5	1584	507.6	3.1	1497	546.1	2.7	1400	587.3	2.4	1289	632.0	2.0
			6°C	1713	478.5	3.6	1632	516.3	3.2	1544	555.4	2.8	1444	597.2	2.4	1330	642.6	2.1
			7°C	1762	486.3	3.6	1680	524.9	3.2	1591	564.8	2.8	1488	607.2	2.5	1371	653.3	2.1
			8°C	1810	494.0	3.7	1727	533.2	3.2	1636	573.9	2.9	1532	617.0	2.5	1412	663.7	2.1
			9°C	1861	502.1	3.7	1775	541.8	3.3	1683	583.4	2.9	1577	627.3	2.5	1455	674.6	2.2
			10°C	1912	510.2	3.7	1824	550.5	3.3	1730	592.7	2.9	1623	637.7	2.5	1498	685.6	2.2
470ATS	60 Hz	27.0	5°C	1769	501.5	3.5	1687	541.6	3.1	1599	583.3	2.7	1500	628.1	2.4	1385	676.5	2.0
			6°C	1821	509.6	3.6	1738	550.4	3.2	1648	592.8	2.8	1547	638.3	2.4	1429	687.5	2.1
			7°C	1873	517.6	3.6	1789	559.2	3.2	1698	602.4	2.8	1594	648.6	2.5	1474	698.5	2.1
			8°C	1925	525.5	3.7	1839	567.7	3.2	1746	611.8	2.9	1640	658.7	2.5	1518	709.4	2.1
			9°C	1978	533.9	3.7	1890	576.6	3.3	1796	621.4	2.9	1688	669.1	2.5	1563	720.6	2.2
			10°C	2032	542.3	3.7	1942	585.7	3.3	1845	631.1	2.9	1736	679.7	2.6	1608	732.0	2.2

Performance Data (non-VFD)

Table 21: Performance Data 60 Hz Standard Efficiency non-VFD Models AWS500-530 (SI Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
500ATS	60 Hz	29.1	5°C	1890	537.0	3.5	1804	580.1	3.1	1712	625.2	2.7	1607	673.6	2.4	1484	725.7	2.0
			6°C	1945	545.6	3.6	1858	589.4	3.2	1763	635.2	2.8	1657	684.4	2.4	1531	737.4	2.1
			7°C	2001	554.2	3.6	1912	598.8	3.2	1815	645.3	2.8	1706	695.2	2.5	1578	749.3	2.1
			8°C	2055	562.7	3.7	1964	607.9	3.2	1866	655.2	2.8	1754	705.8	2.5	1625	760.9	2.1
			9°C	2112	571.5	3.7	2019	617.4	3.3	1919	665.4	2.9	1804	716.8	2.5	1672	772.6	2.2
			10°C	2170	580.4	3.7	2074	627.0	3.3	1971	675.8	2.9	1855	728.1	2.5	1719	784.7	2.2
530ATS	60 Hz	31.2	5°C	1995	567.5	3.5	1907	613.5	3.1	1812	661.7	2.7	1705	713.5	2.4	1575	769.0	2.0
			6°C	2053	576.5	3.6	1963	623.2	3.1	1866	672.0	2.8	1756	724.7	2.4	1625	781.3	2.1
			7°C	2112	585.4	3.6	2019	632.8	3.2	1920	682.4	2.8	1807	735.9	2.5	1675	793.6	2.1
			8°C	2169	594.3	3.7	2075	642.3	3.2	1973	692.6	2.8	1858	746.8	2.5	1724	805.7	2.1
			9°C	2229	603.4	3.7	2132	652.1	3.3	2028	703.2	2.9	1910	758.1	2.5	1774	818.0	2.2
			10°C	2290	612.7	3.7	2191	662.1	3.3	2084	714.0	2.9	1963	769.6	2.6	1823	830.3	2.2

Table 22: Performance Data 60 Hz High Efficiency non-VFD Models AWS210-280ADH(SI Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
210ADH	60 Hz	12.5	5°C	733	182.7	4.0	714	204.7	3.5	693	225.9	3.1	668	248.2	2.7	633	275.1	2.3
			6°C	755	184.9	4.1	735	207.3	3.5	714	228.6	3.1	688	251.0	2.7	652	277.7	2.3
			7°C	777	187.2	4.2	757	209.8	3.6	735	231.4	3.2	708	253.8	2.8	671	280.3	2.4
			8°C	799	189.3	4.2	778	212.4	3.7	755	234.1	3.2	728	256.6	2.8	691	283.1	2.4
			9°C	822	191.7	4.3	800	215.2	3.7	777	237.1	3.3	748	259.7	2.9	710	285.9	2.5
			10°C	845	194.2	4.4	823	218.0	3.8	798	240.2	3.3	769	262.7	2.9	730	288.8	2.5
230ADH	60 Hz	14.6	5°C	827	205.9	4.0	804	230.9	3.5	781	254.8	3.1	752	280.0	2.7	714	310.4	2.3
			6°C	851	208.3	4.1	828	233.7	3.5	804	257.9	3.1	775	283.1	2.7	736	313.3	2.3
			7°C	876	210.7	4.2	853	236.6	3.6	828	261.0	3.2	798	286.3	2.8	758	316.3	2.4
			8°C	901	213.1	4.2	877	239.4	3.7	851	264.1	3.2	820	289.5	2.8	779	319.3	2.4
			9°C	926	215.7	4.3	901	242.4	3.7	875	267.3	3.3	843	292.8	2.9	801	322.5	2.5
			10°C	951	218.2	4.4	926	245.4	3.8	899	270.7	3.3	867	296.3	2.9	824	325.8	2.5
250ADH	60 Hz	14.6	5°C	901	231.0	3.9	877	257.2	3.4	850	283.0	3.0	817	311.4	2.6	772	346.3	2.2
			6°C	928	234.0	4.0	903	260.6	3.5	875	286.6	3.1	841	314.9	2.7	795	349.6	2.3
			7°C	954	237.0	4.0	929	264.0	3.5	900	290.2	3.1	865	318.5	2.7	819	353.0	2.3
			8°C	980	240.0	4.1	954	267.3	3.6	925	293.7	3.1	889	322.2	2.8	842	356.4	2.4
			9°C	1007	243.1	4.1	980	270.8	3.6	951	297.6	3.2	914	325.9	2.8	865	360.0	2.4
			10°C	1033	246.3	4.2	1006	274.4	3.7	976	301.4	3.2	938	329.9	2.8	889	363.8	2.4
280ADH	60 Hz	16.6	5°C	966	244.5	4.0	939	272.7	3.4	910	300.1	3.0	874	329.5	2.7	824	365.4	2.3
			6°C	995	247.6	4.0	967	276.2	3.5	937	303.9	3.1	901	333.5	2.7	850	369.1	2.3
			7°C	1024	250.9	4.1	996	279.9	3.6	965	307.8	3.1	927	337.4	2.7	877	372.9	2.4
			8°C	1053	254.1	4.1	1024	283.6	3.6	992	311.7	3.2	953	341.3	2.8	902	376.8	2.4
			9°C	1082	257.5	4.2	1053	287.4	3.7	1020	315.8	3.2	980	345.6	2.8	928	380.8	2.4
			10°C	1112	260.9	4.3	1082	291.2	3.7	1048	319.9	3.3	1008	349.9	2.9	954	384.9	2.5

Table 23: Performance Data 60 Hz High Efficiency non-VFD Models AWS300ADH-470 (SI Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature													
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
300ADH	60 Hz	16.6	5°C	1042	273.1	3.8	1014	303.2	3.3	983	333.3	2.9	943	366.7	2.6	886	407.9	2.2
			6°C	1072	276.8	3.9	1043	307.2	3.4	1011	337.5	3.0	971	371.1	2.6	913	412.0	2.2
			7°C	1102	280.5	3.9	1072	311.3	3.4	1039	341.8	3.0	998	375.4	2.7	941	416.3	2.3
			8°C	1132	284.3	4.0	1101	315.4	3.5	1067	346.1	3.1	1024	380.3	2.7	967	416.2	2.3
			9°C	1164	288.4	4.0	1131	319.8	3.5	1096	350.6	3.1	1052	386.8	2.7	994	404.9	2.5
			10°C	1196	292.6	4.1	1162	324.3	3.6	1125	355.3	3.2	1079	389.0	2.8	1020	429.5	2.4
320ADH	60 Hz	20.8	5°C	1161	304.2	3.8	1129	337.2	3.3	1095	369.0	3.0	1054	402.0	2.6	999	439.7	2.3
			6°C	1196	308.2	3.9	1163	341.8	3.4	1129	374.1	3.0	1086	407.4	2.7	1030	445.1	2.3
			7°C	1232	312.3	3.9	1198	346.4	3.5	1162	379.1	3.1	1118	412.9	2.7	1061	450.7	2.4
			8°C	1266	316.4	4.0	1232	350.9	3.5	1195	384.2	3.1	1150	418.2	2.7	1091	456.3	2.4
			9°C	1302	320.5	4.1	1267	355.7	3.6	1229	389.5	3.2	1183	423.8	2.8	1123	462.0	2.4
			10°C	1338	324.7	4.1	1302	360.6	3.6	1263	394.9	3.2	1216	429.5	2.8	1154	467.9	2.5
350ADH	60 Hz	20.8	5°C	1196	296.6	4.0	1164	341.1	3.4	1128	358.6	3.1	1084	391.0	2.8	1025	426.6	2.4
			6°C	1231	301.2	4.1	1198	346.4	3.5	1161	364.2	3.2	1116	397.1	2.8	1055	433.2	2.4
			7°C	1266	305.9	4.1	1232	351.8	3.5	1194	370.0	3.2	1148	403.4	2.8	1086	439.9	2.5
			8°C	1302	310.7	4.2	1267	357.4	3.5	1228	375.8	3.3	1180	409.7	2.9	1117	446.6	2.5
			9°C	1338	315.5	4.2	1302	363.0	3.6	1262	381.6	3.3	1213	416.0	2.9	1149	453.5	2.5
			10°C	1374	320.4	4.3	1337	368.6	3.6	1296	387.6	3.3	1246	422.5	2.9	1180	460.4	2.6
380ADH	60 Hz	22.9	5°C	1299	328.8	4.0	1265	370.7	3.4	1227	397.9	3.1	1180	434.1	2.7	1118	474.0	2.4
			6°C	1336	333.8	4.0	1301	376.3	3.5	1262	404.0	3.1	1214	440.8	2.8	1150	481.2	2.4
			7°C	1374	338.9	4.1	1338	382.1	3.5	1298	410.2	3.2	1249	447.5	2.8	1183	488.4	2.4
			8°C	1411	344.0	4.1	1374	387.9	3.5	1334	416.5	3.2	1283	454.3	2.8	1216	495.8	2.5
			9°C	1449	349.1	4.2	1411	393.7	3.6	1370	422.7	3.2	1318	461.1	2.9	1250	503.2	2.5
			10°C	1487	354.4	4.2	1449	399.6	3.6	1406	429.1	3.3	1353	468.1	2.9	1283	510.7	2.5
405ADH	60 Hz	25.0	5°C	1402	356.3	3.9	1366	401.7	3.4	1326	431.3	3.1	1277	470.8	2.7	1210	514.5	2.4
			6°C	1442	361.6	4.0	1404	407.7	3.4	1364	437.8	3.1	1313	477.9	2.7	1245	522.1	2.4
			7°C	1481	366.9	4.0	1443	413.8	3.5	1401	444.4	3.2	1349	485.1	2.8	1280	529.9	2.4
			8°C	1520	372.2	4.1	1482	419.9	3.5	1439	451.0	3.2	1386	492.3	2.8	1315	537.7	2.4
			9°C	1560	377.7	4.1	1521	426.0	3.6	1477	457.6	3.2	1423	499.6	2.8	1351	545.5	2.5
			10°C	1601	383.2	4.2	1560	432.3	3.6	1515	464.3	3.3	1460	506.9	2.9	1387	553.4	2.5
445ATH	60 Hz	25.0	5°C	1559	397.2	3.9	1515	440.7	3.4	1467	484.3	3.0	1406	533.3	2.6	1325	594.2	2.2
			6°C	1605	402.7	4.0	1560	446.7	3.5	1510	490.6	3.1	1448	539.5	2.7	1365	599.9	2.3
			7°C	1652	408.3	4.0	1606	452.9	3.5	1555	497.1	3.1	1490	545.9	2.7	1405	605.9	2.3
			8°C	1698	413.9	4.1	1651	459.0	3.6	1598	503.6	3.2	1531	552.3	2.8	1444	611.8	2.4
			9°C	1745	419.6	4.2	1697	465.5	3.6	1643	510.3	3.2	1574	559.2	2.8	1485	618.3	2.4
			10°C	1791	425.5	4.2	1743	471.9	3.7	1688	517.3	3.3	1618	566.2	2.9	1526	625.0	2.4
470ATH	60 Hz	27.0	5°C	1663	428.3	3.9	1618	473.4	3.4	1569	518.5	3.0	1508	568.0	2.7	1424	627.4	2.3
			6°C	1711	434.2	3.9	1665	479.8	3.5	1614	525.3	3.1	1551	575.1	2.7	1466	634.4	2.3
			7°C	1759	440.1	4.0	1712	486.3	3.5	1660	532.3	3.1	1595	582.3	2.7	1508	641.6	2.4
			8°C	1806	446.0	4.1	1758	492.7	3.6	1705	539.2	3.2	1638	589.4	2.8	1549	648.7	2.4
			9°C	1855	451.9	4.1	1806	499.5	3.6	1751	546.5	3.2	1682	596.8	2.8	1592	656.1	2.4
			10°C	1903	458.1	4.2	1854	506.3	3.7	1798	553.9	3.2	1727	604.6	2.9	1634	663.8	2.5

Performance Data (non-VFD)

Table 24: Performance Data 60 Hz High Efficiency non-VFD Models AWS500-530(SI Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
500ATH	60 Hz	29.1	5°C	1752	466.2	3.8	1706	513.1	3.3	1656	560.2	3.0	1592	582.8	2.7	1523	683.1	2.2
			6°C	1801	472.5	3.8	1754	520.1	3.4	1703	567.8	3.0	1638	587.5	2.8	1555	693.3	2.2
			7°C	1851	478.8	3.9	1803	527.2	3.4	1750	575.5	3.0	1684	627.1	2.7	1596	686.2	2.3
			8°C	1900	485.1	3.9	1851	534.2	3.5	1797	583.0	3.1	1729	635.1	2.7	1639	694.5	2.4
			9°C	1951	491.7	4.0	1901	541.4	3.5	1845	590.9	3.1	1775	643.5	2.8	1683	703.2	2.4
			10°C	2002	498.2	4.0	1950	548.7	3.6	1893	599.0	3.2	1822	652.0	2.8	1728	712.1	2.4
530ATH	60 Hz	31.2	5°C	1862	505.2	3.7	1815	554.1	3.3	1763	603.2	2.9	1699	654.9	2.6	1611	711.8	2.3
			6°C	1914	512.0	3.7	1865	561.7	3.3	1812	611.5	3.0	1747	664.1	2.6	1657	721.8	2.3
			7°C	1966	518.9	3.8	1916	569.3	3.4	1862	619.9	3.0	1794	673.2	2.7	1704	731.9	2.3
			8°C	2017	525.6	3.8	1966	576.9	3.4	1910	628.2	3.0	1841	682.1	2.7	1749	741.7	2.4
			9°C	2071	532.7	3.9	2018	584.6	3.5	1961	636.8	3.1	1889	691.4	2.7	1796	751.7	2.4
			10°C	2125	539.8	3.9	2071	592.5	3.5	2012	645.5	3.1	1938	700.9	2.8	1842	761.8	2.4

Table 25: Performance Data 60 Hz Premium Efficiency non-VFD Models AWS210-280 (SI Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
210ADP	60 Hz	16.6	5°C	743	173.8	4.3	730	195.1	3.7	714	215.6	3.3	697	237.2	2.9	671	263.3	2.5
			6°C	766	175.9	4.4	751	197.5	3.8	736	218.2	3.4	718	239.8	3.0	692	265.7	2.6
			7°C	788	178.1	4.4	774	200.0	3.9	757	220.9	3.4	739	242.5	3.0	712	268.3	2.7
			8°C	810	180.2	4.5	795	202.5	3.9	778	223.5	3.5	759	245.2	3.1	733	270.9	2.7
			9°C	833	182.4	4.6	818	205.1	4.0	800	226.4	3.5	781	248.1	3.1	753	273.6	2.8
			10°C	856	184.8	4.6	841	207.8	4.0	823	229.2	3.6	802	251.0	3.2	774	276.4	2.8
230ADP	60 Hz	18.7	5°C	833	196.6	4.2	817	220.8	3.7	800	244.0	3.3	780	268.4	2.9	753	298.0	2.5
			6°C	858	198.9	4.3	842	223.5	3.8	824	246.9	3.3	804	271.4	3.0	776	300.8	2.6
			7°C	883	201.2	4.4	867	226.2	3.8	848	250.0	3.4	828	282.1	2.9	799	242.8	3.3
			8°C	908	203.5	4.5	891	229.0	3.9	872	252.9	3.4	851	296.9	2.9	822	151.4	5.4
			9°C	933	205.9	4.5	916	231.8	4.0	896	256.0	3.5	875	276.7	3.2	845	341.7	2.5
			10°C	959	208.3	4.6	941	234.7	4.0	921	259.3	3.6	899	284.0	3.2	869	312.8	2.8
250ADP	60 Hz	18.7	5°C	910	220.8	4.1	892	246.2	3.6	872	271.3	3.2	849	298.8	2.8	815	332.8	2.4
			6°C	936	223.6	4.2	918	249.4	3.7	898	274.7	3.3	874	302.2	2.9	840	335.9	2.5
			7°C	963	226.5	4.3	945	252.7	3.7	924	278.1	3.3	899	305.6	2.9	864	339.2	2.5
			8°C	989	229.3	4.3	971	255.9	3.8	949	281.6	3.4	924	309.1	3.0	889	342.5	2.6
			9°C	1016	232.3	4.4	997	259.2	3.8	975	285.3	3.4	949	312.7	3.0	913	346.0	2.6
			10°C	1043	235.4	4.4	1024	262.7	3.9	1001	288.9	3.5	975	316.6	3.1	938	349.6	2.7
280ADP	60 Hz	20.8	5°C	984	236.9	4.2	965	264.7	3.6	942	291.7	3.2	917	320.7	2.9	879	356.1	2.5
			6°C	1014	240.0	4.2	994	268.1	3.7	971	295.4	3.3	945	324.5	2.9	907	359.7	2.5
			7°C	1044	243.1	4.3	1023	271.7	3.8	999	299.2	3.3	973	328.3	3.0	935	363.4	2.6
			8°C	1073	246.3	4.4	1052	275.3	3.8	1028	303.0	3.4	1000	332.2	3.0	962	367.2	2.6
			9°C	1103	249.5	4.4	1081	278.9	3.9	1057	307.0	3.4	1028	336.3	3.1	990	371.1	2.7
			10°C	1133	252.8	4.5	1111	282.7	3.9	1086	311.0	3.5	1057	340.5	3.1	1017	375.2	2.7

Table 26: Performance Data 60 Hz Premium Efficiency non-VFD Models AWS300-350ADP(SI Units

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
300ADP	60 Hz	20.8	5°C	1056	262.1	4.0	1036	291.4	3.6	1012	320.8	3.2	983	353.4	2.8	938	393.6	2.4
			6°C	1086	265.6	4.1	1065	295.3	3.6	1041	324.9	3.2	1012	357.6	2.8	968	397.6	2.4
			7°C	1116	269.2	4.1	1095	299.2	3.7	1070	329.0	3.3	1040	361.8	2.9	997	401.8	2.5
			8°C	1147	272.8	4.2	1124	303.1	3.7	1098	333.2	3.3	1068	366.5	2.9	1025	401.6	2.6
			9°C	1179	276.8	4.3	1155	307.3	3.8	1128	337.5	3.3	1096	372.7	2.9	1053	390.7	2.7
			10°C	1211	280.8	4.3	1187	311.7	3.8	1158	342.0	3.4	1125	374.8	3.0	1081	414.5	2.6
320ADP	60 Hz	22.9	5°C	1176	289.0	4.1	1153	320.8	3.6	1127	351.6	3.2	1098	383.4	2.9	1058	419.9	2.5
			6°C	1211	292.7	4.1	1188	325.1	3.7	1161	356.4	3.3	1132	388.5	2.9	1091	425.1	2.6
			7°C	1247	296.6	4.2	1223	329.5	3.7	1196	361.2	3.3	1166	393.7	3.0	1124	430.5	2.6
			8°C	1282	300.5	4.3	1257	333.8	3.8	1229	366.0	3.4	1198	398.8	3.0	1156	435.8	2.7
			9°C	1318	304.4	4.3	1293	338.4	3.8	1264	371.1	3.4	1232	404.1	3.0	1189	441.3	2.7
			10°C	1355	308.5	4.4	1329	343.0	3.9	1300	376.2	3.5	1267	409.6	3.1	1223	446.9	2.7
350ADP	60 Hz	25.0	5°C	1288	325.6	4.0	1263	357.4	3.5	1234	389.3	3.2	1201	411.3	2.9	1154	457.2	2.5
			6°C	1326	330.3	4.0	1300	362.7	3.6	1271	395.1	3.2	1237	405.0	3.1	1189	461.7	2.6
			7°C	1364	335.2	4.1	1338	368.0	3.6	1307	401.0	3.3	1273	409.1	3.1	1224	468.1	2.6
			8°C	1402	339.8	4.1	1375	373.2	3.7	1343	406.7	3.3	1308	421.6	3.1	1258	475.9	2.6
			9°C	1440	344.7	4.2	1413	378.7	3.7	1381	412.6	3.3	1344	452.3	3.0	1294	487.3	2.7
			10°C	1479	349.6	4.2	1451	384.1	3.8	1419	418.7	3.4	1380	454.4	3.0	1329	493.5	2.7

Part Load Performance Data

Table 27: Part-load Performance Data 60 Hz (non-VFD Models) (I-P Units)

Model	Power	% Load	Capacity (Tons)	Power (kW)	EER	IPLV
175 ADS	60 Hz	100	173	216.0	9.6	13.2
		75	130	128.0	12.2	
		50	86	75.4	13.8	
		25	43	33.9	15.3	
190 ADS	60 Hz	100	196	246.0	9.6	13.4
		75	147	143.1	12.3	
		50	98	84.3	14.0	
		25	49	37.9	15.5	
210 ADS	60 Hz	100	216	271.0	9.6	13.1
		75	162	161.4	12.1	
		50	108	95.1	13.6	
		25	54	42.8	15.2	
230 ADS	60 Hz	100	230	287.0	9.6	13.4
		75	172	168.2	12.3	
		50	115	99.1	13.9	
		25	57	44.6	15.5	
250 ADS	60 Hz	100	252	317.0	9.6	13.1
		75	189	188.7	12.0	
		50	126	111.2	13.6	
		25	63	50.0	15.1	
280 ADS	60 Hz	100	274	343.5	9.6	13.1
		75	205	203.9	12.1	
		50	137	120.1	13.7	
		25	68	54.1	15.2	
300 ADS	60 Hz	100	291	364.7	9.6	13.1
		75	218	217.4	12.0	
		50	145,4	128.8	13.5	
		25	73	56.4	15.5	
320 ADS	60 Hz	100	327	400.8	9.8	13.5
		75	246	238.1	12.4	
		50	164	141.1	13.9	
		25	82	61.8	15.9	
350 ADS	60 Hz	100	349	438.8	9.6	13.1
		75	262	261.3	12.0	
		50	175	154.9	13.5	
		25	87	67.8	15.5	
375 ADS	60 Hz	100	377	471.0	9.6	13.3
		75	282	276.3	12.3	
		50	188	162.8	13.9	
		25	94	73.2	15.4	
400 ADS	60 Hz	100	398	500.1	9.6	13.1
		75	299	297.5	12.1	
		50	199	175.3	13.6	
		25	100	78.8	15.2	
425 ADS	60 Hz	100	419	525.7	9.6	13.1
		75	314	312.5	12.1	
		50	209	184.1	13.6	
		25	105	82.8	15.2	
445 ADS	60 Hz	100	448	561.8	9.6	13.1
		75	336	334.6	12.0	
		50	224	197.2	13.6	
		25	112	88.7	15.1	
470 ADS	60 Hz	100	478	599.3	9.6	13.1
		75	359	356.6	12.1	
		50	239	210.1	13.7	
		25	120	94.5	15.2	
500 ADS	60 Hz	100	511	642.0	9.6	13.1
		75	384	382.7	12.0	
		50	256	225.5	13.6	
		25	128	101.4	15.1	

Model	Power	% Load	Capacity (Tons)	Power (kW)	EER	IPLV
530 ADS	60 Hz	100	541	679.1	9.6	13.1
		75	406	404.3	12.0	
		50	270	238.2	13.6	
		25	135	107.2	15.1	
210 ADH	60 Hz	100	207	230.5	10.8	13.9
		75	155	146.7	12.7	
		50	103	86.0	14.4	
		25	52	38.9	16.0	
230 ADH	60 Hz	100	233	260.0	10.8	14.0
		75	175	163.1	12.9	
		50	117	95.6	14.6	
		25	58	43.3	16.2	
250 ADH	60 Hz	100	254	289.0	10.5	13.6
		75	190	183.2	12.5	
		50	127	107.4	14.2	
		25	63	48.6	15.7	
280 ADH	60 Hz	100	272	306.5	10.7	14.0
		75	204	190.4	12.9	
		50	136	111.6	14.6	
		25	68	50.5	16.1	
300 ADH	60 Hz	100	293	340.4	10.3	13.4
		75	220	214.4	12.3	
		50	146	125.7	14.0	
		25	73	56.9	15.4	
320 ADH	60 Hz	100	327	377.5	10.4	13.7
		75	245	234.1	12.6	
		50	164	137.2	14.3	
		25	82	62.1	15.8	
350 ADH	60 Hz	100	336	383.2	10.5	14.1
		75	252	235.8	12.8	
		50	168	137.7	14.7	
		25	84	61.8	16.3	
380 ADH	60 Hz	100	366	416.3	10.5	13.9
		75	274	258.8	12.7	
		50	183	151.2	14.5	
		25	92	67.9	16.2	
405 ADH	60 Hz	100	395	451.2	10.5	13.9
		75	296	280.4	12.7	
		50	198	163.8	14.5	
		25	99	73.5	16.1	
445 ADH	60 Hz	100	438	495.0	10.6	13.9
		75	329	308.6	12.8	
		50	219	180.9	14.5	
		25	110	81.9	16.1	
470 ADH	60 Hz	100	468	530.0	10.6	13.9
		75	351	331.2	12.7	
		50	234	194.1	14.5	
		25	117	87.9	16.0	
500 ADH	60 Hz	100	493	573.0	10.3	13.4
		75	370	360.1	12.3	
		50	247	211.1	14.0	
		25	123	95.5	15.5	
530 ADH	60 Hz	100	525	617.2	10.2	13.4
		75	394	384.0	12.3	
		50	262	225.1	14.0	
		25	131	101.9	15.5	

Table 28: Part-load Performance Data 60 Hz (non-VFD and VFD Models) (I-P Units)

Model	Power	% Load	Capacity (Tons)	Power (kW)	EER	IPLV
210 ADP	60 Hz	100	213	220.0	11.6	15.1
		75	160	138.6	13.8	
		50	107	81.3	15.7	
		25	53	36.8	17.4	
230 ADP	60 Hz	100	239	249.0	11.5	15.1
		75	179	155.8	13.8	
		50	119	91.3	15.7	
		25	60	41.3	17.3	
250 ADP	60 Hz	100	260	277.0	11.3	14.7
		75	195	173.5	13.5	
		50	130	101.7	15.3	
		25	65	46.0	17.0	
280 ADP	60 Hz	100	282	298.0	11.3	14.9
		75	211	185.4	13.7	
		50	141	108.7	15.5	
		25	70	49.2	17.2	
300 ADP	60 Hz	100	301	327.6	11.1	14.4
		75	226	205.8	13.2	
		50	151	120.7	15.0	
		25	75	54.6	16.6	
320 ADP	60 Hz	100	337	359.6	11.2	14.6
		75	253	225.9	13.4	
		50	168	132.5	15.3	
		25	84	59.9	16.9	
350 ADP	60 Hz	100	368	399.1	11.1	14.4
		75	276	250.7	13.2	
		50	184	147.0	15.0	
		25	92	66.5	16.6	
150ADS **VFD**	60 Hz	100	154	192.3	9.6	16.4
		75	116	97.1	14.3	
		50	77	52.3	17.7	
		25	39	23.7	19.5	
175ADS **VFD**	60 Hz	100	170	208.8	9.8	16.4
		75	128	108.0	14.2	
		50	85	57.8	17.7	
		25	43	25.0	20.4	
190ADS **VFD**	60 Hz	100	185	230.5	9.6	16.4
		75	139	119.4	13.9	
		50	93	62.4	17.8	
		25	46	27.4	20.3	
210ADH **VFD**	60 Hz	100	207	241.2	10.3	18.5
		75	155	111.1	16.8	
		50	104	63.4	19.6	
		25	52	29.3	21.2	
230ADH **VFD**	60 Hz	100	233	273.2	10.2	18.4
		75	175	127.8	16.4	
		50	117	71.8	19.5	
		25	58	32.4	21.6	
250ADH **VFD**	60 Hz	100	254	315.1	9.7	18.2
		75	190	142.5	16.0	
		50	127	77.6	19.6	
		25	63	35.3	21.6	
280ADH **VFD**	60 Hz	100	272	322.8	10.1	18.5
		75	204	151.0	16.2	
		50	136	82.5	19.8	
		25	68	36.6	22.3	
300ADH **VFD**	60 Hz	100	293	365.9	9.6	18.3
		75	220	165.0	16.0	
		50	146	89.1	19.7	
		25	73	40.3	21.8	

Model	Power	% Load	Capacity (Tons)	Power (kW)	EER	IPLV
320ADH **VFD**	60 Hz	100	327	388.6	10.1	18.5
		75	245	180.3	16.3	
		50	164	99.6	19.7	
		25	82	44.6	22.0	
350ADH **VFD**	60 Hz	100	336	409.6	9.9	18.4
		75	252	187.5	16.1	
		50	168	102.3	19.7	
		25	84	46.0	21.9	
380ADH **VFD**	60 Hz	100	366	447.1	9.8	18.6
		75	274	204.2	16.1	
		50	183	109.3	20.1	
		25	91	48.0	22.8	
405ADH **VFD**	60 Hz	100	395	484.5	9.8	18.5
		75	296	220.9	16.1	
		50	197	119.4	19.8	
		25	99	53.1	22.3	
445ATH **VFD**	60 Hz	100	438	537.4	9.8	18.7
		75	328	242.6	16.2	
		50	219	130.8	20.1	
		25	109	56.7	23.2	
470ATH **VFD**	60 Hz	100	468	572.0	9.8	18.7
		75	351	259.7	16.2	
		50	234	138.6	20.2	
		25	117	62.0	22.6	
500ATH **VFD**	60 Hz	100	493	602.0	9.8	18.5
		75	370	273.8	16.2	
		50	247	150.3	19.7	
		25	123	64.2	23.0	
530ATH **VFD**	60 Hz	100	525	635.9	9.9	18.8
		75	394	289.6	16.3	
		50	262	157.7	20.0	
		25	131	66.8	23.6	
210ADP **VFD**	60 Hz	100	213	226.8	11.3	19.2
		75	160	107.8	17.8	
		50	107	63.9	20.0	
		25	53	29.2	21.9	
230ADP **VFD**	60 Hz	100	239	256.7	11.2	19.2
		75	179	122.5	17.5	
		50	119	71.1	20.1	
		25	60	32.3	22.2	
250ADP **VFD**	60 Hz	100	260	285.6	10.9	19.3
		75	195	135.0	17.3	
		50	130	76.5	20.4	
		25	65	34.5	22.6	
280ADP **VFD**	60 Hz	100	282	307.2	11.0	19.4
		75	211	146.3	17.3	
		50	141	82.6	20.4	
		25	70	36.6	23.1	
300ADP **VFD**	60 Hz	100	302	337.8	10.7	19.2
		75	226	157.7	17.2	
		50	151	88.4	20.4	
		25	75	39.7	22.7	
320ADP **VFD**	60 Hz	100	337	370.8	10.9	19.3
		75	253	176.4	17.2	
		50	168	98.8	20.5	
		25	84	44.6	22.7	
350ADP **VFD**	60 Hz	100	368	411.4	10.7	19.3
		75	276	192.6	17.2	
		50	184	108.2	20.4	
		25	92	48.3	22.9	

Performance Data (VFD)

Table 29: Performance Data 60 Hz Standard and High Efficiency VFD Models (I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER
150ADS *VFD*	60 Hz	10.4	40°F	161	148.3	13.0	153	165.9	11.0	142	187.9	9.1	129	207.9	7.5	92	161.1	6.8
			42°F	167	150.8	13.3	159	168.3	11.3	148	190.0	9.4	135	209.8	7.7	95	160.3	7.1
			44°F	174	153.5	13.6	165	170.8	11.6	**154**	**192.3**	**9.6**	139	210.1	7.9	98	158.4	7.5
			46°F	181	156.3	13.9	171	173.4	11.8	160	194.7	9.9	143	208.9	8.2	101	155.8	7.8
			48°F	188	159.4	14.1	178	176.1	12.1	166	197.3	10.1	147	206.3	8.5	103	152.7	8.1
			50°F	195	162.6	14.4	184	178.9	12.4	172	199.9	10.3	150	202.5	8.9	105	149.4	8.5
175ADS *VFD*	60 Hz	12.5	40°F	177	163.6	12.9	168	181.5	11.1	157	203.5	9.3	145	227.2	7.6	118	216.8	6.5
			42°F	184	166.3	13.2	174	184.2	11.4	164	206.1	9.5	150	228.8	7.9	121	212.0	6.9
			44°F	191	169.0	13.5	181	186.9	11.6	**170**	**208.8**	**9.8**	156	230.6	8.1	124	206.8	7.2
			46°F	198	171.9	13.8	188	189.7	11.9	177	211.6	10.0	162	232.0	8.4	126	201.3	7.5
			48°F	205	174.8	14.1	195	192.7	12.2	183	214.5	10.3	168	233.9	8.6	128	195.5	7.8
			50°F	213	177.8	14.4	202	195.8	12.4	190	217.6	10.5	174	236.4	8.8	129	189.4	8.2
190ADS *VFD*	60 Hz	12.5	40°F	193	181.7	12.7	183	200.8	10.9	171	223.9	9.2	158	250.1	7.6	136	253.6	6.5
			42°F	200	184.8	13.0	190	204.0	11.2	178	227.2	9.4	164	251.9	7.8	138	244.9	6.8
			44°F	208	188.0	13.3	197	207.3	11.4	**185**	**230.5**	**9.6**	170	253.2	8.1	139	236.0	7.1
			46°F	216	191.3	13.5	205	210.7	11.7	192	234.0	9.8	176	255.5	8.3	140	227.1	7.4
			48°F	224	194.6	13.8	213	214.2	11.9	199	237.6	10.1	183	258.8	8.5	141	218.4	7.8
			50°F	232	198.0	14.0	220	217.8	12.1	207	241.4	10.3	190	261.9	8.7	142	210.0	8.1
210ADH *VFD*	60 Hz	12.5	40°F	206	185.0	13.4	200	210.3	11.4	194	234.8	9.9	186	261.2	8.5	175	292.8	7.2
			42°F	213	187.4	13.7	207	213.2	11.6	200	237.9	10.1	192	264.4	8.7	181	295.6	7.3
			44°F	220	189.8	13.9	214	216.2	11.9	**207**	**241.2**	**10.3**	198	267.7	8.9	187	298.6	7.5
			46°F	227	192.2	14.2	221	219.1	12.1	213	244.3	10.5	204	270.9	9.1	186	291.3	7.7
			48°F	234	194.8	14.4	228	222.3	12.3	220	247.8	10.7	211	274.4	9.2	186	283.3	7.9
			50°F	242	197.6	14.7	235	225.5	12.5	227	251.3	10.8	217	277.9	9.4	185	275.0	8.1
230ADH *VFD*	60 Hz	14.6	40°F	233	209.2	13.3	226	238.3	11.4	218	266.0	9.9	209	296.0	8.5	197	331.7	7.1
			42°F	240	211.8	13.6	233	241.5	11.6	226	269.5	10.0	216	299.5	8.7	204	334.9	7.3
			44°F	248	214.5	13.9	241	244.7	11.8	**233**	**273.2**	**10.2**	223	303.3	8.8	211	338.4	7.5
			46°F	256	217.2	14.1	248	248.1	12.0	240	276.7	10.4	230	306.9	9.0	218	341.8	7.6
			48°F	264	220.1	14.4	256	251.4	12.2	248	280.5	10.6	238	310.8	9.2	224	345.4	7.8
			50°F	272	222.9	14.6	264	254.9	12.4	256	284.5	10.8	245	314.8	9.3	232	349.3	8.0
250ADH *VFD*	60 Hz	14.6	40°F	254	243.9	12.5	246	275.4	10.7	238	306.6	9.3	227	341.7	8.0	213	384.2	6.7
			42°F	262	247.2	12.7	254	279.3	10.9	246	310.7	9.5	235	345.8	8.1	220	387.9	6.8
			44°F	271	250.8	12.9	263	283.5	11.1	**254**	**315.1**	**9.7**	242	350.2	8.3	228	392.0	7.0
			46°F	279	254.3	13.1	270	287.4	11.3	261	319.4	9.8	250	354.5	8.5	235	396.1	7.1
			48°F	287	257.9	13.4	279	291.7	11.5	269	324.1	10.0	257	359.1	8.6	242	400.4	7.3
			50°F	296	261.7	13.6	287	296.0	11.6	278	328.6	10.1	265	363.9	8.7	250	405.0	7.4
280ADH *VFD*	60 Hz	16.6	40°F	272	249.1	13.1	264	282.0	11.2	255	313.8	9.7	243	348.9	8.3	227	391.2	7.0
			42°F	281	252.6	13.3	272	286.0	11.4	263	318.2	9.9	251	353.5	8.5	235	395.2	7.1
			44°F	290	256.3	13.6	282	290.2	11.6	**272**	**322.8**	**10.1**	260	358.1	8.7	244	399.7	7.3
			46°F	299	259.9	13.8	290	294.5	11.8	280	327.3	10.3	268	362.6	8.9	252	404.1	7.5
			48°F	309	263.7	14.0	299	298.9	12.0	289	332.1	10.5	276	367.6	9.0	255	401.3	7.6
			50°F	318	267.6	14.3	309	303.3	12.2	298	336.9	10.6	285	372.6	9.2	258	398.0	7.8
300ADH *VFD*	60 Hz	16.6	40°F	294	284.3	12.4	285	320.0	10.7	275	355.8	9.3	262	396.5	7.9	244	446.0	6.6
			42°F	303	288.5	12.6	294	324.7	10.9	284	360.7	9.4	271	401.7	8.1	252	450.6	6.7
			44°F	312	292.8	12.8	303	329.6	11.0	**293**	**365.9**	**9.6**	279	406.9	8.2	261	455.7	6.9
			46°F	322	297.1	13.0	312	334.3	11.2	302	371.0	9.8	288	412.1	8.4	270	460.9	7.0
			48°F	332	302.0	13.2	322	339.5	11.4	311	376.3	9.9	296	417.4	8.5	278	436.0	7.7
			50°F	342	306.9	13.4	332	344.9	11.5	320	381.9	10.1	305	423.0	8.7	277	455.2	7.3

Table 30: Performance Data 60 Hz High Efficiency VFD Models (I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER
320ADH *VFD*	60 Hz	20.8	40°F	327	303.5	12.9	317	340.9	11.2	306	377.0	9.7	293	415.1	8.5	261	431.7	7.2
			42°F	338	307.7	13.2	327	346.0	11.4	317	382.7	9.9	303	421.1	8.6	264	428.0	7.4
			44°F	349	312.3	13.4	339	351.3	11.6	**327**	**388.6**	**10.1**	313	427.5	8.8	268	424.4	7.6
			46°F	360	316.8	13.6	349	356.4	11.8	338	394.2	10.3	323	433.6	8.9	271	420.5	7.7
			48°F	371	321.3	13.9	360	361.8	12.0	348	400.3	10.4	333	439.9	9.1	280	426.3	7.9
			50°F	383	326.0	14.1	371	367.3	12.1	359	406.5	10.6	344	446.5	9.2	283	422.4	8.0
350ADH *VFD*	60 Hz	20.8	40°F	337	319.6	12.6	327	357.6	11.0	315	395.5	9.6	301	435.7	8.3	255	427.6	7.1
			42°F	348	325.1	12.8	337	363.8	11.1	326	402.5	9.7	311	443.3	8.4	253	417.0	7.3
			44°F	359	330.8	13.0	348	370.1	11.3	**336**	**409.6**	**9.9**	321	451.1	8.5	252	406.4	7.4
			46°F	370	336.5	13.2	359	376.6	11.4	347	416.8	10.0	332	459.0	8.7	249	395.6	7.6
			48°F	381	342.2	13.4	370	383.2	11.6	358	423.9	10.1	342	466.7	8.8	246	385.0	7.7
			50°F	393	348.2	13.5	381	389.8	11.7	369	431.3	10.3	352	474.8	8.9	243	374.2	7.8
380ADH *VFD*	60 Hz	22.9	40°F	366	349.0	12.6	355	390.5	10.9	343	432.2	9.5	328	476.4	8.3	284	480.3	7.1
			42°F	377	354.9	12.8	367	397.2	11.1	354	439.7	9.7	339	484.6	8.4	294	488.4	7.2
			44°F	389	360.8	12.9	378	403.9	11.2	**366**	**447.1**	**9.8**	350	492.8	8.5	292	476.4	7.4
			46°F	401	367.0	13.1	390	410.8	11.4	377	454.8	9.9	361	501.2	8.6	290	464.4	7.5
			48°F	413	372.9	13.3	401	417.6	11.5	388	462.4	10.1	371	509.5	8.7	287	452.2	7.6
			50°F	425	379.2	13.5	413	424.6	11.7	400	470.2	10.2	383	518.1	8.9	291	450.6	7.7
405ADH *VFD*	60 Hz	25.0	40°F	395	378.2	12.5	384	423.3	10.9	371	468.6	9.5	355	516.9	8.2	323	550.1	7.1
			42°F	407	384.4	12.7	396	430.4	11.0	383	476.5	9.6	367	525.6	8.4	322	538.0	7.2
			44°F	420	390.8	12.9	408	437.5	11.2	**395**	**484.5**	**9.8**	378	534.4	8.5	332	546.8	7.3
			46°F	432	397.0	13.1	420	444.7	11.3	407	492.6	9.9	390	543.2	8.6	331	533.6	7.4
			48°F	445	403.5	13.2	432	451.9	11.5	419	500.6	10.0	401	552.2	8.7	328	519.9	7.6
			50°F	458	410.0	13.4	445	459.3	11.6	431	508.7	10.2	413	561.1	8.8	338	528.2	7.7
445ATH *VFD*	60 Hz	25.0	40°F	439	417.5	12.6	425	469.7	10.9	410	522.1	9.4	391	582.7	8.0	365	656.6	6.7
			42°F	453	423.8	12.8	439	476.7	11.1	424	529.5	9.6	404	589.9	8.2	378	663.1	6.8
			44°F	468	430.6	13.1	454	484.2	11.3	**438**	**537.4**	**9.8**	417	597.6	8.4	377	647.1	7.0
			46°F	483	437.0	13.3	468	491.4	11.4	451	545.1	9.9	430	605.2	8.5	376	629.0	7.2
			48°F	497	443.8	13.5	483	499.2	11.6	466	553.2	10.1	443	613.4	8.7	374	610.7	7.3
			50°F	512	450.7	13.6	497	506.8	11.8	480	561.6	10.3	457	621.8	8.8	385	617.9	7.5
470ATH *VFD*	60 Hz	27.0	40°F	468	448.1	12.5	454	501.7	10.9	439	555.5	9.5	419	616.0	8.2	373	650.9	6.9
			42°F	483	454.8	12.7	469	509.1	11.1	453	563.5	9.6	433	624.2	8.3	386	658.6	7.0
			44°F	499	461.8	13.0	484	517.1	11.2	**468**	**572.0**	**9.8**	447	633.0	8.5	393	657.1	7.2
			46°F	514	468.7	13.1	499	524.6	11.4	482	580.2	10.0	460	641.4	8.6	400	655.0	7.3
			48°F	529	475.5	13.3	514	532.6	11.6	496	588.9	10.1	474	650.2	8.7	406	653.0	7.5
			50°F	544	482.9	13.5	529	540.6	11.7	511	597.7	10.3	488	659.5	8.9	413	651.1	7.6
500ATH *VFD*	60 Hz	29.1	40°F	493	475.3	12.5	479	529.6	10.9	464	584.2	9.5	443	640.5	8.3	385	642.2	7.2
			42°F	509	482.3	12.7	494	537.5	11.0	478	592.9	9.7	457	607.4	9.0	381	669.1	6.8
			44°F	525	489.7	12.9	510	545.9	11.2	**493**	**602.0**	**9.8**	472	663.0	8.5	392	638.2	7.4
			46°F	540	496.7	13.0	525	553.9	11.4	508	610.7	10.0	486	672.2	8.7	393	627.5	7.5
			48°F	556	504.2	13.2	541	562.2	11.5	523	619.9	10.1	500	682.0	8.8	394	617.1	7.7
			50°F	572	511.7	13.4	556	570.6	11.7	538	629.3	10.3	515	692.0	8.9	394	606.8	7.8
530ATH *VFD*	60 Hz	31.2	40°F	524	505.6	12.4	510	561.1	10.9	494	616.8	9.6	473	676.0	8.4	386	633.4	7.3
			42°F	540	513.0	12.6	525	569.4	11.1	509	626.2	9.8	488	686.5	8.5	383	616.2	7.5
			44°F	557	520.9	12.8	542	578.3	11.2	**525**	**635.9**	**9.9**	503	697.3	8.7	396	626.1	7.6
			46°F	573	528.2	13.0	558	586.7	11.4	540	645.4	10.0	518	707.5	8.8	391	608.3	7.7
			48°F	590	536.2	13.2	574	595.5	11.6	556	655.1	10.2	533	718.2	8.9	386	590.6	7.8
			50°F	607	544.1	13.4	591	604.5	11.7	572	665.0	10.3	548	729.1	9.0	380	572.9	8.0

Performance Data (VFD)

Table 31: Performance Data 60 Hz Premium Efficiency VFD (I-P Units)

Unit Size	Hz	Fan Power (kW)	LWT (°F)	Ambient Air Temperature														
				75°F			85°F			95°F			105°F			115°F		
				Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER	Unit Tons	Power kWi	Unit EER
210ADP *VFD*	60 Hz	16.6	40°F	209	173.2	14.5	205	197.4	12.4	200	220.8	10.9	194	246.0	9.5	186	276.1	8.1
			42°F	216	175.4	14.8	211	200.1	12.7	206	223.7	11.1	201	249.0	9.7	192	278.7	8.3
			44°F	223	177.9	15.0	218	203.0	12.9	**213**	**226.8**	**11.3**	207	252.1	9.9	199	281.6	8.5
			46°F	230	180.1	15.3	225	205.7	13.1	220	229.7	11.5	214	255.1	10.1	205	284.5	8.7
			48°F	237	182.6	15.6	232	208.7	13.4	227	233.0	11.7	220	258.4	10.2	212	287.6	8.8
			50°F	244	185.2	15.8	240	211.7	13.6	234	236.3	11.9	227	261.7	10.4	218	290.8	9.0
230ADP *VFD*	60 Hz	18.7	40°F	234	195.9	14.3	229	223.5	12.3	224	249.9	10.7	217	278.5	9.4	209	312.5	8.0
			42°F	242	198.3	14.6	237	226.5	12.5	231	253.2	11.0	225	281.8	9.6	216	315.5	8.2
			44°F	250	200.9	14.9	245	229.6	12.8	**239**	**256.7**	**11.2**	232	285.3	9.8	223	318.8	8.4
			46°F	258	203.3	15.2	252	232.7	13.0	246	260.0	11.4	239	288.7	10.0	230	322.0	8.6
			48°F	266	206.1	15.5	260	235.8	13.2	254	263.6	11.6	247	292.4	10.1	238	325.4	8.8
			50°F	274	208.7	15.7	268	239.1	13.5	262	267.3	11.8	255	296.1	10.3	245	329.1	8.9
250ADP *VFD*	60 Hz	18.7	40°F	256	220.3	13.9	250	249.2	12.1	244	277.8	10.5	236	310.0	9.1	226	349.1	7.8
			42°F	264	223.3	14.2	258	252.7	12.3	252	281.6	10.7	244	313.8	9.3	233	352.6	7.9
			44°F	273	226.5	14.4	267	256.5	12.5	**260**	**285.6**	**10.9**	252	317.7	9.5	241	356.3	8.1
			46°F	281	229.7	14.7	275	260.1	12.7	268	289.4	11.1	260	321.7	9.7	249	360.0	8.3
			48°F	289	232.9	14.9	283	263.9	12.9	276	293.7	11.3	268	325.8	9.9	257	363.9	8.5
			50°F	298	236.4	15.1	292	267.8	13.1	285	297.8	11.5	276	330.2	10.0	265	368.0	8.6
280ADP *VFD*	60 Hz	20.8	40°F	277	236.2	14.1	270	267.9	12.1	264	298.6	10.6	255	332.5	9.2	243	373.3	7.8
			42°F	286	239.6	14.3	279	271.7	12.3	272	302.8	10.8	264	336.8	9.4	252	377.1	8.0
			44°F	295	243.1	14.6	289	275.7	12.6	**282**	**307.2**	**11.0**	273	341.2	9.6	261	381.4	8.2
			46°F	304	246.5	14.8	298	279.8	12.8	290	311.4	11.2	281	345.5	9.8	269	385.6	8.4
			48°F	314	250.1	15.1	307	283.9	13.0	300	316.0	11.4	290	350.2	9.9	278	390.1	8.6
			50°F	323	253.8	15.3	317	288.2	13.2	309	320.6	11.6	299	355.0	10.1	287	394.7	8.7
300ADP *VFD*	60 Hz	20.8	40°F	297	261.6	13.6	291	294.9	11.8	283	328.4	10.3	273	366.6	8.9	260	412.9	7.5
			42°F	306	265.4	13.8	300	299.3	12.0	292	333.0	10.5	283	371.3	9.1	269	417.2	7.7
			44°F	316	269.4	14.1	309	303.8	12.2	**302**	**337.8**	**10.7**	292	376.1	9.3	278	421.9	7.9
			46°F	325	273.4	14.3	319	308.1	12.4	310	342.5	10.9	300	380.9	9.5	287	426.7	8.1
			48°F	336	277.9	14.5	328	312.9	12.6	320	347.4	11.0	309	385.8	9.6	296	403.7	8.8
			50°F	346	282.4	14.7	338	317.9	12.8	329	352.6	11.2	319	391.0	9.8	305	436.4	8.4
320ADP *VFD*	60 Hz	22.9	40°F	330	288.6	13.7	323	324.7	11.9	315	359.7	10.5	306	396.5	9.3	288	430.3	8.0
			42°F	341	292.6	14.0	334	329.6	12.2	326	365.2	10.7	316	402.3	9.4	292	427.4	8.2
			44°F	353	296.9	14.3	345	334.6	12.4	**337**	**370.8**	**10.9**	327	408.4	9.6	302	433.3	8.4
			46°F	364	301.3	14.5	356	339.5	12.6	347	376.1	11.1	337	414.2	9.8	306	430.1	8.5
			48°F	375	305.5	14.7	367	344.6	12.8	358	382.0	11.3	348	420.3	9.9	310	426.7	8.7
			50°F	387	310.0	15.0	379	349.8	13.0	370	387.8	11.4	359	426.5	10.1	320	432.7	8.9
350ADP *VFD*	60 Hz	25.0	40°F	362	325.8	13.3	354	361.9	11.7	345	398.0	10.4	334	436.2	9.2	309	461.6	8.0
			42°F	374	331.0	13.5	366	367.7	11.9	357	404.6	10.6	345	422.4	9.8	309	451.3	8.2
			44°F	386	336.5	13.8	378	373.8	12.1	**368**	**411.4**	**10.7**	357	426.4	10.0	319	458.8	8.3
			46°F	398	341.6	14.0	389	379.7	12.3	380	417.9	10.9	368	433.5	10.2	317	447.2	8.5
			48°F	410	347.0	14.2	402	385.9	12.5	391	424.7	11.1	379	470.0	9.7	315	435.8	8.7
			50°F	422	352.5	14.4	414	392.0	12.7	403	431.6	11.2	391	472.9	9.9	312	424.2	8.8

Table 32: Performance Data 60 Hz Standard and High Efficiency VFD (SI Units)

Unit Size	Hz	Fan Power (kW)	LWT (°C)	Ambient Air Temperature														
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
150ADS *VFD*	60 Hz	10.4	5°C	572	153.1	3.7	544	169.3	3.2	511.0	189.0	2.7	477	213.7	2.2	356	170.3	2.1
			6°C	592	155.3	3.8	563	171.4	3.3	529.2	190.9	2.8	493	214.9	2.3	367	169.6	2.2
			7°C	612	157.8	3.9	582	173.7	3.4	**547.7**	**193.0**	**2.8**	508	214.9	2.4	378	168.0	2.2
			8°C	634	160.3	4.0	602	176.0	3.4	566.6	195.2	2.9	520	213.7	2.4	386	165.8	2.3
			9°C	655	163.0	4.0	623	178.5	3.5	585.8	197.5	3.0	532	211.3	2.5	395	163.1	2.4
			10°C	677	165.9	4.1	643	181.0	3.6	605.4	199.9	3.0	542	207.8	2.6	402	160.1	2.5
175ADS *VFD*	60 Hz	12.5	5°C	627	168.5	3.7	598	185.0	3.2	564.0	204.8	2.8	528	229.3	2.3	440	217.1	2.0
			6°C	649	171.0	3.8	619	187.4	3.3	584.1	207.2	2.8	548	231.5	2.4	451	213.9	2.1
			7°C	672	173.5	3.9	641	189.9	3.4	**604.6**	**209.6**	**2.9**	567	233.6	2.4	460	210.3	2.2
			8°C	694	176.1	4.0	663	192.5	3.4	625.5	212.2	2.9	586	235.6	2.5	469	206.6	2.3
			9°C	718	178.7	4.0	685	195.2	3.5	646.8	214.9	3.0	606	238.1	2.5	478	202.7	2.4
			10°C	741	181.4	4.1	708	198.0	3.6	668.4	217.6	3.1	627	241.1	2.6	486	198.8	2.4
190ADS *VFD*	60 Hz	12.5	5°C	684	187.1	3.7	652	204.7	3.2	614.1	225.5	2.7	576	251.1	2.3	499	249.6	2.0
			6°C	708	189.9	3.7	675	207.6	3.3	635.8	228.5	2.8	596	253.5	2.4	507	243.5	2.1
			7°C	732	192.9	3.8	698	210.6	3.3	**657.9**	**231.6**	**2.8**	615	255.9	2.4	513	237.4	2.2
			8°C	757	195.8	3.9	721	213.7	3.4	680.4	234.7	2.9	637	259.2	2.5	520	231.5	2.2
			9°C	781	198.8	3.9	745	216.9	3.4	703.2	238.0	3.0	660	263.2	2.5	527	225.9	2.3
			10°C	807	202.0	4.0	770	220.2	3.5	726.5	241.4	3.0	683	267.0	2.6	533	220.4	2.4
210ADH *VFD*	60 Hz	12.5	5°C	733	191.3	3.8	714	214.2	3.3	693.1	236.3	2.9	668	259.7	2.6	633	287.9	2.2
			6°C	755	193.5	3.9	735	216.9	3.4	713.9	239.2	3.0	688	262.6	2.6	652	290.6	2.2
			7°C	777	195.8	4.0	757	219.6	3.4	**734.9**	**242.1**	**3.0**	709	265.9	2.7	666	290.8	2.3
			8°C	799	198.1	4.0	778	222.3	3.5	755.4	245.0	3.1	730	269.8	2.7	669	286.1	2.3
			9°C	822	200.6	4.1	800	225.2	3.6	776.8	248.1	3.1	753	274.0	2.7	671	280.9	2.4
			10°C	845	203.2	4.2	823	228.1	3.6	798.5	251.3	3.2	776	278.2	2.8	672	275.6	2.4
230ADH *VFD*	60 Hz	14.6	5°C	827	216.4	3.8	804	242.7	3.3	780.8	267.7	2.9	752	294.2	2.6	714	326.2	2.2
			6°C	851	218.9	3.9	828	245.6	3.4	804.2	271.0	3.0	775	297.5	2.6	736	329.2	2.2
			7°C	876	221.4	4.0	853	248.6	3.4	**827.8**	**274.3**	**3.0**	798	300.9	2.7	758	332.4	2.3
			8°C	901	223.9	4.0	877	251.6	3.5	851.1	277.5	3.1	820	304.2	2.7	779	335.6	2.3
			9°C	926	226.6	4.1	901	254.7	3.5	875.1	280.9	3.1	843	307.7	2.7	801	338.9	2.4
			10°C	951	229.3	4.1	926	257.9	3.6	899.5	284.5	3.2	867	311.3	2.8	824	342.4	2.4
250ADH *VFD*	60 Hz	14.6	5°C	901	251.9	3.6	877	280.5	3.1	850.3	308.7	2.8	817	339.5	2.4	772	377.6	2.0
			6°C	928	255.1	3.6	903	284.2	3.2	875.2	312.5	2.8	841	343.4	2.5	795	381.2	2.1
			7°C	954	258.4	3.7	929	287.9	3.2	**900.4**	**316.4**	**2.8**	865	347.3	2.5	819	384.9	2.1
			8°C	980	261.7	3.7	954	291.5	3.3	925.0	320.3	2.9	889	351.3	2.5	842	388.7	2.2
			9°C	1007	265.1	3.8	980	295.3	3.3	950.6	324.5	2.9	914	355.4	2.6	865	392.6	2.2
			10°C	1033	268.6	3.8	1006	299.2	3.4	976.1	328.6	3.0	938	359.8	2.6	889	396.8	2.2
280ADH *VFD*	60 Hz	16.6	5°C	966	257.5	3.8	939	287.2	3.3	910.1	316.0	2.9	874	347.0	2.5	824	384.8	2.1
			6°C	995	260.8	3.8	967	290.9	3.3	937.5	320.0	2.9	901	351.2	2.6	850	388.7	2.2
			7°C	1024	264.2	3.9	996	294.8	3.4	**965.1**	**324.2**	**3.0**	927	355.3	2.6	877	392.7	2.2
			8°C	1053	267.6	3.9	1024	298.6	3.4	992.2	328.2	3.0	954	359.6	2.7	900	395.6	2.3
			9°C	1082	271.2	4.0	1053	302.6	3.5	1020.4	332.6	3.1	982	364.8	2.7	914	394.4	2.3
			10°C	1112	274.7	4.0	1082	306.7	3.5	1048.3	336.9	3.1	1011	370.0	2.7	927	392.9	2.4
300ADH *VFD*	60 Hz	16.6	5°C	1042	293.6	3.6	1014	325.9	3.1	983.1	358.2	2.7	943	394.2	2.4	886	438.4	2.0
			6°C	1072	297.5	3.6	1043	330.2	3.2	1011.2	362.8	2.8	971	398.9	2.4	913	442.9	2.1
			7°C	1102	301.5	3.7	1072	334.6	3.2	**1039.3**	**367.4**	**2.8**	998	403.6	2.5	941	447.5	2.1
			8°C	1132	305.6	3.7	1101	339.0	3.2	1066.9	372.1	2.9	1024	408.8	2.5	967	447.3	2.2
			9°C	1164	310.0	3.8	1131	343.7	3.3	1095.6	376.9	2.9	1052	415.9	2.5	991	433.9	2.3
			10°C	1196	314.5	3.8	1162	348.6	3.3	1124.9	381.9	2.9	1083	419.7	2.6	993	448.7	2.2

Performance Data (VFD)

Table 33: Performance Data 60 Hz High Efficiency VFD (SI Units)

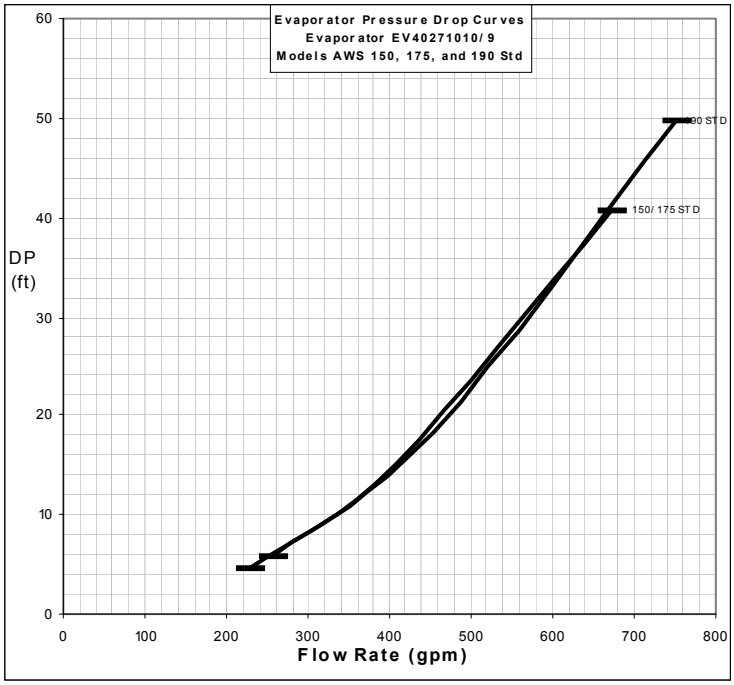
Unit Size	Hz	Fan Power (kW)	LWT (°C)	Ambient Air Temperature														
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
320ADH *VFD*	60 Hz	20.8	5°C	1161	313.2	3.7	1129	347.1	3.3	1095.3	379.9	2.9	1060	416.9	2.5	948	427.5	2.2
			6°C	1196	317.3	3.8	1163	351.8	3.3	1128.6	385.1	2.9	1094	423.4	2.6	964	426.0	2.3
			7°C	1232	321.5	3.8	1198	356.6	3.4	**1162.0**	**390.3**	**3.0**	1129	429.9	2.6	980	424.5	2.3
			8°C	1266	325.7	3.9	1232	361.3	3.4	1194.7	395.5	3.0	1162	436.1	2.7	997	424.3	2.3
			9°C	1302	329.9	3.9	1267	366.2	3.5	1228.7	401.0	3.1	1195	442.1	2.7	1024	428.9	2.4
			10°C	1338	334.3	4.0	1302	371.2	3.5	1263.2	406.5	3.1	1230	448.9	2.7	1038	427.2	2.4
350ADH *VFD*	60 Hz	20.8	5°C	1196	330.0	3.6	1164	364.5	3.2	1127.9	399.0	2.8	1095	441.2	2.5	930	425.7	2.2
			6°C	1231	335.2	3.7	1198	370.2	3.2	1161.0	405.3	2.9	1131	449.8	2.5	933	419.5	2.2
			7°C	1266	340.4	3.7	1232	376.0	3.3	**1194.3**	**411.7**	**2.9**	1167	458.5	2.5	934	413.2	2.3
			8°C	1302	345.7	3.8	1267	381.9	3.3	1227.9	418.2	2.9	1203	467.2	2.6	935	406.9	2.3
			9°C	1338	351.0	3.8	1302	387.9	3.4	1262.0	424.7	3.0	1240	475.9	2.6	934	400.6	2.3
			10°C	1374	356.5	3.9	1337	393.9	3.4	1296.5	431.3	3.0	1277	484.9	2.6	931	394.3	2.4
380ADH *VFD*	60 Hz	22.9	5°C	1299	360.3	3.6	1265	398.1	3.2	1227.1	436.0	2.8	1189	480.1	2.5	1048	483.6	2.2
			6°C	1336	365.8	3.7	1301	404.2	3.2	1262.3	442.7	2.9	1225	488.3	2.5	1066	484.5	2.2
			7°C	1374	371.3	3.7	1338	410.3	3.3	**1297.8**	**449.4**	**2.9**	1263	497.6	2.5	1069	477.3	2.2
			8°C	1411	376.9	3.7	1374	416.6	3.3	1333.8	456.3	2.9	1301	507.0	2.6	1070	470.1	2.3
			9°C	1449	382.5	3.8	1411	422.8	3.3	1369.7	463.2	3.0	1340	516.2	2.6	1072	463.7	2.3
			10°C	1487	388.3	3.8	1449	429.2	3.4	1406.1	470.2	3.0	1378	524.9	2.6	1087	464.1	2.3
405ADH *VFD*	60 Hz	25.0	5°C	1402	390.4	3.6	1366	431.4	3.2	1326.2	472.6	2.8	1283	519.0	2.5	1162	539.5	2.2
			6°C	1442	396.2	3.6	1404	437.9	3.2	1363.5	479.7	2.8	1321	527.9	2.5	1179	539.0	2.2
			7°C	1481	402.1	3.7	1443	444.4	3.2	**1401.3**	**487.0**	**2.9**	1359	536.4	2.5	1202	541.7	2.2
			8°C	1520	407.9	3.7	1482	450.9	3.3	1439.3	494.2	2.9	1400	546.4	2.6	1204	533.7	2.3
			9°C	1560	413.9	3.8	1521	457.5	3.3	1477.3	501.4	2.9	1441	556.3	2.6	1208	527.2	2.3
			10°C	1601	419.9	3.8	1560	464.2	3.4	1515.5	508.7	3.0	1478	564.4	2.6	1240	534.8	2.3
445ATH *VFD*	60 Hz	25.0	5°C	1559	431.2	3.6	1515	478.5	3.2	1466.8	525.8	2.8	1406	579.0	2.4	1325	645.1	2.1
			6°C	1605	437.2	3.7	1560	485.0	3.2	1510.5	532.7	2.8	1450	586.6	2.5	1350	643.9	2.1
			7°C	1652	443.3	3.7	1606	491.7	3.3	**1554.5**	**539.7**	**2.9**	1496	595.7	2.5	1356	633.3	2.1
			8°C	1698	449.3	3.8	1651	498.4	3.3	1597.7	546.7	2.9	1542	605.0	2.5	1360	621.7	2.2
			9°C	1745	455.6	3.8	1697	505.4	3.4	1642.7	554.1	3.0	1589	614.5	2.6	1367	612.0	2.2
			10°C	1791	461.9	3.9	1743	512.3	3.4	1687.9	561.6	3.0	1633	622.2	2.6	1405	618.7	2.3
470ATH *VFD*	60 Hz	27.0	5°C	1663	462.2	3.6	1618	510.8	3.2	1569.1	559.5	2.8	1515	616.6	2.5	1368	647.9	2.1
			6°C	1711	468.5	3.7	1665	517.8	3.2	1614.4	566.9	2.8	1559	624.7	2.5	1402	652.0	2.2
			7°C	1759	475.0	3.7	1712	524.8	3.3	**1660.1**	**574.4**	**2.9**	1605	633.4	2.5	1429	652.3	2.2
			8°C	1806	481.3	3.8	1758	531.7	3.3	1704.8	581.9	2.9	1650	642.0	2.6	1454	652.3	2.2
			9°C	1855	487.7	3.8	1806	539.0	3.4	1751.3	589.8	3.0	1696	651.0	2.6	1480	652.5	2.3
			10°C	1903	494.4	3.8	1854	546.3	3.4	1798.0	597.7	3.0	1744	660.4	2.6	1505	652.8	2.3
500ATH *VFD*	60 Hz	29.1	5°C	1752	489.8	3.6	1706	539.1	3.2	1656.0	588.5	2.8	1608	620.8	2.6	1395	649.3	2.1
			6°C	1801	496.4	3.6	1754	546.4	3.2	1703.0	596.5	2.9	1657	626.9	2.6	1410	651.3	2.2
			7°C	1851	503.1	3.7	1803	553.9	3.3	**1750.3**	**604.6**	**2.9**	1704	668.8	2.5	1439	641.1	2.2
			8°C	1900	509.7	3.7	1851	561.2	3.3	1796.7	612.5	2.9	1753	679.1	2.6	1450	635.2	2.3
			9°C	1951	516.6	3.8	1901	568.8	3.3	1844.8	620.8	3.0	1803	689.7	2.6	1461	629.5	2.3
			10°C	2002	523.5	3.8	1950	576.5	3.4	1893.3	629.3	3.0	1854	700.6	2.6	1470	623.8	2.4
530ATH *VFD*	60 Hz	31.2	5°C	1862	520.5	3.6	1815	570.9	3.2	1763.1	621.5	2.8	1723	686.9	2.5	1419	636.1	2.2
			6°C	1914	527.5	3.6	1865	578.7	3.2	1812.3	630.1	2.9	1774	697.9	2.5	1439	634.3	2.3
			7°C	1966	534.6	3.7	1916	586.6	3.3	**1861.9**	**638.8**	**2.9**	1824	708.3	2.6	1466	636.7	2.3
			8°C	2017	541.5	3.7	1966	594.4	3.3	1910.4	647.3	3.0	1877	720.1	2.6	1463	625.7	2.3
			9°C	2071	548.8	3.8	2018	602.4	3.4	1960.8	656.1	3.0	1931	732.4	2.6	1459	614.9	2.4
			10°C	2125	556.2	3.8	2071	610.5	3.4	2011.8	665.0	3.0	1987	744.7	2.7	1454	604.1	2.4

Table 34: Performance Data 60 Hz Premium Efficiency VFD (SI Units)

Unit Size	Hz	Fan Power (kW)	LWT (°C)	Ambient Air Temperature														
				25°C			30°C			35°C			40°C			45°C		
				Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP	Unit kW	Power kWi	Unit COP
210ADP *VFD*	60 Hz	16.6	5°C	743	179.2	4.1	730	201.1	3.6	714.2	222.3	3.2	697	244.5	2.8	671	271.4	2.5
			6°C	766	181.4	4.2	751	203.6	3.7	735.6	225.0	3.3	718	247.2	2.9	692	273.9	2.5
			7°C	788	183.6	4.3	774	206.2	3.8	**757.2**	**227.7**	**3.3**	739	250.0	3.0	712	276.6	2.6
			8°C	810	185.8	4.4	795	208.7	3.8	778.4	230.4	3.4	759	252.8	3.0	733	279.3	2.6
			9°C	833	188.1	4.4	818	211.4	3.9	800.4	233.4	3.4	781	255.8	3.1	753	282.0	2.7
			10°C	856	190.5	4.5	841	214.2	3.9	822.7	236.3	3.5	802	258.8	3.1	774	284.9	2.7
230ADP *VFD*	60 Hz	18.7	5°C	833	202.7	4.1	817	227.6	3.6	799.8	251.5	3.2	780	276.7	2.8	753	307.2	2.5
			6°C	858	205.0	4.2	842	230.4	3.7	823.8	254.6	3.2	804	279.8	2.9	776	310.1	2.5
			7°C	883	207.4	4.3	867	233.2	3.7	**848.0**	**257.7**	**3.3**	828	283.0	2.9	799	313.1	2.6
			8°C	908	209.8	4.3	891	236.1	3.8	871.8	260.7	3.3	851	286.1	3.0	822	316.1	2.6
			9°C	933	212.3	4.4	916	238.9	3.8	896.5	263.9	3.4	875	289.4	3.0	845	319.2	2.6
			10°C	959	214.8	4.5	941	241.9	3.9	921.4	267.3	3.4	899	292.8	3.1	869	322.5	2.7
250ADP *VFD*	60 Hz	18.7	5°C	910	227.6	4.0	892	253.8	3.5	872.2	279.7	3.1	849	308.0	2.8	815	343.0	2.4
			6°C	936	230.5	4.1	918	257.1	3.6	897.8	283.2	3.2	874	311.5	2.8	840	346.3	2.4
			7°C	963	233.5	4.1	945	260.5	3.6	**923.5**	**286.7**	**3.2**	899	315.1	2.9	864	349.7	2.5
			8°C	989	236.4	4.2	971	263.8	3.7	948.8	290.3	3.3	924	318.7	2.9	889	353.1	2.5
			9°C	1016	239.5	4.2	997	267.2	3.7	975.0	294.1	3.3	949	322.4	2.9	913	356.7	2.6
			10°C	1043	242.6	4.3	1024	270.8	3.8	1001.2	297.8	3.4	975	326.4	3.0	938	360.5	2.6
280ADP *VFD*	60 Hz	20.8	5°C	984	244.3	4.0	965	272.9	3.5	942.5	300.7	3.1	917	330.6	2.8	879	367.1	2.4
			6°C	1014	247.4	4.1	994	276.4	3.6	970.9	304.5	3.2	945	334.5	2.8	907	370.8	2.4
			7°C	1044	250.7	4.2	1023	280.1	3.7	**999.5**	**308.5**	**3.2**	973	338.5	2.9	935	374.7	2.5
			8°C	1073	253.9	4.2	1052	283.8	3.7	1027.6	312.3	3.3	1000	342.5	2.9	962	378.5	2.5
			9°C	1103	257.3	4.3	1081	287.6	3.8	1056.7	316.5	3.3	1028	346.7	3.0	990	382.6	2.6
			10°C	1133	260.7	4.3	1111	291.4	3.8	1085.7	320.6	3.4	1057	351.0	3.0	1017	386.8	2.6
300ADP *VFD*	60 Hz	20.8	5°C	1056	270.2	3.9	1036	300.5	3.4	1012.0	330.7	3.1	983	364.3	2.7	938	405.8	2.3
			6°C	1086	273.8	4.0	1065	304.4	3.5	1040.9	334.9	3.1	1012	368.7	2.7	968	409.9	2.4
			7°C	1116	277.5	4.0	1095	308.5	3.5	**1069.9**	**339.2**	**3.2**	1040	373.0	2.8	997	414.2	2.4
			8°C	1147	281.2	4.1	1124	312.5	3.6	1098.3	343.5	3.2	1068	377.8	2.8	1025	414.0	2.5
			9°C	1179	285.4	4.1	1155	316.8	3.6	1127.8	347.9	3.2	1096	384.2	2.9	1053	402.8	2.6
			10°C	1211	289.5	4.2	1187	321.4	3.7	1158.0	352.6	3.3	1125	386.4	2.9	1081	427.4	2.5
320ADP *VFD*	60 Hz	22.9	5°C	1176	297.9	3.9	1153	330.7	3.5	1127.1	362.4	3.1	1101	396.5	2.8	1035	423.0	2.4
			6°C	1211	301.8	4.0	1188	335.2	3.5	1161.3	367.4	3.2	1136	402.2	2.8	1059	424.8	2.5
			7°C	1247	305.8	4.1	1223	339.7	3.6	**1195.7**	**372.4**	**3.2**	1170	407.9	2.9	1086	427.9	2.5
			8°C	1282	309.8	4.1	1257	344.2	3.7	1229.3	377.3	3.3	1205	414.0	2.9	1102	426.6	2.6
			9°C	1318	313.8	4.2	1293	348.9	3.7	1264.3	382.6	3.3	1241	420.3	3.0	1120	426.0	2.6
			10°C	1355	318.0	4.3	1329	353.6	3.8	1299.8	387.8	3.4	1276	425.9	3.0	1152	431.4	2.7
350ADP *VFD*	60 Hz	25.0	5°C	1288	335.7	3.8	1263	368.5	3.4	1234.1	401.3	3.1	1206	426.6	2.8	1108	451.0	2.5
			6°C	1326	340.6	3.9	1300	373.9	3.5	1270.8	407.3	3.1	1244	421.0	3.0	1126	448.2	2.5
			7°C	1364	345.5	3.9	1338	379.4	3.5	**1307.5**	**413.4**	**3.2**	1282	425.8	3.0	1149	449.9	2.6
			8°C	1402	350.4	4.0	1375	384.8	3.6	1343.4	419.3	3.2	1321	440.4	3.0	1152	444.1	2.6
			9°C	1440	355.3	4.1	1413	390.4	3.6	1380.8	425.4	3.2	1361	473.9	2.9	1153	441.8	2.6
			10°C	1479	360.4	4.1	1451	396.0	3.7	1418.5	431.6	3.3	1402	477.8	2.9	1154	433.9	2.7

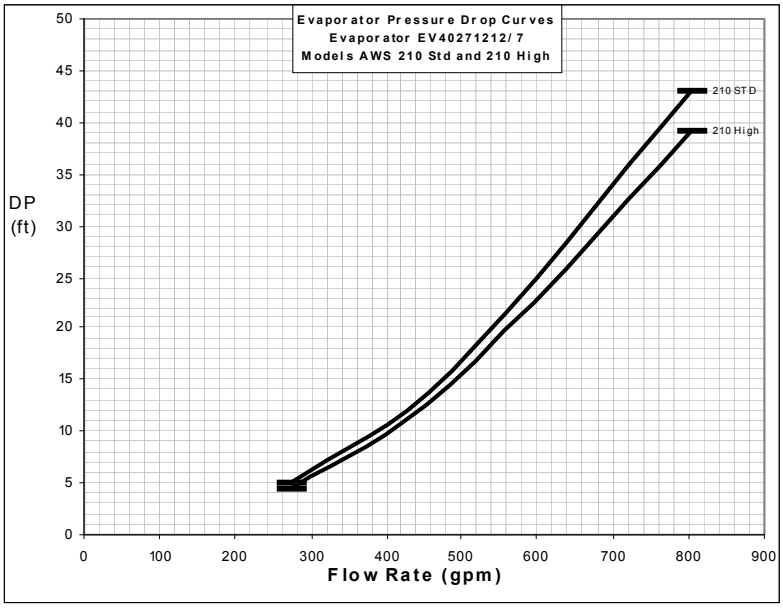
Pressure Drop Data

Figure 16: Evaporator Pressure Drop: AWS models 150/175/190 Standard Efficiency, 60Hz



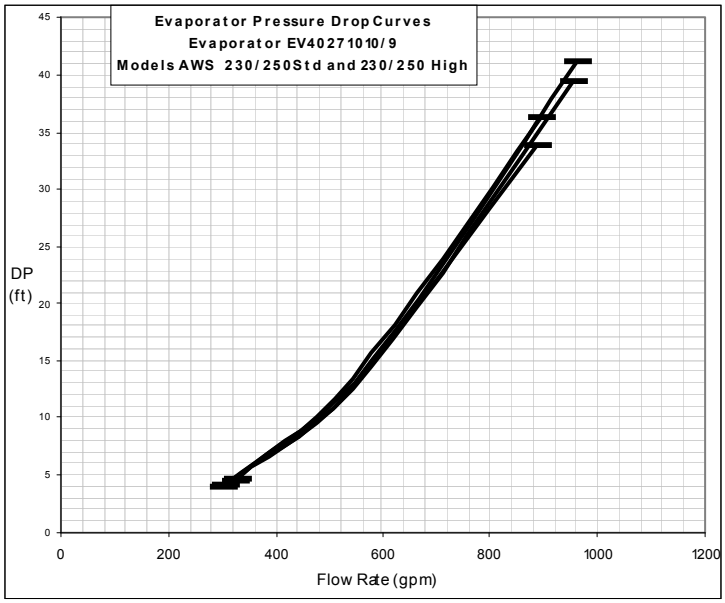
Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
150/175 STD	60	228.5	4.7	14.4	14.0	408.0	15.0	25.7	44.7	673.2	40.8	42.5	121.7
190 STD	60	254.9	5.7	16.1	17.1	455.1	18.3	28.7	54.7	750.9	49.8	47.4	148.8

Figure 17: Evaporator Pressure Drop: AWS models 210 Standard Efficiency and 210 High Efficiency, 60Hz



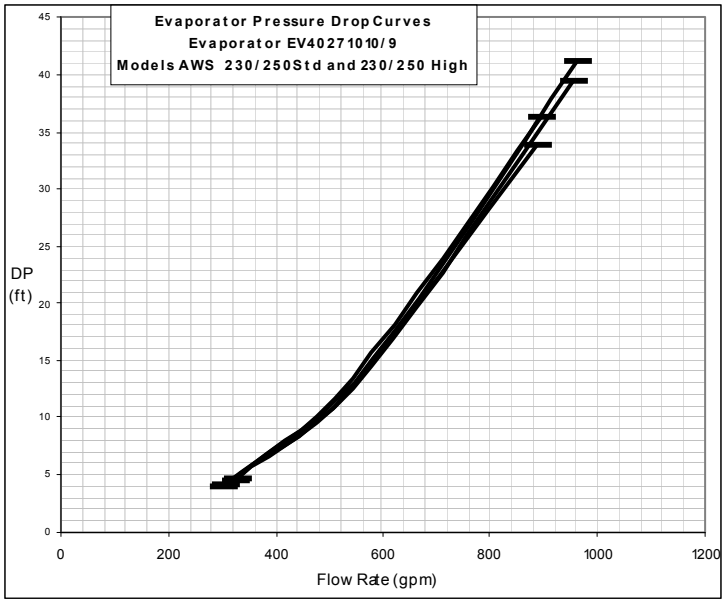
Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
210 STD	60	272.7	5.0	17.2	14.8	486.9	15.8	30.7	47.3	803.4	43.1	50.7	128.6
210 High	60	272.5	4.5	17.2	13.5	486.5	14.4	30.7	43.1	802.8	39.3	50.6	117.2

Figure 18: Evaporator Pressure Drop: AWS models 230/250 Standard Efficiency and 230/250 High Efficiency, 60Hz



Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
230 STD	60	304.2	4.2	19.2	12.5	543.2	13.4	34.3	39.9	896.3	36.4	56.5	108.6
250 STD	60	326.4	4.7	20.6	14.2	582.8	15.1	36.8	45.2	961.6	41.2	60.7	123.0
230 High	60	301.5	3.9	19.0	11.7	538.4	12.5	34.0	37.2	888.3	33.9	56.0	101.3
250 High	60	324.5	4.5	20.5	13.6	579.5	14.5	36.6	43.2	956.2	39.4	60.3	117.7

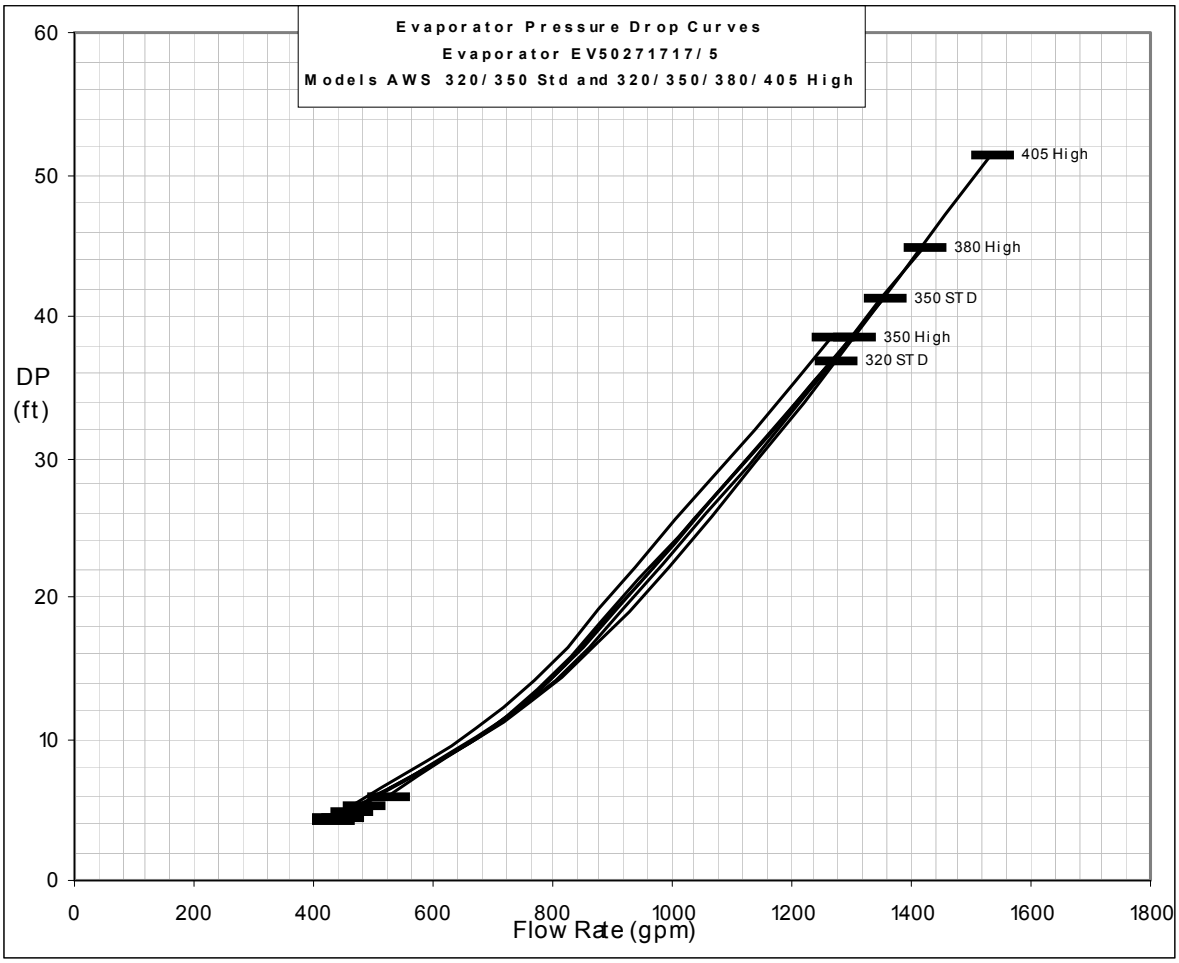
Figure 19: Evaporator Pressure Drop: AWS models 280/300 Standard Efficiency and 280/300 High Efficiency, 60Hz



Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
280 STD	60	356.7	2.9	22.5	8.7	637.0	9.3	40.2	27.8	1051.1	25.4	66.3	75.7
300 STD	60	381.8	3.0	24.1	9.0	681.7	9.6	43.0	28.7	1124.8	26.2	71.0	78.1
280 High	60	357.8	2.8	22.6	8.4	638.9	9.0	40.3	26.9	1054.3	24.5	66.5	73.2
300 High	60	384.8	3.1	24.3	9.3	687.1	9.9	43.3	29.6	1133.7	27.0	71.5	80.5

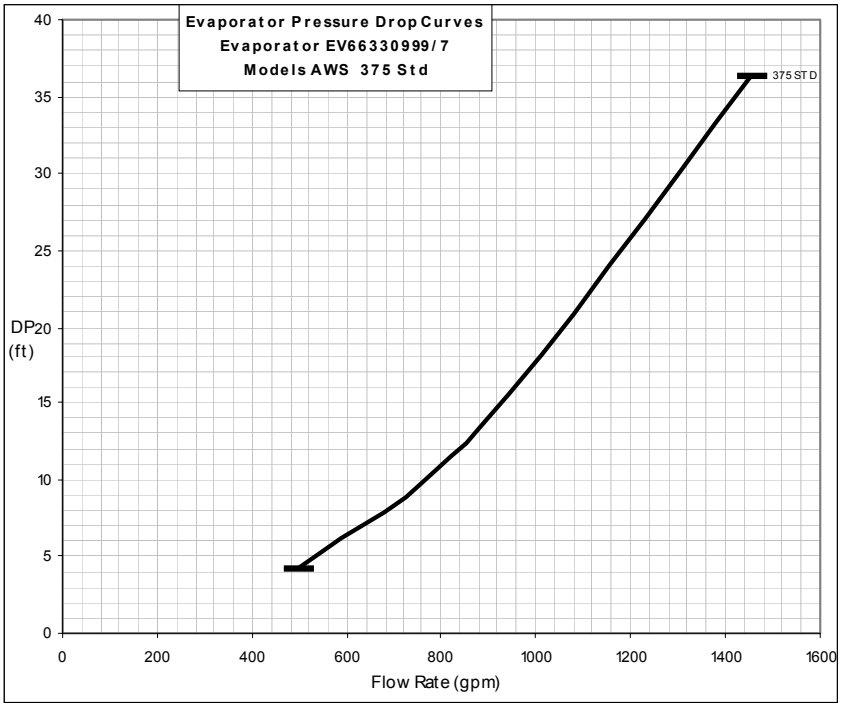
Pressure Drop Data

Figure 20: Evaporator Pressure Drop: AWS models 320/350 Standard Efficiency and 320/350/380/405 High Efficiency, 60Hz



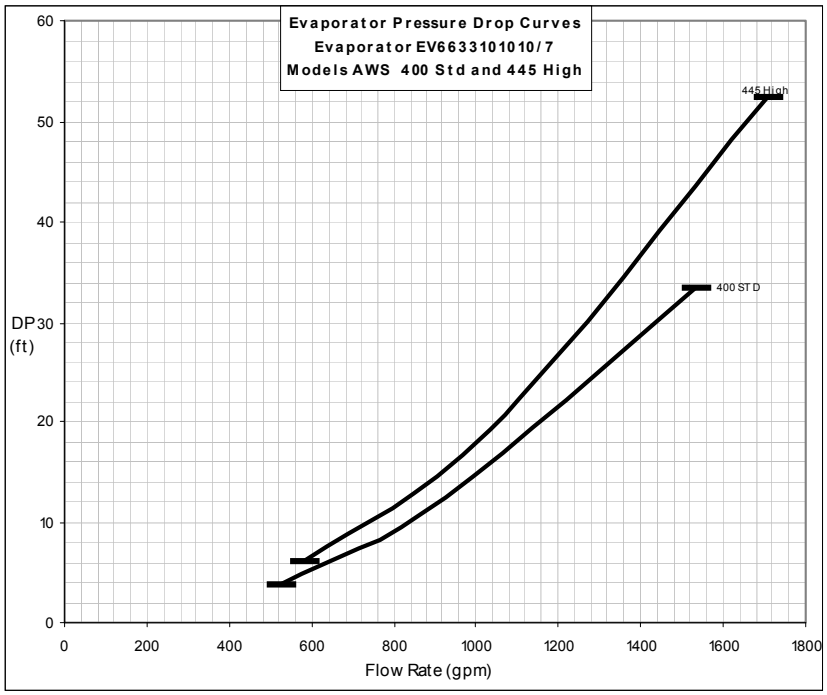
Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
320 STD	60	431.4	4.2	27.2	12.7	770.3	13.5	48.6	40.4	1271.0	36.8	80.2	110.0
350 STD	60	459.3	4.8	29.0	14.2	820.1	15.2	51.7	45.3	1353.2	41.3	85.4	123.4
320 High	60	430.8	4.4	27.2	13.3	769.3	14.2	48.5	42.3	1269.3	38.5	80.1	115.1
350 High	60	443.3	4.4	28.0	13.3	791.6	14.2	49.9	42.3	1306.1	38.6	82.4	115.3
380 High	60	481.8	5.2	30.4	15.4	860.4	16.5	54.3	49.1	1419.6	44.8	89.6	133.8
405 High	60	520.3	5.9	32.8	17.7	929.1	18.9	58.6	56.4	1533.0	51.5	96.7	153.7

Figure 21: Evaporator Pressure Drop: AWS models 375 Standard Efficiency 60Hz



Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
375 STD	60	494.1	4.2	31.2	12.5	882.3	13.3	55.7	39.8	1455.9	36.3	91.9	108.4

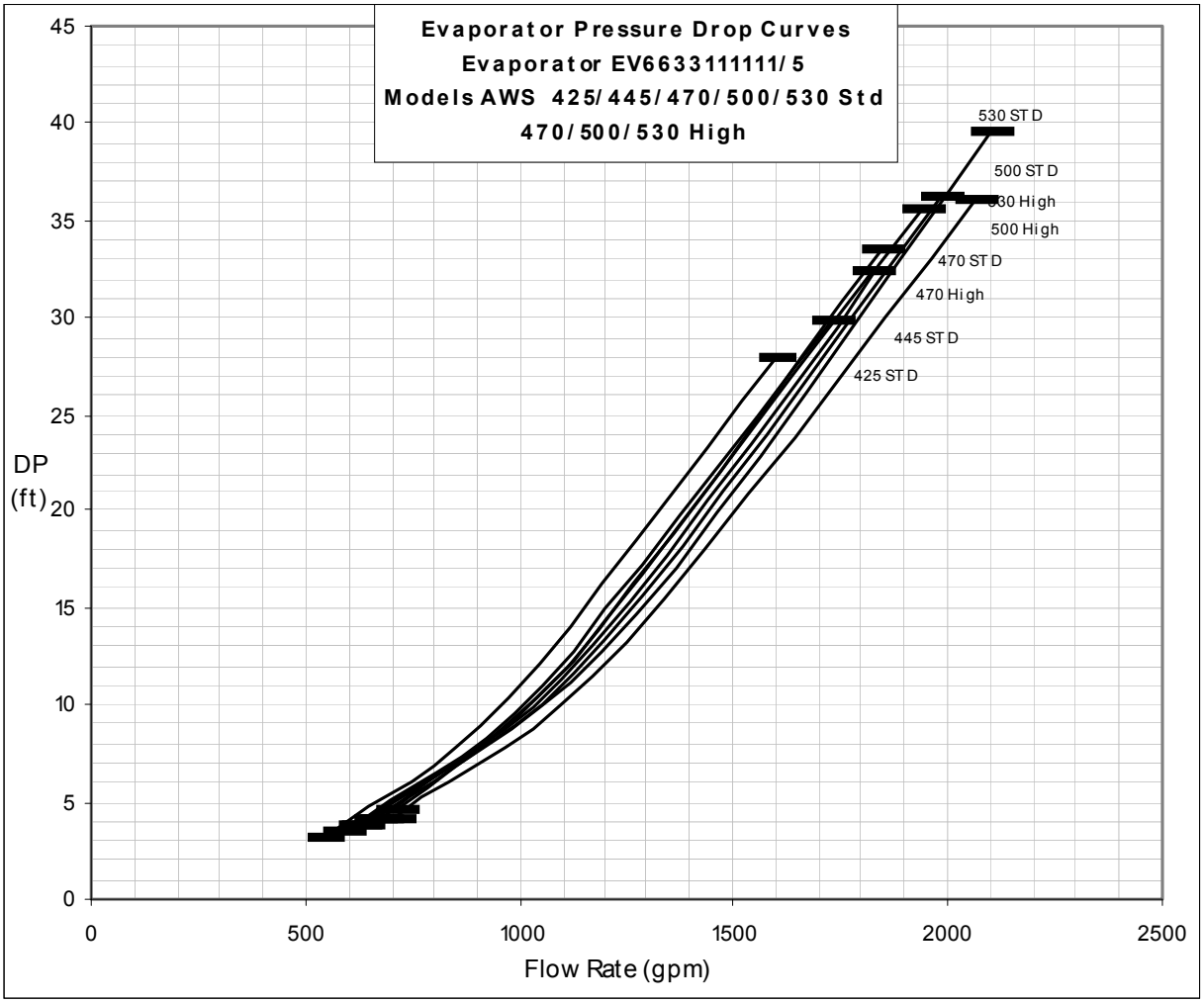
Figure 22: Evaporator Pressure Drop: AWS models 400 Standard Efficiency and 445 High Efficiency, 60Hz



Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
400 STD	60	520.7	3.9	32.8	11.5	929.7	12.3	58.7	36.8	1534.1	33.5	96.8	100.1
445 High	60	578.9	6.0	36.5	18.0	1033.7	19.3	65.2	57.5	1705.6	52.4	107.6	156.6

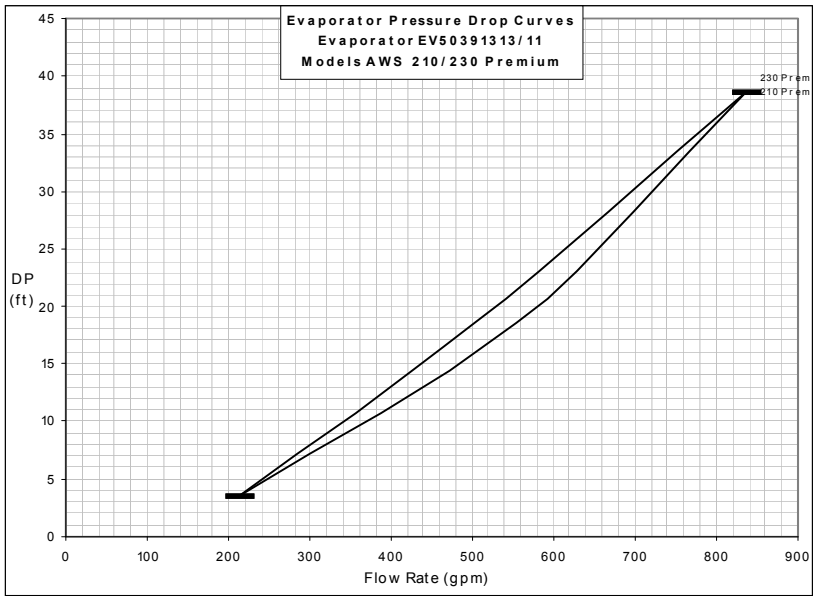
Pressure Drop Data

Figure 23: Evap. Pressure Drop: AWS models 425/445/470/500/530 Standard Efficiency & 470/500/530 High Efficiency, 60Hz



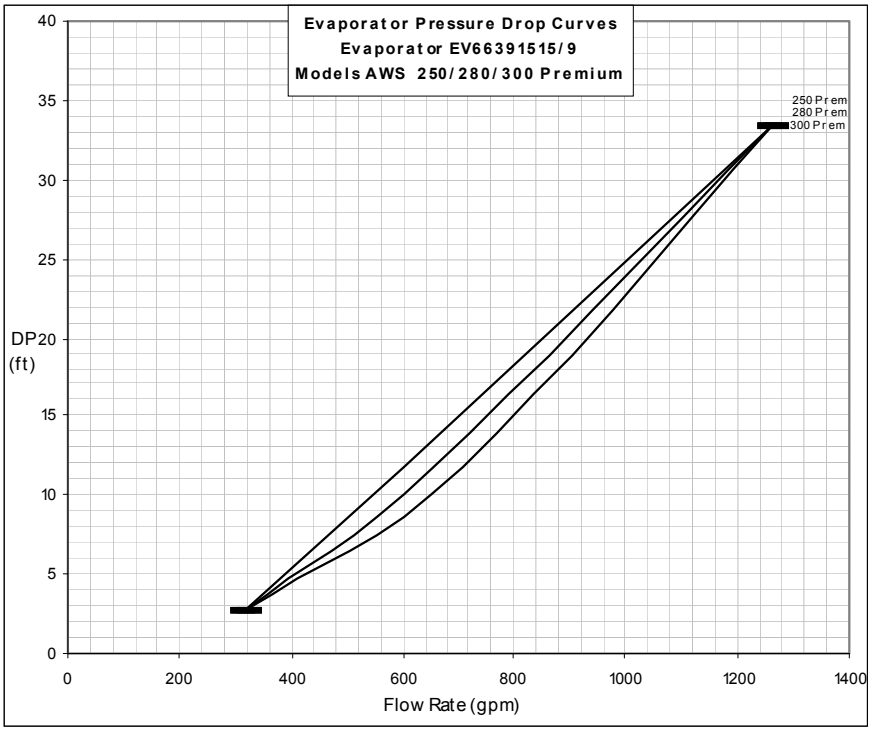
Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
425 STD	60	543.4	3.2	34.3	9.6	970.4	10.3	61.2	30.7	1601.2	28.0	101.0	83.5
445 STD	60	588.2	3.4	37.1	10.3	1050.4	11.0	66.3	32.8	1733.1	29.9	109.3	89.4
470 STD	60	627.6	3.9	39.6	11.5	1120.7	12.3	70.7	36.8	1849.1	33.5	116.7	100.1
500 STD	60	673.6	4.2	42.5	12.5	1202.9	13.3	75.9	39.7	1984.9	36.2	125.2	108.2
530 STD	60	713.0	4.6	45.0	13.6	1273.2	14.6	80.3	43.5	2100.8	39.7	132.5	118.5
470 High	60	621.0	3.7	39.2	11.2	1108.9	11.9	70.0	35.6	1829.7	32.5	115.4	96.9
500 High	60	658.9	4.1	41.6	12.3	1176.6	13.1	74.2	39.1	1941.3	35.7	122.5	106.6
530 High	60	700.9	4.2	44.2	12.4	1251.7	13.3	79.0	39.6	2065.3	36.1	130.3	107.8

Figure 24: Evaporator Pressure Drop: AWS models 210/230 Premium Efficiency, 60Hz



Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
210 Prem	60	211.3	3.5	13.3	10.3	504.6	18.4	31.8	55.0	836.5	38.6	52.8	115.2
230 Prem	60	211.3	3.5	13.3	10.3	554.8	18.4	35.0	55.0	836.5	38.6	52.8	115.2

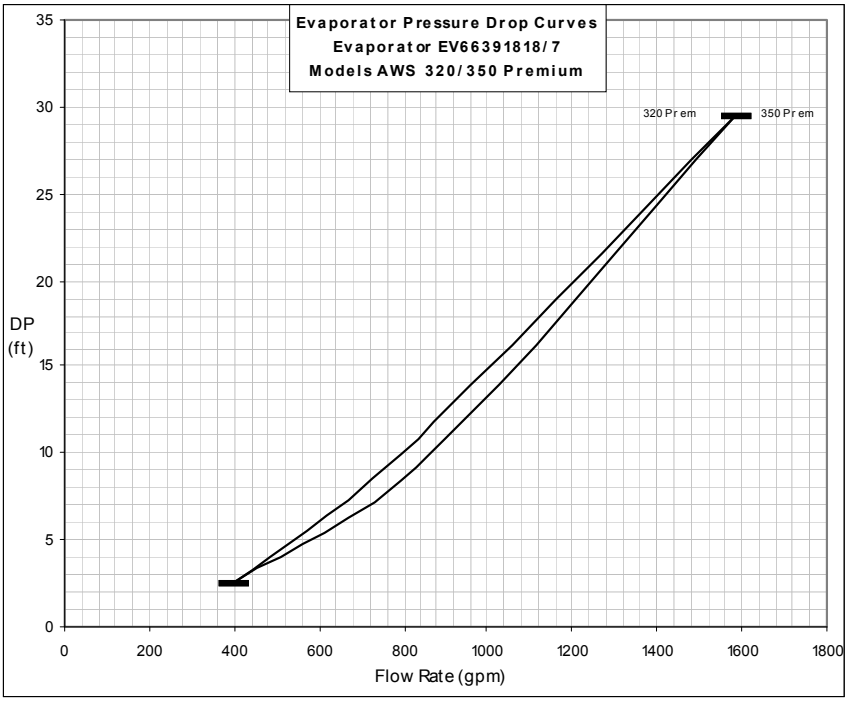
Figure 25: Evaporator Pressure Drop: AWS models 250/280/300 Premium Efficiency, 60Hz



Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
250 Prem	60	317.0	2.8	20.0	8.3	599.4	11.8	37.8	35.3	1263.6	33.4	79.7	99.8
280 Prem	60	317.0	2.8	20.0	8.3	656.8	11.8	41.4	35.3	1263.6	33.4	79.7	99.8
300 Prem	60	317.0	2.8	20.0	8.3	708.6	11.8	44.7	35.3	1263.6	33.4	79.7	99.8

Pressure Drop Data

Figure 26: Evaporator Pressure Drop: AWS models 320/350 Premium Efficiency, 60Hz



Model	Hz	Minimum				Nominal				Maximum			
		gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa	gpm	ft.	l/s	kpa
320 Prem	60	396.3	2.5	25.0	7.6	791.5	9.9	49.9	29.6	1585.0	29.5	100.0	88.2
350 Prem	60	396.3	2.5	25.0	7.6	865.7	9.9	54.6	29.6	1585.0	29.5	100.0	88.2

Table 35: Physical Data (60 Hz, Standard Efficiency, non-VFD models)

Data	AWS175ADS		AWS190ADS		AWS210ADS	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	173 (608)		196 (690)		216 (760)	
Unit Operating Charge lbs (kg)	145 (66)	145 (66)	165 (75)	165 (75)	165 (75)	165 (75)
Unit Dimensions L x W x H, in. (mm)	245 x 88 x 100 (6220 x 2225 x 2548)		245 x 88 x 100 (6220 x 2225 x 2548)		245 x 88 x 100 (6220 x 2225 x 2548)	
Unit Operating Weight, lbs. (kg)	12950 (5874)		13673 (6202)		14208 (6445)	
Unit Shipping Weight, lbs (kg)	12407 (5628)		13130 (5956)		13665 (6198)	
Weight-Add for Copper Fins, lbs (kg)	1786 (810)		1786 (810)		1786 (810)	
Weight-Add for Louvered Panels, lbs (kg)	676 (307)		788 (357)		788 (357)	
Weight-Add for Sound Enclosures, lbs (kg	477 (216)		477 (216)		477 (216)	
Weight-Add for PFCC option, lbs (kg)	160 (73)		160 (73)		160 (73)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	90 (316)	90 (316)	90 (316)	100 (351)	100 (351)	100 (351)
Minimum Capacity (% of Full Load)	15		15		15	
Oil charge per circuit , gallons (liters)	4.5 (17)	4.5 (17)	4.5 (17)	5.5 (21)	5.5 (21)	5.5 (21)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	208 (94)	208 (94)	250 (113)	250 (113)	250 (113)	250 (113)
Coil Inlet Face Area, sq. ft. (sq. m.)	123.1 (11.4)	123.1 (11.4)	147.7 (13.7)	147.7 (13.7)	147.7 (13.7)	147.7 (13.7)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	5	5	6	6	6	6
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow, cfm (l/s)	110850 (52315)		133020 (62778)		133020 (62778)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	16 x 406 (406 x 2750)		16 x 108 (406 x 2750)		16 x 108 (406 x 2750)	
Water Volume, gallons (liters)	67 (255)		67 (255)		63 (240)	
Victaulic inlet/outlet conn. in. (mm)	6 (168)		6 (168)		6 (168)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (non-VFD)

Table 36: Physical Data (60 Hz, Standard Efficiency, non-VFD models)

Data	AWS230ADS		AWS250ADS		AWS280ADS	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	230 (808)		253 (888)		274 (962)	
Unit Operating Charge lbs (kg)	185 (84)	185 (84)	185 (84)	185 (84)	210 (95)	210 (95)
Unit Dimensions L x W x H, in. (mm)	280 x 88 x 100 (7121 x 2225 x 2548)		280 x 88 x 100 (7121 x 2225 x 2548)		316 x 88 x 100 (8022 x 2225 x 2548)	
Unit Operating Weight, lbs. (kg)	15381 (6977)		15669 (7107)		17012 (7717)	
Unit Shipping Weight, lbs (kg)	14838 (6730)		15126 (6861)		16145 (7323)	
Weight-Add for Copper Fins, lbs (kg)	2084 (945)		2084 (945)		2372 (1076)	
Weight-Add for Louvered Panels, lbs (kg)	900 (408)		900 (408)		1012 (459)	
Weight-Add for Sound Enclosures, lbs (kg	477 (216)		477 (216)		477 (216)	
Weight-Add for PFCC option, lbs (kg)	160 (73)		160 (73)		160 (73)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	100 (351)	125 (439)	125 (439)	125 (439)	125 (439)	150 (528)
Minimum Capacity (% of Full Load)	15		15		15	
Oil charge per circuit , gallons (liters)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	291 (132)	291 (132)	291 (132)	291 (132)	333 (151)	333 (151)
Coil Inlet Face Area, sq. ft. (sq. m.)	172.3 (16.0)	172.3 (16.0)	172.3 (16.0)	172.3 (16.0)	169.9 (18.3)	169.9 (18.3)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	7	7	7	7	8	8
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow, cfm (l/s)	155190 (73241)		155190 (73241)		177360 (83704)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	16 x 108 / (406 x 2750)		16 x 108 / (406 x 2750)		20 x 108 / (508 x 2750)	
Water Volume, gallons (liters)	61 (232)		61 (232)		103 (390)	
Victaulic inlet/outlet conn. in. (mm)	6 (168)		6 (168)		8 (219)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 37: Physical Data (60 Hz, Standard Efficiency, non-VFD models)

Data	AWS300ADS		AWS320ADS		AWS350ADS	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	291 (1021)		327 (1151)		350 (1229)	
Unit Operating Charge lbs (kg)	215 (98)	215 (98)	265 (120)	265 (120)	265 (120)	265 (120)
Unit Dimensions L x W x H, in. (mm)	316 x 88 x 100 (8026 x 2225 x 2548)		387 x 88 x 100 (9823 x 2225 x 2548)		387 x 88 x 100 (9823 x 2225 x 2548)	
Unit Operating Weight, lbs. (kg)	17724 (8040)		19656 (8916)		19656 (8916)	
Unit Shipping Weight, lbs (kg)	16857 (7646)		18789 (8523)		18789 (8523)	
Weight-Add for Copper Fins, lbs (kg)	2372 (1076)		2968 (1346)		2968 (1346)	
Weight-Add for Louvered Panels, lbs (kg)	1012 (459)		1236 (561)		1236 (561)	
Weight-Add for Sound Enclosures, lbs (kg	477 (216)		477 (216)		477 (216)	
Weight-Add for PFCC option, lbs (kg)	160 (73)		160 (73)		160 (73)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	150 (528)	150 (528)	150 (128)	175 (615)	175 (615)	175 (615)
Minimum Capacity (% of Full Load)	15		15		15	
Oil charge per circuit , gallons (liters)	6 (23)	6 (23)	6 (23)	6 (23)	6 (23)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	333 (151)	333 (151)	416 (189)	416 (189)	416 (189)	416 (189)
Coil Inlet Face Area, sq. ft. (sq. m.)	169.9 (18.3)	169.9 (18.3)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	8	8	10	10	10	10
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow, cfm (l/s)	177360 (83704)		221700 (104630)		221700 (104630)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	20 x 108 / (508 x 2750)		20 x 108 / (508 x 2750)		20 x 108 / (508 x 2750)	
Water Volume, gallons (liters)	103 (390)		99 (374)		99 (374)	
Victaulic inlet/outlet conn. in. (mm)	8 (219)		8 (219)		8 (219)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (non-VFD)

Table 38: Physical Data (60 Hz, Standard Efficiency, non-VFD models)

Data	AWS375ATS			AWS400ATS		
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	398 (1401)			398 (1401)		
Unit Operating Charge lbs (kg)	185 (84)	185 (84)	220 (100)	185 (84)	185 (84)	220 (100)
Unit Dimensions L x W x H, in. (mm)	438 x 88 x 100 (11123 x 2225 x 2548)			438 x 88 x 100 (11123 x 2225 x 2548)		
Unit Operating Weight, lbs. (kg)	23885 (10834)			24570 (11145)		
Unit Shipping Weight, lbs (kg)	22486 (10200)			23171 (10510)		
Weight-Add for Copper Fins, lbs (kg)	3256 (1477)			3256 (1477)		
Weight-Add for Louvered Panels, lbs (kg)	1348 (611)			1348 (611)		
Weight-Add for Sound Enclosures, lbs (kg	776 (352)			776 (352)		
Weight-Add for PFCC option, lbs (kg)	120 (55)			120 (55)		
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	125 (439)	125 (439)	125 (439)	125 (439)	125 (439)	150 (528)
Minimum Capacity (% of Full Load)	8			8		
Oil charge per circuit , gallons (liters)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	291 (132)	291 (132)	333 (151)	291 (132)	291 (132)	333 (151)
Coil Inlet Face Area, sq. ft. (sq. m.)	172.3 (16.0)	172.3 (16.0)	169.9 (18.3)	172.3 (16.0)	172.3 (16.0)	169.9 (18.3)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	7	7	8	7	7	8
Fan Motor, hp (kW)	1.4 (1.05)			1.4 (1.05)		
Fan & Motor RPM	850			850		
Fan Tip Speed, fpm (m/s)	6984 (35)			6984 (35)		
Airflow, cfm (l/s)	266040 (125556)			243870 (115094)		
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	26 x 130 / (660 x 3300)			26 x 130 / (660 x 3300)		
Water Volume, gallons (liters)	230 (871)			225 (850)		
Victaulic inlet/outlet conn. in. (mm)	10 (273)			10 (273)		
Max. Water Pressure, psi (kPa)	152 (1048)			152 (1048)		
Max. Refrigerant Press., psi (kPa)	325 (2241)			325 (2241)		

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 39: Physical Data (60 Hz, Standard Efficiency, non-VFD models)

Data	AWS425ATS			AWS445ATS		
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	419 (1472)			448 (1575)		
Unit Operating Charge lbs (kg)	210 (95)	210 (95)	220 (100)	210 (95)	210 (95)	220 (100)
Unit Dimensions L x W x H, in. (mm)	473 x 88 x 100 (12024 x 2225 x 2548)			473 x 88 x 100 (12024 x 2225 x 2548)		
Unit Operating Weight, lbs. (kg)	26830 (12170)			27506 (12477)		
Unit Shipping Weight, lbs (kg)	25431 (11535)			26107 (11842)		
Weight-Add for Copper Fins, lbs (kg)	3553 (1612)			3553 (1612)		
Weight-Add for Louvered Panels, lbs (kg)	1460 (662)			1460 (662)		
Weight-Add for Sound Enclosures, lbs (kg	776 (352)			776 (352)		
Weight-Add for PFCC option, lbs (kg)	120 (55)			120 (55)		
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	125 (439)	150 (528)	150 (528)	150 (528)	150 (528)	150 (528)
Minimum Capacity (% of Full Load)	8			8		
Oil charge per circuit , gallons (liters)	5.5 (21)	6 (23)	6 (23)	6 (23)	6 (23)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	333 (151)	333 (151)	333 (151)	333 (151)	333 (151)	333 (151)
Coil Inlet Face Area, sq. ft. (sq. m.)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	8	8	8	8	8	8
Fan Motor, hp (kW)	1.4 (1.05)			1.4 (1.05)		
Fan & Motor RPM	850			850		
Fan Tip Speed, fpm (m/s)	6984 (35)			6984 (35)		
Airflow, cfm (l/s)	266040 (125556)			266040 (125556)		
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	26 x 130 / (660 x 3300)			26 x 130 / (660 x 3300)		
Water Volume, gallons (liters)	220 (831)			220 (831)		
Victaulic inlet/outlet conn. in. (mm)	10 (273)			10 (273)		
Max. Water Pressure, psi (kPa)	152 (1048)			152 (1048)		
Max. Refrigerant Press., psi (kPa)	325 (2241)			325 (2241)		

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (non-VFD)

Table 40: Physical Data (60 Hz, Standard Efficiency, non-VFD models)

Data	AWS470ATS			AWS500ATS		
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	478 (1681)			511 (1798)		
Unit Operating Charge lbs (kg)	210 (95)	210 (95)	280 (127)	265 (120)	265 (120)	220 (100)
Unit Dimensions L x W x H, in. (mm)	509 x 88 x 100 (12921 x 2225 x 2548)			544 x 88 x 100 (13823 x 2225 x 2548)		
Unit Operating Weight, lbs. (kg)	28631 (12987)			29508 (13385)		
Unit Shipping Weight, lbs (kg)	27232 (12352)			28109 (12750)		
Weight-Add for Copper Fins, lbs (kg)	3870 (1755)			4168 (1891)		
Weight-Add for Louvered Panels, lbs (kg)	1572 (713)			1684 (764)		
Weight-Add for Sound Enclosures, lbs (kg	776 (352)			776 (352)		
Weight-Add for PFCC option, lbs (kg)	120 (55)			120 (55)		
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	150 (528)	150 (528)	175 (615)	175 (615)	175 (615)	150 (528)
Minimum Capacity (% of Full Load)	8			8		
Oil charge per circuit , gallons (liters)	6 (23)	6 (23)	6 (23)	6 (23)	6 (23)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	333 (151)	333 (151)	416 (189)	416 (189)	416 (189)	333 (151)
Coil Inlet Face Area, sq. ft. (sq. m.)	169.9 (18.3)	169.9 (18.3)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)	169.9 (18.3)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	8	8	10	10	10	8
Fan Motor, hp (kW)	1.4 (1.05)			1.4 (1.05)		
Fan & Motor RPM	850			850		
Fan Tip Speed, fpm (m/s)	6984 (35)			6984 (35)		
Airflow, cfm (l/s)	288210 (136019)			310380 (146482)		
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	26 x 130 / (660 x 3300)			26 x 130 / (660 x 3300)		
Water Volume, gallons (liters)	220 (831)			220 (831)		
Victaulic inlet/outlet conn. in. (mm)	10 (273)			10 (273)		
Max. Water Pressure, psi (kPa)	152 (1048)			152 (1048)		
Max. Refrigerant Press., psi (kPa)	325 (2241)			325 (2241)		

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 41: Physical Data (60 Hz, Standard Efficiency, non-VFD models)

Data	AWS530ATS		
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3
BASIC DATA			
Unit Cap. @ AHRI tons (kW)	541 (1902)		
Unit Operating Charge lbs (kg)	270 (122)	270 (122)	280 (127)
Unit Dimensions L x W x H, in. (mm)	580 x 88 x 100 (14722 x 2225 x 2548)		
Unit Operating Weight, lbs. (kg)	30348 (13766)		
Unit Shipping Weight, lbs (kg)	28949 (13131)		
Weight-Add for Copper Fins, lbs (kg)	4466 (2026)		
Weight-Add for Louvered Panels, lbs (kg)	1796 (815)		
Weight-Add for Sound Enclosures, lbs (kg	776 (352)		
Weight-Add for PFCC option, lbs (kg)	120 (55)		
COMPRESSORS, SCREW, SEMI-HERMETIC			
Nominal Capacity, tons (kW)	175 (615)	175 (615)	175 (615)
Minimum Capacity (% of Full Load)	8		
Oil charge per circuit , gallons (liters)	6 (23)	6 (23)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE			
Pumpdown Capacity, lbs (kg)	416 (189)	416 (189)	416 (189)
Coil Inlet Face Area, sq. ft. (sq. m.)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE			
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	10	10	10
Fan Motor, hp (kW)	1.4 (1.05)		
Fan & Motor RPM	850		
Fan Tip Speed, fpm (m/s)	6984 (35)		
Airflow, cfm (l/s)	332550 (156945)		
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE			
Shell Dia.-Tube Length, in.(mm)	26 x 130 / (660 x 3300)		
Water Volume, gallons (liters)	220 (831)		
Victaulic inlet/outlet conn. in. (mm)	10 (273)		
Max. Water Pressure, psi (kPa)	152 (1048)		
Max. Refrigerant Press., psi (kPa)	325 (2241)		

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (non-VFD)

Table 42: Physical Data (60 Hz, High Efficiency, non-VFD models)

Data	AWS210ADH		AWS230ADH		AWS250ADH	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	207 (728)		233 (820)		254 (892)	
Unit Operating Charge lbs (kg)	180 (82)	180 (82)	200 (90)	220 (100)	220 (100)	220 (100)
Unit Dimensions L x W x H, in. (mm)	245 x 88 x 100 (6220 x 2225 x 2548)		280 x 88 x 100 (7121 x 2225 x 2548)		280 x 88 x 100 (7121 x 2225 x 2548)	
Unit Operating Weight, lbs. (kg)	13411 (6083)		15107 (6852)		15669 (7107)	
Unit Shipping Weight, lbs (kg)	12868 (5837)		14564 (6606)		15126 (6861)	
Weight-Add for Copper Fins, lbs (kg)	1876 (851)		2084 (945)		2084 (945)	
Weight-Add for Louvered Panels, lbs (kg)	788 (357)		900 (408)		900 (408)	
Weight-Add for Sound Enclosures, lbs (kg	477 (216)		477 (216)		477 (216)	
Weight-Add for PFCC option, lbs (kg)	160 (73)		160 (73)		160 (73)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	100 (351)	100 (351)	100 (351)	125 (439)	125 (439)	125 (439)
Minimum Capacity (% of Full Load)	15		15		15	
Oil charge per circuit , gallons (liters)	4.5 (17)	4.5 (17)	4.5 (17)	5.5 (21)	5.5 (21)	5.5 (21)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	250 (113)	250 (113)	291 (132)	291 (132)	291 (132)	291 (132)
Coil Inlet Face Area, sq. ft. (sq. m.)	147.7 (13.7)	147.7 (13.7)	172.3 (16.0)	172.3 (16.0)	172.3 (16.0)	172.3 (16.0)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	6	6	7	7	7	7
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow , cfm (l/s)	133020 (62778)		155190 (73241)		155190 (73241)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	16 x 108 / (406 x 2750)		16 x 108 / (406 x 2750)		16 x 108 / (406 x 2750)	
Water Volume, gallons (liters)	63 (240)		61 (232)		61 (252)	
Victaulic inlet/outlet conn. in. (mm)	6 (168)		6 (168)		6 (168)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 43: Physical Data (60 Hz, High Efficiency, non-VFD models)

Data	AWS280ADH		AWS300ADH		AWS320ADH	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	272 (956)		293 (1030)		327 (1151)	
Unit Operating Charge lbs (kg)	230 (104)	250 (113)	250 (113)	250 (113)	260 (118)	285 (129)
Unit Dimensions L x W x H, in. (mm)	316 x 88 x 100 (8022 x 2225 x 2548)		316 x 88 x 100 (8022 x 2225 x 2548)		387 x 88 x 100 (9823 x 2225 x 2548)	
Unit Operating Weight, lbs. (kg)	17008 (7715)		17008 (7715)		19486 (8839)	
Unit Shipping Weight, lbs (kg)	16141 (7322)		16141 (7322)		18619 (8446)	
Weight-Add for Copper Fins, lbs (kg)	2372 (1076)		2372 (1076)		2968 (1346)	
Weight-Add for Louvered Panels, lbs (kg)	1012 (459)		1012 (459)		1236 (561)	
Weight-Add for Sound Enclosures, lbs (kg	477 (216)		477 (216)		477 (216)	
Weight-Add for PFCC option, lbs (kg)	160 (73)		160 (73)		160 (73)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	125 (439)	150 (528)	150 (528)	150 (528)	150 (528)	175 (615)
Minimum Capacity (% of Full Load)	15		15		15	
Oil charge per circuit , gallons (liters)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	333 (151)	333 (151)	333 (151)	333 (151)	416 (189)	416 (189)
Coil Inlet Face Area, sq. ft. (sq. m.)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	246.1 (22.8)	246.1 (22.8)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	8	8	8	8	10	10
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow , cfm (l/s)	177360 (83704)		177360 (83704)		221700 (104630)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	20 x 108 / (508 x 2750)		20 x 108 / (508 x 2750)		20 x 108 / (508 x 2750)	
Water Volume, gallons (liters)	103 (390)		103 (390)		99 (374)	
Victaulic inlet/outlet conn. in. (mm)	8 (219)		8 (219)		8 (219)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (non-VFD)

Table 44: Physical Data (60 Hz, High Efficiency, non-VFD models)

Data	AWS350ADH		AWS380ADH		AWS405ADH	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	336 (1183)		366 (1285)		395 (1388)	
Unit Operating Charge lbs (kg)	285 (129)	285 (129)	285 (129)	331 (150)	331 (150)	331 (150)
Unit Dimensions L x W x H, in. (mm)	387 x 88 x 100 (9823 x 2225 x 2548)		438 x 88 x 100 (11123 x 2225 x 2548)		473 x 88 x 101 (12024 x 2225 x 2548)	
Unit Operating Weight, lbs. (kg)	19656 (8916)		21132 (9585)		21915 (9941)	
Unit Shipping Weight, lbs (kg)	18789 (8523)		20265 (9192)		21048 (9547)	
Weight-Add for Copper Fins, lbs (kg)	2968 (1346)		3256 (1477)		3553 (1612)	
Weight-Add for Louvered Panels, lbs (kg)	1236 (561)		1348 (611)		1460 (662)	
Weight-Add for Sound Enclosures, lbs (kg	477 (216)		477 (216)		477 (216)	
Weight-Add for PFCC option, lbs (kg)	160 (73)		160 (73)		160 (73)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	175 (615)	175 (615)	175 (615)	200 (703)	200 (703)	200 (703)
Minimum Capacity (% of Full Load)	15		15		15	
Oil charge per circuit , gallons (liters)	6 (23)	6 (23)	6 (23)	6 (23)	6 (23)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	416 (189)	416 (189)	416 (189)	500 (227)	500 (227)	500 (227)
Coil Inlet Face Area, sq. ft. (sq. m.)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)	295.3 (27.4)	295.3 (27.4)	295.3 (27.4)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	10	10	10	12	12	12
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow , cfm (l/s)	221700 (104630)		243870 (115094)		266040 (125556)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	20 x 108 / (508 x 2750)		20 x 108 / (508 x 2750)		20 x 108 / (508 x 2750)	
Water Volume, gallons (liters)	99 (374)		99 (374)		99 (374)	
Victaulic inlet/outlet conn. in. (mm)	8 (219)		8 (219)		8 (219)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 45: Physical Data (60 Hz, High Efficiency, non-VFD models)

Data	AWS445ATH			AWS470ATH		
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	438 (1540)			468 (1645)		
Unit Operating Charge lbs (kg)	250 (113)	250 (113)	250 (113)	250 (113)	250 (113)	295 (134)
Unit Dimensions L x W x H, in. (mm)	473 x 88 x 100 (12024 x 2225 x 2548)			509 x 88 x 100 (12921 x 2225 x 2548)		
Unit Operating Weight, lbs. (kg)	25590 (11608)			27125 (12304)		
Unit Shipping Weight, lbs (kg)	24191 (10973)			25726 (11669)		
Weight-Add for Copper Fins, lbs (kg)	3553 (1612)			3870 (1755)		
Weight-Add for Louvered Panels, lbs (kg)	1460 (662)			1572 (713)		
Weight-Add for Sound Enclosures, lbs (kg	776 (352)			776 (352)		
Weight-Add for PFCC option, lbs (kg)	120 (55)			120 (55)		
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	150 (528)	150 (528)	150 (528)	150 (528)	150 (528)	175 (615)
Minimum Capacity (% of Full Load)	8			8		
Oil charge per circuit , gallons (liters)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	333 (151)	333 (151)	333 (151)	333 (151)	333 (151)	416 (189)
Coil Inlet Face Area, sq. ft. (sq. m.)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	246.1 (22.8)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	8	8	8	8	8	10
Fan Motor, hp (kW)	1.4 (1.05)			1.4 (1.05)		
Fan & Motor RPM	850			850		
Fan Tip Speed, fpm (m/s)	6984 (35)			6984 (35)		
Airflow , cfm (l/s)	266040 (125556)			288210 (136019)		
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	26 x 130 / (660 x 3300)			26 x 130 / (660 x 3300)		
Water Volume, gallons (liters)	225 (850)			220 (831)		
Victaulic inlet/outlet conn. in. (mm)	10 (273)			10 (273)		
Max. Water Pressure, psi (kPa)	152 (1048)			152 (1048)		
Max. Refrigerant Press., psi (kPa)	325 (2241)			325 (2241)		

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (non-VFD)

Table 46: Physical Data (60 Hz, High Efficiency, non-VFD models)

Data	AWS500ATH			AWS530ATH		
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	493 (1734)			525 (1845)		
Unit Operating Charge lbs (kg)	295 (134)	295 (134)	250 (113)	295 (134)	295 (134)	295 (134)
Unit Dimensions L x W x H, in. (mm)	544 x 88 x 100 (13823 x 2225 x 2548)			580 x 88 x 100 (14722 x 2225 x 2548)		
Unit Operating Weight, lbs. (kg)	29098 (13199)			30348 (13766)		
Unit Shipping Weight, lbs (kg)	27699 (12564)			28949 (13131)		
Weight-Add for Copper Fins, lbs (kg)	4168 (1891)			4466 (2026)		
Weight-Add for Louvered Panels, lbs (kg)	1684 (764)			1796 (815)		
Weight-Add for Sound Enclosures, lbs (kg	776 (352)			776 (352)		
Weight-Add for PFCC option, lbs (kg)	120 (55)			120 (55)		
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	175 (615)	175 (615)	150 (528)	175 (615)	175 (615)	175 (615)
Minimum Capacity (% of Full Load)	8			8		
Oil charge per circuit , gallons (liters)	6 (23)	6 (23)	5.5 (21)	6 (23)	6 (23)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	416 (189)	416 (189)	333 (151)	416 (189)	416 (189)	416 (189)
Coil Inlet Face Area, sq. ft. (sq. m.)	246.1 (22.8)	246.1 (22.8)	169.9 (18.3)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	10	10	8	10	10	10
Fan Motor, hp (kW)	1.4 (1.05)			1.4 (1.05)		
Fan & Motor RPM	850			850		
Fan Tip Speed, fpm (m/s)	6984 (35)			6984 (35)		
Airflow , cfm (l/s)	310380 (146482)			332550 (156945)		
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	26 x 130 / (660 x 3300)			26 x 130 / (660 x 3300)		
Water Volume, gallons (liters)	220 (831)			220 (831)		
Victaulic inlet/outlet conn. in. (mm)	10 (273)			10 (273)		
Max. Water Pressure, psi (kPa)	152 (1048)			152 (1048)		
Max. Refrigerant Press., psi (kPa)	325 (2241)			325 (2241)		

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 47: Physical Data (60 Hz, Premium Efficiency, non-VFD models)

Data	AWS210ADP		AWS230ADP		AWS250ADP	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	213 (750)		239 (840)		260 (915)	
Unit Operating Charge lbs (kg)	200 (91)	200 (91)	225 (102)	225 (102)	(235) (107)	(235) (107)
Unit Dimensions L x W x H, in. (mm)	316 x 88 x 100 (8022 x 2225 x 2548)		351 x 88 x 100 (8923 x 2225 x 2548)		351 x 88 x 100 (8923 x 2225 x 2548)	
Unit Operating Weight, lbs. (kg)	16812 (7626)		18327 (8313)		20200 (9163)	
Unit Shipping Weight, lbs (kg)	15560 (7058)		17075 (7745)		18547 (8413)	
Weight-Add for Copper Fins, lbs (kg)	2372 (1076)		2679 (1215)		2679 (1215)	
Weight-Add for Louvered Panels, lbs (kg)	1012 (459)		1124 (510)		1124 (510)	
Weight-Add for Sound Enclosures, lbs (kg	477 (216)		477 (216)		477 (216)	
Weight-Add for PFCC option, lbs (kg)	160 (73)		160 (73)		160 (73)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	100 (351)	100 (351)	100 (351)	125 (439)	125 (439)	125 (439)
Minimum Capacity (% of Full Load)	15		15		15	
Oil charge per circuit , gallons (liters)	4.5 (17)	4.5 (17)	4.5 (17)	5.5 (21)	5.5 (21)	5.5 (21)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	333 (151)	333 (151)	375 (170)	375 (170)	375 (170)	375 (170)
Coil Inlet Face Area, sq. ft. (sq. m.)	169.9 (18.3)	169.9 (18.3)	221.5 (20.6)	221.5 (20.6)	221.5 (20.6)	221.5 (20.6)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	8	8	9	9	9	9
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow , cfm (l/s)	177360 (83704)		199530 (94167)		199530 (94167)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	20 x 154 / (508 x 3900)		20 x 154 / (508 x 3900)		26 x 154 / (660 x 3900)	
Water Volume, gallons (liters)	154 (582)		154 (582)		267 (1011)	
Victaulic inlet/outlet conn. in. (mm)	8 (2199		8 (219)		10 (273)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (non-VFD)

Table 48: Physical Data (60 Hz, Premium Efficiency, non-VFD models)

Data	AWS280ADP		AWS300ADP		AWS320ADP	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	281.6 (990.0)		301.0 (1058.4)		336.8 (1184.3)	
Unit Operating Charge lbs (kg)	250 (113)	250 (113)	260 (118)	260 (118)	260 (118)	300 (136)
Unit Dimensions L x W x H, in. (mm)	387 x 88 x 100 9823 x 2225 x 2545		387 x 88 x 100 9823 x 2225 x 2545		438 x 88 x 100 11123 x 2225 x 2548	
Unit Operating Weight, lbs. (kg)	22485 (10199)		22485 (10199)		24441 (11086)	
Unit Shipping Weight, lbs (kg)	20832 (9449)		20832 (9449)		22788 (10337)	
Weight-Add for Copper Fins, lbs (kg)	2968 (1346)		2968 (1346)		3256 (1477)	
Weight-Add for Louvered Panels, lbs (kg)	1236 (561)		1236 (561)		1348 (611)	
Weight-Add for Sound Enclosures, lbs (kg	477 (216)		477 (216)		477 (216)	
Weight-Add for PFCC option, lbs (kg)	160 (73)		160 (73)		160 (73)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	125 (439)	150 (528)	150 (528)	150 (528)	150 (528)	175 (615)
Minimum Capacity (% of Full Load)	15		15		15	
Oil charge per circuit , gallons (liters)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	416 (189)	416 (189)	416 (189)	416 (189)	416 (189)	500 (227)
Coil Inlet Face Area, sq. ft. (sq. m.)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)	295.3 (27.4)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	10	10	10	10	10	12
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow , cfm (l/s)	221700 (104630)		221700 (104630)		243870 (115093)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	26 x 154 / (660 x 3900)		26 x 154 / (660 x 3900)		26 x 154 / (660 x 3900)	
Water Volume, gallons (liters)	267 (1011)		267 (1011)		254 (963)	
Victaulic inlet/outlet conn. in. (mm)	10 (273)		10 (273)		10 (273)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 49: Physical Data (60 Hz, Premium Efficiency, non-VFD models)

Data	AWS350ADP	
	CIRCUIT 1	CIRCUIT 2
BASIC DATA		
Unit Cap. @ AHRI tons (kW)	368 (1295)	
Unit Operating Charge lbs (kg)	310 (141)	310 (141)
Unit Dimensions L x W x H, in. (mm)	473 x 88 x 100 (12024 x 2225 x 2548)	
Unit Operating Weight, lbs. (kg)	24140 (10950)	
Unit Shipping Weight, lbs (kg)	22487 (10200)	
Weight-Add for Copper Fins, lbs (kg)	3553 (1612)	
Weight-Add for Louvered Panels, lbs (kg)	1460 (662)	
Weight-Add for Sound Enclosures, lbs (kg	477 (216)	
Weight-Add for PFCC option, lbs (kg)	160 (73)	
COMPRESSORS, SCREW, SEMI-HERMETIC		
Nominal Capacity, tons (kW)	175 (615)	175 (615)
Minimum Capacity (% of Full Load)	15	
Oil charge per circuit , gallons (liters)	6 (23)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE		
Pumpdown Capacity, lbs (kg)	500 (227)	500 (227)
Coil Inlet Face Area, sq. ft. (sq. m.)	295.3 (27.4)	295.3 (27.4)
Rows Deep/Fins Per Inch	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE		
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	12	12
Fan Motor, hp (kW)	1.4 (1.05)	
Fan & Motor RPM	850	
Fan Tip Speed, fpm (m/s)	6984 (35)	
Airflow , cfm (l/s)	266040 (125556)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE		
Shell Dia.-Tube Length, in.(mm)	26 x 154 / (660 x 3900)	
Water Volume, gallons (liters)	254 (963)	
Victaulic inlet/outlet conn. in. (mm)	10 (273)	
Max. Water Pressure, psi (kPa)	152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (VFD)

Table 50: Physical Data (60 Hz, Standard Efficiency, VFD models)

Data	AWS150ADS VFD		AWS175ADS VFD		AWS190ADS VFD	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	154 (542)		170 (598)		185 (651)	
Unit Operating Charge lbs (kg)	145 (66)	145 (66)	165 (75)	165 (75)	165 (75)	165 (75)
Unit Dimensions L x W x H, in. (mm)	268 x 88 x 100 (6803 x 2225 x 2548)		268 x 88 x 100 (6803 x 2225 x 2548)		268 x 88 x 100 (6803 x 2225 x 2548)	
Unit Operating Weight, lbs. (kg)	14673 (6656)		15978 (7248)		15902 (7213)	
Unit Shipping Weight, lbs (kg)	14130 (6409)		15435 (7001)		15359 (6967)	
Weight-Add for Copper Fins	1776 (806)		1776 (806)		1776 (806)	
Weight-Add for Louvered Panels	676 (307)		788 (357)		788 (357)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	90 (316)	90 (316)	90 (316)	100 (351)	100 (351)	100 (351)
Minimum Capacity (% of Full Load)	20		20		20	
Oil charge per circuit , gallons (liters)	4.5 (17)	4.5 (17)	4.5 (17)	5.5 (21)	5.5 (21)	5.5 (21)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	208 (94)	208 (94)	250 (113)	250 (113)	250 (113)	250 (113)
Coil Inlet Face Area, sq. ft. (sq. m.)	123.1 (11.4)	123.1 (11.4)	147.7 (13.7)	147.7 (13.7)	147.7 (13.7)	147.7 (13.7)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	5	5	6	6	6	6
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow , cfm (l/s)	110850 (52315)		133020 (62778)		133020 (62778)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	16 x 108 (406 x 2750)		16 x 108 (406 x 2750)		16 x 108 (406 x 2750)	
Water Volume, gallons (liters)	67 (255)		67 (255)		63 (240)	
Victaulic inlet/outlet conn. in. (mm)	6 (168)		6 (168)		6 (168)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 51: Physical Data (60 Hz, High Efficiency, VFD models)

Data	AWS210ADH VFD		AWS230ADH VFD		AWS250ADH VFD	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @AHRI tons (kW)	207 (728)		233 (820)		254 (892)	
Unit Operating Charge lbs (kg)	160 (73)	160 (73)	180 (82)	180 (82)	180 (82)	180 (82)
Unit Dimensions L x W x H, in. (mm)	268 x 88 x 100 6803 x 2225 x 2548		303 x 88 x 100 7703 x 2225 x 2548		303 x 88 x 100 7703 x 2225 x 2548	
Unit Operating Weight, lbs. (kg)	15146 (6870)		16478 (7474)		17021 (7721)	
Unit Shipping Weight, lbs (kg)	14603 (6624)		15935 (7228)		16478 (7474)	
Weight-Add for Copper Fins	1876 (851)		2084 (945)		2084 (945)	
Weight-Add for Louvered Panels	788 (357)		900 (408)		900 (408)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	100 (351)	100 (351)	100 (351)	125 (439)	125 (439)	125 (439)
Minimum Capacity (% of Full Load)	20		20		20	
Oil charge per circuit , gallons (liters)	4.5 (17)	4.5 (17)	4.5 (17)	5.5 (21)	5.5 (21)	5.5 (21)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	250 (113)	250 (113)	291 (132)	291 (132)	291 (132)	291 (132)
Coil Inlet Face Area, sq. ft. (sq. m)	147.7 (13.7)	147.7 (13.7)	172.3 (16.0)	172.3 (16.0)	172.3 (16.0)	172.3 (16.0)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	6	6	7	7	7	7
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow, cfm (l/s)	133020 (62778)		155190 (73241)		155190 (73241)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	16 x 108 / (406 x 2750)		16 x 108 / (406 x 2750)		16 x 108 / (406 x 2750)	
Water Volume, gallons (liters)	63 (240)		61 (232)		61 (252)	
Victaulic inlet/outlet conn. in. (mm)	6 (168)		6 (168)		6 (168)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (VFD)

Table 52: Physical Data (60 Hz, High Efficiency, VFD models)

Data	AWS280ADH VFD		AWS300ADH VFD		AWS320ADH VFD	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	272 (956)		292 (1028)		327 (1151)	
Unit Operating Charge lbs (kg)	200 (91)	200 (91)	210 (95)	210 (95)	260 (118)	260 (118)
Unit Dimensions L x W x H, in. (mm)	339 x 88 x 100 8602 x 2225 x 2548		339 x 88 x 100 8602 x 2225 x 2548		410 x 88 x 100 10402 x 2225 x 2545	
Unit Operating Weight, lbs. (kg)	18606 (8440)		18606 (8440)		20903 (9482)	
Unit Shipping Weight, lbs (kg)	17739 (8046)		17739 (8046)		20036 (9088)	
Weight-Add for Copper Fins	2372 (1076)		2372 (1076)		2968 (1346)	
Weight-Add for Louvered Panels	1012 (459)		1012 (459)		1236 (561)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	125 (439)	150 (528)	150 (528)	150 (528)	150 (528)	175 (615)
Minimum Capacity (% of Full Load)	20		20		20	
Oil charge per circuit , gallons (liters)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	6 (23)
CONDENSERS, VFDICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	333 (151)	333 (151)	333 (151)	333 (151)	416 (189)	416 (189)
Coil Inlet Face Area, sq. ft. (sq. m.)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	246.1 (22.8)	246.1 (22.8)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	8	8	8	8	10	10
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow , cfm (l/s)	177360 (83704)		177360 (83704)		221700 (104630)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	20 x 108 / (508 x 2750)		20 x 108 / (508 x 2750)		20 x 108 / (508 x 2750)	
Water Volume, gallons (liters)	103 (390)		103 (390)		99 (374)	
Victaulic inlet/outlet conn. in. (mm)	8 (219)		8 (219)		8 (219)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 53: Physical Data (60 Hz, High Efficiency, VFD models)

Data	AWS350ADH VFD		AWS380ADH VFD		AWS405ADH VFD	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	336 (1184)		366 (1287)		395 (1389)	
Unit Operating Charge lbs (kg)	265 (120)	265 (120)	270 (122)	320 (145)	320 (145)	320 (145)
Unit Dimensions	410 x 88 x 100		461 x 88 x 100		496 x 88 x 100	
L x W x H, in. (mm)	10402 x 2225 x 2545		11701 x 2225 x 2548		12604 x 2225 x 2545	
Unit Operating Weight, lbs. (kg)	21596 (9796)		22900 (10387)		23705 (10753)	
Unit Shipping Weight, lbs (kg)	20729 (9403)		22033 (9994)		22838 (10359)	
Weight-Add for Copper Fins	2968 (1346)		3256 (1477)		3553 (1612)	
Weight-Add for Louvered Panels	1236 (561)		1348 (611)		1460 (662)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	175 (615)	175 (615)	175 (615)	200 (703)	200 (703)	200 (703)
Minimum Capacity (% of Full Load)	20		20		20	
Oil charge per circuit , gallons (liters)	6 (23)	6 (23)	6 (23)	6 (23)	6 (23)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	416 (189)	416 (189)	416 (189)	500 (227)	500 (227)	500 (227)
Coil Inlet Face Area, sq. ft. (sq. m)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)	295.3 (27.4)	295.3 (27.4)	295.3 (27.4)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	10	10	10	12	12	12
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow, cfm (l/s)	221700 (104630)		243870 (115094)		266040 (125556)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	20 x 108 / (508 x 2750)		20 x 108 / (508 x 2750)		20 x 108 / (508 x 2750)	
Water Volume, gallons (liters)	99 (374)		99 (374)		99 (374)	
Victaulic inlet/outlet conn. in. (mm)	8 (219)		8 (219)		8 (219)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (VFD)

Table 54: Physical Data (60 Hz, High Efficiency, VFD models)

Data	AWS445ATH VFD			AWS470ATH VFD		
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	438 (1540)			468 (1645)		
Unit Operating Charge lbs (kg)	210 (95)	210 (95)	220 (100)	210 (95)	210 (95)	280 (187)
Unit Dimensions	496 x 88 x 100			532 x 88 x 100		
L x W x H, in. (mm)	12605 x 2225 x 2548			13504 x 2225 x 2545		
Unit Operating Weight, lbs. (kg)	27152 (12316)			28300 (12837)		
Unit Shipping Weight, lbs (kg)	25753 (11682)			26901 (12202)		
Weight-Add for Copper Fins	3553 (1612)			3870 (1755)		
Weight-Add for Louvered Panels	1460 (662)			1572 (713)		
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	150 (528)	150 (528)	150 (528)	150 (528)	150 (528)	175 (615)
Minimum Capacity (% of Full Load)	13			13		
Oil charge per circuit , gallons (liters)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	6 (23)
CONDENSERS, VFDICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	333 (151)	333 (151)	333 (151)	333 (151)	333 (151)	416 (189)
Coil Inlet Face Area, sq. ft. (sq. m.)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	169.9 (18.3)	246.1 (22.8)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	8	8	8	8	8	10
Fan Motor, hp (kW)	1.4 (1.05)			1.4 (1.05)		
Fan & Motor RPM	850			850		
Fan Tip Speed, fpm (m/s)	6984 (35)			6984 (35)		
Airflow , cfm (l/s)	266040 (125556)			288210 (136019)		
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	26 x 130 / (660 x 3300)			26 x 130 / (660 x 3300)		
Water Volume, gallons (liters)	225 (850)			220 (831)		
Victaulic inlet/outlet conn. in. (mm)	10 (273)			10 (273)		
Max. Water Pressure, psi (kPa)	152 (1048)			152 (1048)		
Max. Refrigerant Press., psi (kPa)	325 (2241)			325 (2241)		

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 55: Physical Data (60 Hz, High Efficiency, VFD models)

Data	AWS500ATH VFD			AWS530ATH VFD		
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3	CIRCUIT 1	CIRCUIT 2	CIRCUIT 3
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	493 (1735)			525 (1845)		
Unit Operating Charge lbs (kg)	265 (120)	265 (120)	220 (100)	265 (120)	265 (120)	280 (187)
Unit Dimensions L x W x H, in. (mm)	567 x 88 x 100 14405 x 2225 x 2548			603 x 88 x 100 15304 x 2225 x 2545		
Unit Operating Weight, lbs. (kg)	30117 (13661)			31446 (14264)		
Unit Shipping Weight, lbs (kg)	28718 (13026)			30047 (13629)		
Weight-Add for Copper Fins	4168 (1891)			4466 (2026)		
Weight-Add for Louvered Panels	1684 (764)			1796 (815)		
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	175 (615)	175 (615)	150 (528)	175 (615)	175 (615)	175 (615)
Minimum Capacity (% of Full Load)	13			13		
Oil charge per circuit , gallons (liters)	6 (23)	6 (23)	5.5 (21)	6 (23)	6 (23)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	416 (189)	416 (189)	333 (151)	416 (189)	416 (189)	416 (189)
Coil Inlet Face Area, sq. ft. (sq. m.)	246.1 (22.8)	246.1 (22.8)	169.9 (18.3)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	10	10	8	10	10	10
Fan Motor, hp (kW)	1.4 (1.05)			1.4 (1.05)		
Fan & Motor RPM	850			850		
Fan Tip Speed, fpm (m/s)	6984 (35)			6984 (35)		
Airflow , cfm (l/s)	310380 (146482)			332550 (156945)		
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	26 x 130 / (660 x 3300)			26 x 130 / (660 x 3300)		
Water Volume, gallons (liters)	220 (831)			220 (831)		
Victaulic inlet/outlet conn. in. (mm)	10 (273)			10 (273)		
Max. Water Pressure, psi (kPa)	152 (1048)			152 (1048)		
Max. Refrigerant Press., psi (kPa)	325 (2241)			325 (2241)		

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (VFD)

Table 56: Physical Data (60 Hz, Premium Efficiency, VFD models)

Data	AWS210ADP VFD		AWS230ADP VFD		AWS250ADP VFD	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	213 (750)		238 (840)		260.2 (915)	
Unit Operating Charge lbs (kg)	200 (91)	200 (91)	225 (102)	225 (102)	(235) (107)	(235) (107)
Unit Dimensions L x W x H, in. (mm)	339 x 88 x 100 8602 x 2225 x 2548		374 x 88 x 100 9504 x 2225 x 2545		374 x 88 x 100 9504 x 2225 x 2545	
Unit Operating Weight, lbs. (kg)	18435 (8362)		19641 (8909)		21512 (9758)	
Unit Shipping Weight, lbs (kg)	17183 (7794)		18389 (8341)		19859 (9008)	
Weight-Add for Copper Fins	2372 (1076)		2679 (1215)		2679 (1215)	
Weight-Add for Louvered Panels	1012 (459)		1124 (510)		1124 (510)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	100 (351)	100 (351)	100 (351)	125 (439)	125 (439)	125 (439)
Minimum Capacity (% of Full Load)	20		20		20	
Oil charge per circuit , gallons (liters)	4.5 (17)	4.5 (17)	4.5 (17)	5.5 (21)	5.5 (21)	5.5 (21)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE						
Pumpdown Capacity, lbs (kg)	333 (151)	333 (151)	375 (170)	375 (170)	375 (170)	375 (170)
Coil Inlet Face Area, sq. ft. (sq. m.)	169.9 (18.3)	169.9 (18.3)	221.5 (20.6)	221.5 (20.6)	221.5 (20.6)	221.5 (20.6)
Rows Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	8	8	9	9	9	9
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow , cfm (l/s)	177360 (83704)		199530 (94167)		199530 (94167)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	20 x 154 / (508 x 3900)		20 x 154 / (508 x 3900)		26 x 154 / (660 x 3900)	
Water Volume, gallons (liters)	154 (582)		154 (582)		267 (1011)	
Victaulic inlet/outlet conn. in. (mm)	8 (2199		8 (219)		10 (273)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Table 57: Physical Data (60 Hz, Premium Efficiency, VFD models)

Data	AWS280ADP VFD		AWS300ADP VFD		AWS320ADP VFD	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Cap. @ AHRI tons (kW)	282 (990)		301 (1058)		337 (1184)	
Unit Operating Charge lbs (kg)	250 (113)	250 (113)	260 (118)	260 (118)	260 (118)	300 (136)
Unit Dimensions L x W x H, in. (mm)	410 x 88 x 100 10402 x 2225 x 2545		410 x 88 x 100 10402 x 2225 x 2545		461 x 88 x 100 11701 x 2225 x 2548	
Unit Operating Weight, lbs. (kg)	22485 (10199)		22485 (10199)		24441 (11086)	
Unit Shipping Weight, lbs (kg)	20832 (9449)		20832 (9449)		22788 (10337)	
Weight-Add for Copper Fins	2968 (1346)		2968 (1346)		3256 (1477)	
Weight-Add for Louvered Panels	1236 (561)		1236 (561)		1348 (611)	
COMPRESSORS, SCREW, SEMI-HERMETIC						
Nominal Capacity, tons (kW)	125 (439)	150 (528)	150 (528)	150 (528)	150 (528)	175 (615)
Minimum Capacity (% of Full Load)	20		20		20	
Oil charge per circuit , gallons (liters)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)	6 (23)
CONDENSERS, VFDICIENCY FIN AND TUBE TYPE						
Pumpdow n Capacity, lbs (kg)	416 (189)	416 (189)	416 (189)	416 (189)	416 (189)	500 (227)
Coil Inlet Face Area, sq. ft. (sq. m.)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)	246.1 (22.8)	295.3 (27.4)
Row s Deep/Fins Per Inch	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE						
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	10	10	10	10	10	12
Fan Motor, hp (kW)	1.4 (1.05)		1.4 (1.05)		1.4 (1.05)	
Fan & Motor RPM	850		850		850	
Fan Tip Speed, fpm (m/s)	6984 (35)		6984 (35)		6984 (35)	
Airflow , cfm (l/s)	221700 (104630)		221700 (104630)		243870 (115093)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE						
Shell Dia.-Tube Length, in.(mm)	26 x 154 / (660 x 3900)		26 x 154 / (660 x 3900)		26 x 154 / (660 x 3900)	
Water Volume, gallons (liters)	267 (1011)		267 (1011)		254 (963)	
Victaulic inlet/outlet conn. in. (mm)	10 (273)		10 (273)		10 (273)	
Max. Water Pressure, psi (kPa)	152 (1048)		152 (1048)		152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)		325 (2241)		325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Physical Data (VFD)

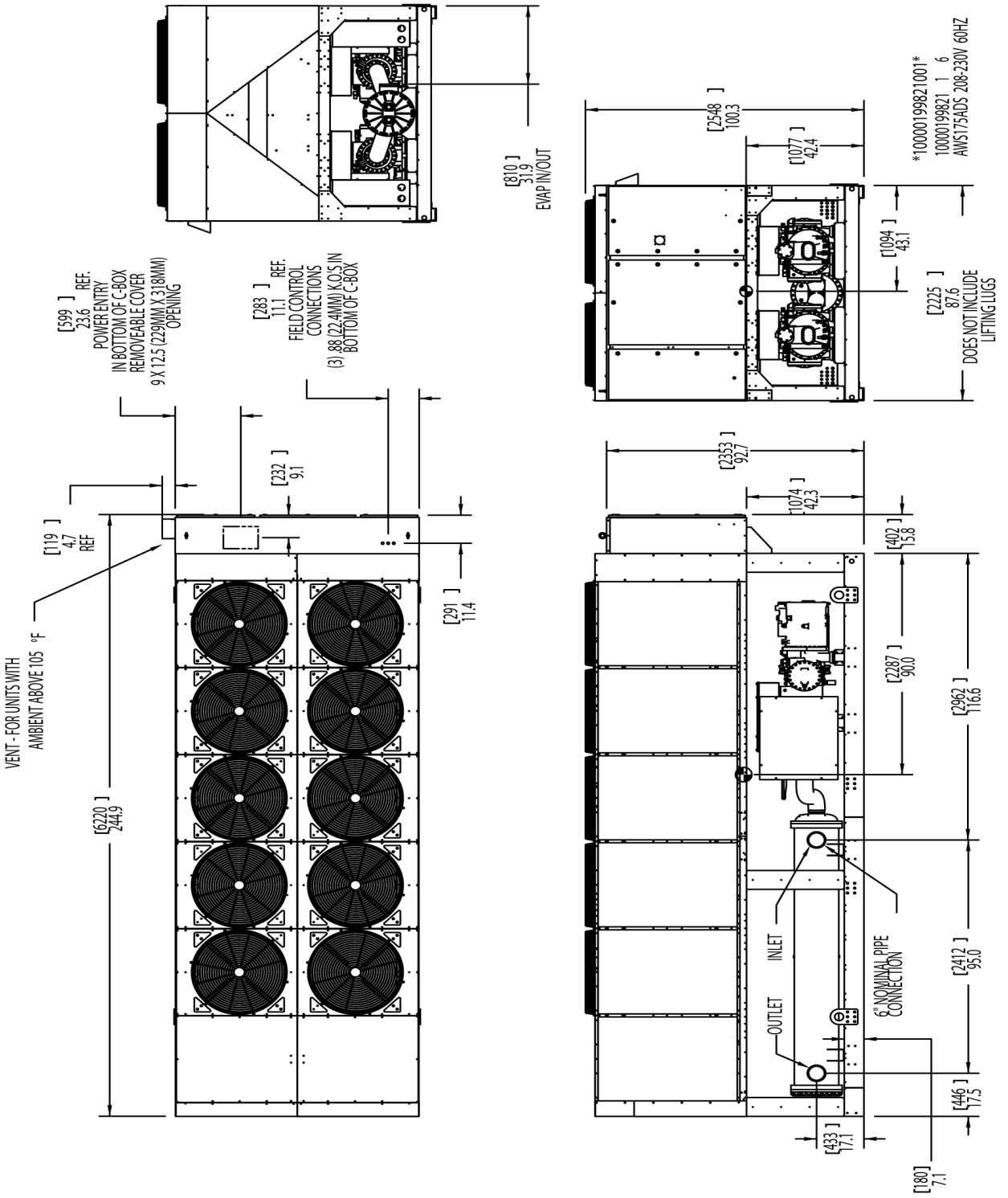
Table 58: Physical Data (60 Hz, Premium Efficiency, VFD models)

Data	AWS350ADP VFD	
	CIRCUIT 1	CIRCUIT 2
BASIC DATA		
Unit Cap. @ AHRI tons (kW)	368 (1295)	
Unit Operating Charge lbs (kg)	310 (141)	310 (141)
Unit Dimensions	496 x 88 x 100	
L x W x H, in. (mm)	12604 x 2225 x 2545	
Unit Operating Weight, lbs. (kg)	25881 (11740)	
Unit Shipping Weight, lbs (kg)	24228 (10990)	
Weight-Add for Copper Fins	3553 (1612)	
Weight-Add for Louvered Panels	1460 (662)	
COMPRESSORS, SCREW, SEMI-HERMETIC		
Nominal Capacity, tons (kW)	175 (615)	175 (615)
Minimum Capacity (% of Full Load)	20	
Oil charge per circuit , gallons (liters)	6 (23)	6 (23)
CONDENSERS, HIGH EFFICIENCY FIN AND TUBE TYPE		
Pumpdown Capacity, lbs (kg)	500 (227)	500 (227)
Coil Inlet Face Area, sq. ft. (sq. m.)	295.3 (27.4)	295.3 (27.4)
Rows Deep/Fins Per Inch	3 / 16	3 / 16
CONDENSER FANS, DIRECT DRIVE PROPELLER TYPE		
Number of Fans per Circuit Fan Diameter: 31.5 in. (800 mm)	12	12
Fan Motor, hp (kW)	1.4 (1.05)	
Fan & Motor RPM	850	
Fan Tip Speed, fpm (m/s)	6984 (35)	
Airflow , cfm (l/s)	266040 (125556)	
EVAPORATOR, DIRECT EXPANSION SHELL AND TUBE		
Shell Dia.-Tube Length, in.(mm)	26 x 154 / (660 x 3900)	
Water Volume, gallons (liters)	254 (963)	
Victaulic inlet/outlet conn. in. (mm)	10 (273)	
Max. Water Pressure, psi (kPa)	152 (1048)	
Max. Refrigerant Press., psi (kPa)	325 (2241)	

Note: A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator.
Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

Figure 27: Dimensions - AWS175 Standard Efficiency, 60Hz (208-230V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Standard Efficiency (non-VFD)

Figure 28: Dimensions - AWS175 Standard Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

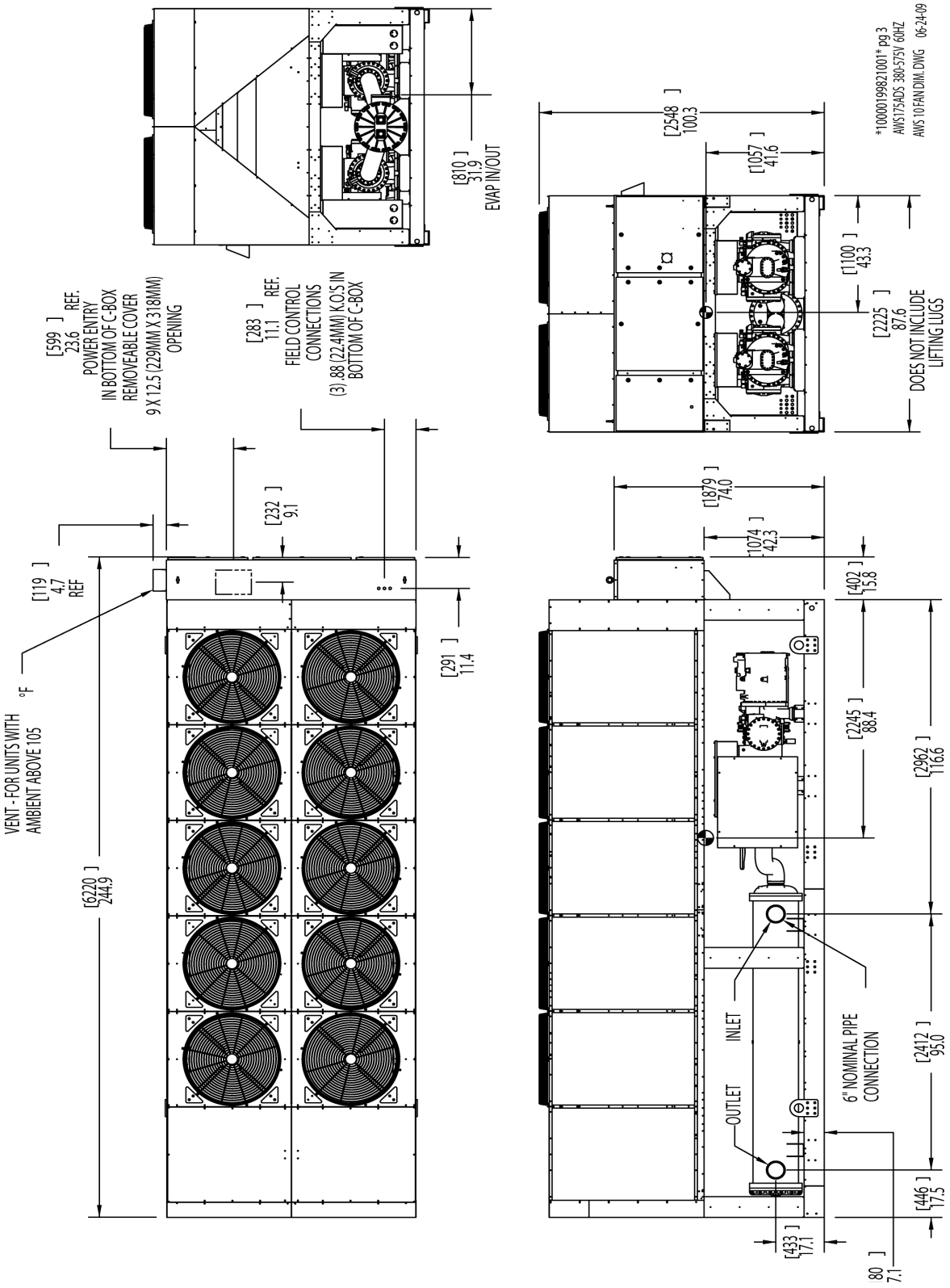
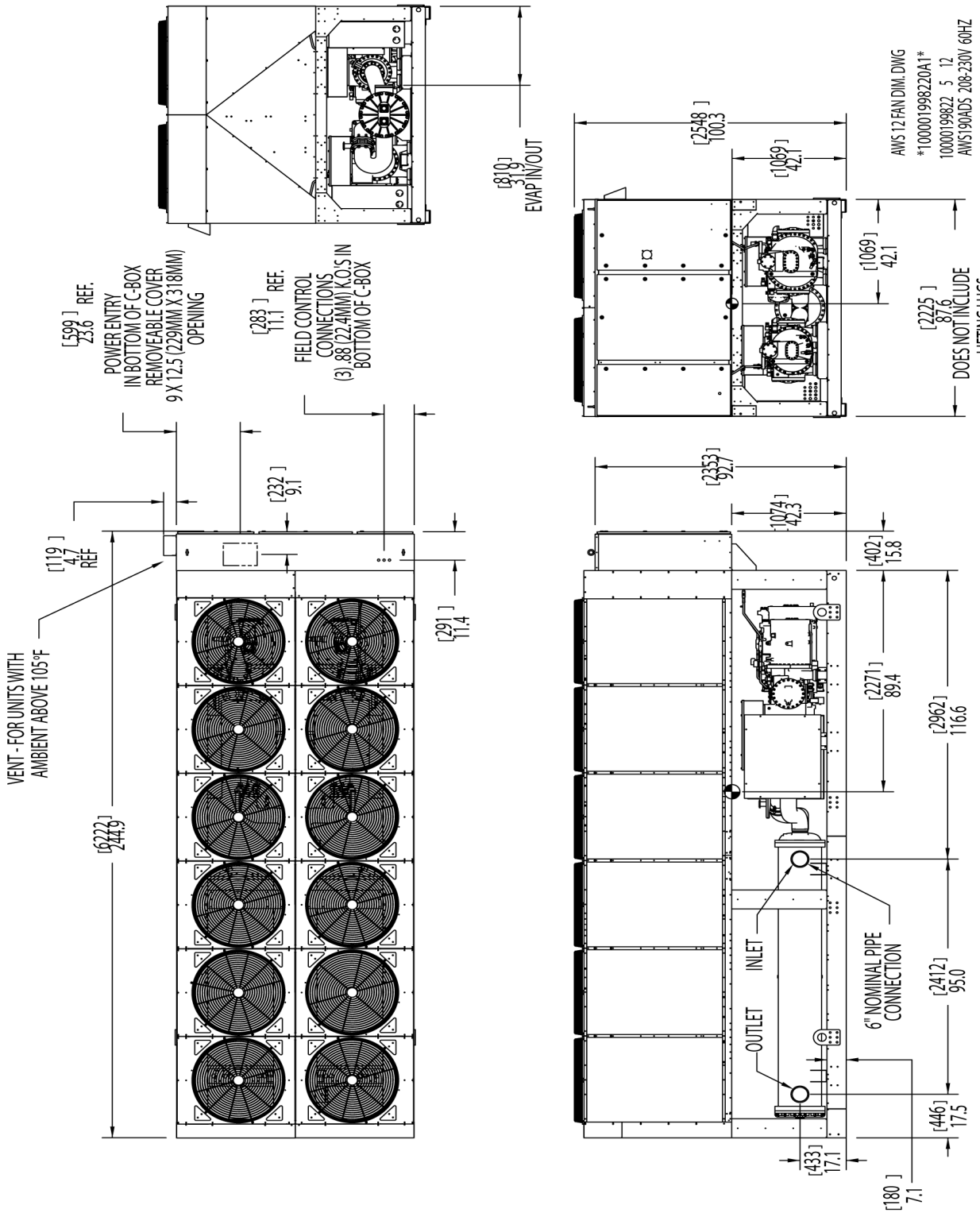


Figure 29: Dimensions - AWS190 Standard Efficiency, 60Hz (208-230V) non-VFD model
Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions



Dimensions - Standard Efficiency (non-VFD)

Figure 30: Dimensions - AWS190 Standard Efficiency, 60Hz (380-575V) non-VFD model
Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions

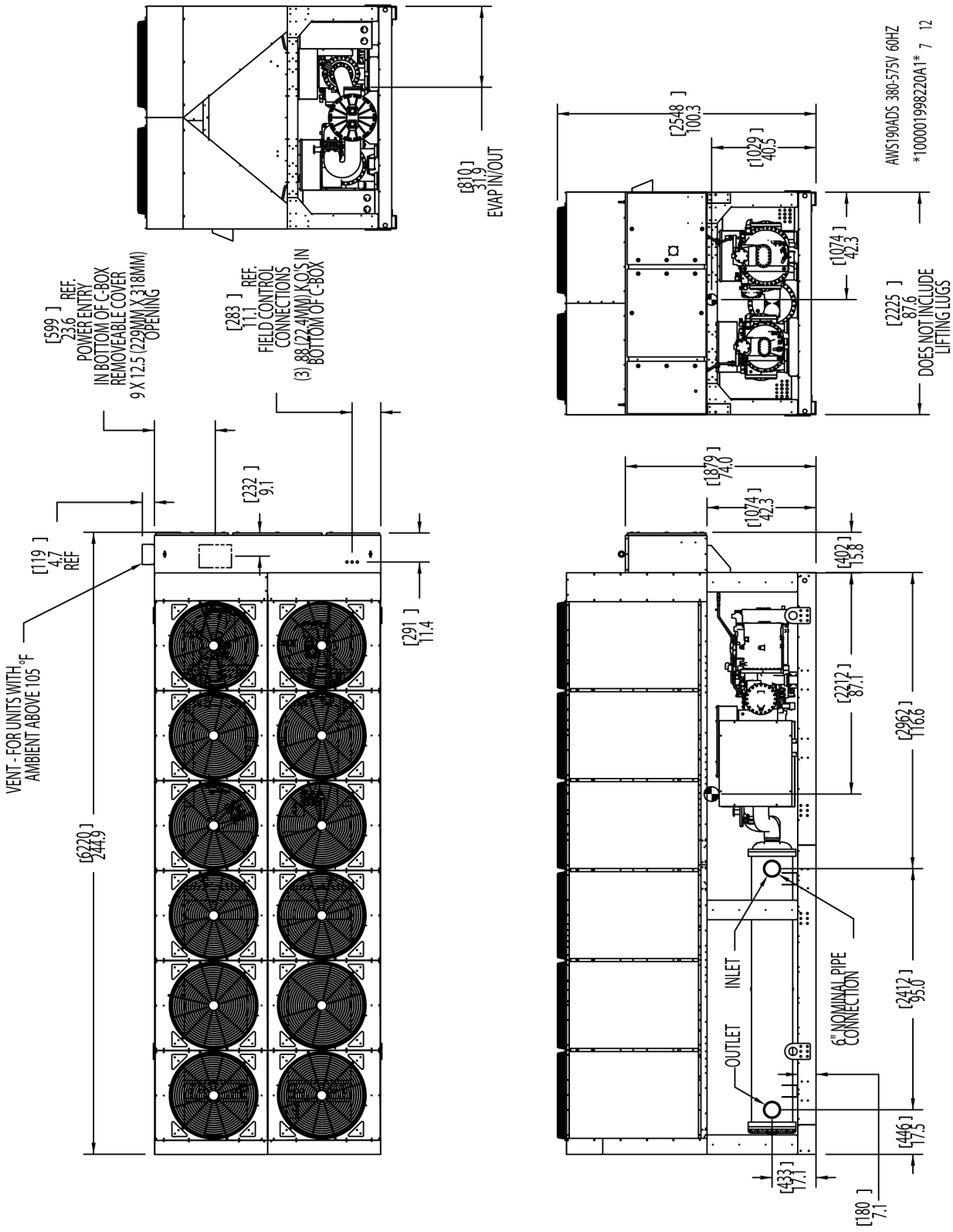
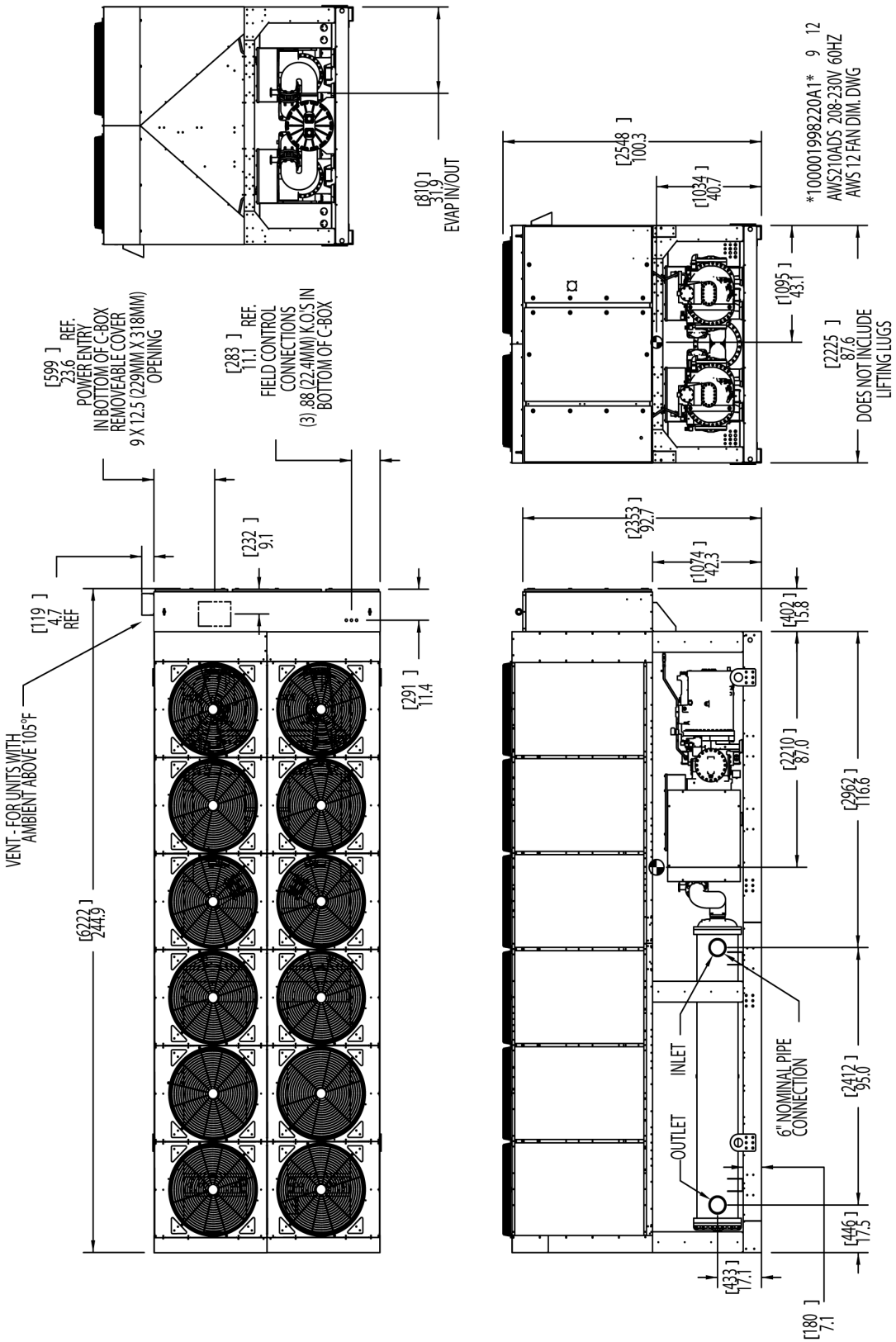


Figure 31: Dimensions - AWS210 Standard Efficiency, 60Hz (208-230V) non-VFD model
Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions



Dimensions - Standard Efficiency (non-VFD)

Figure 32: Dimensions - AWS210 Standard Efficiency, 60Hz (380-575V) non-VFD model
Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions

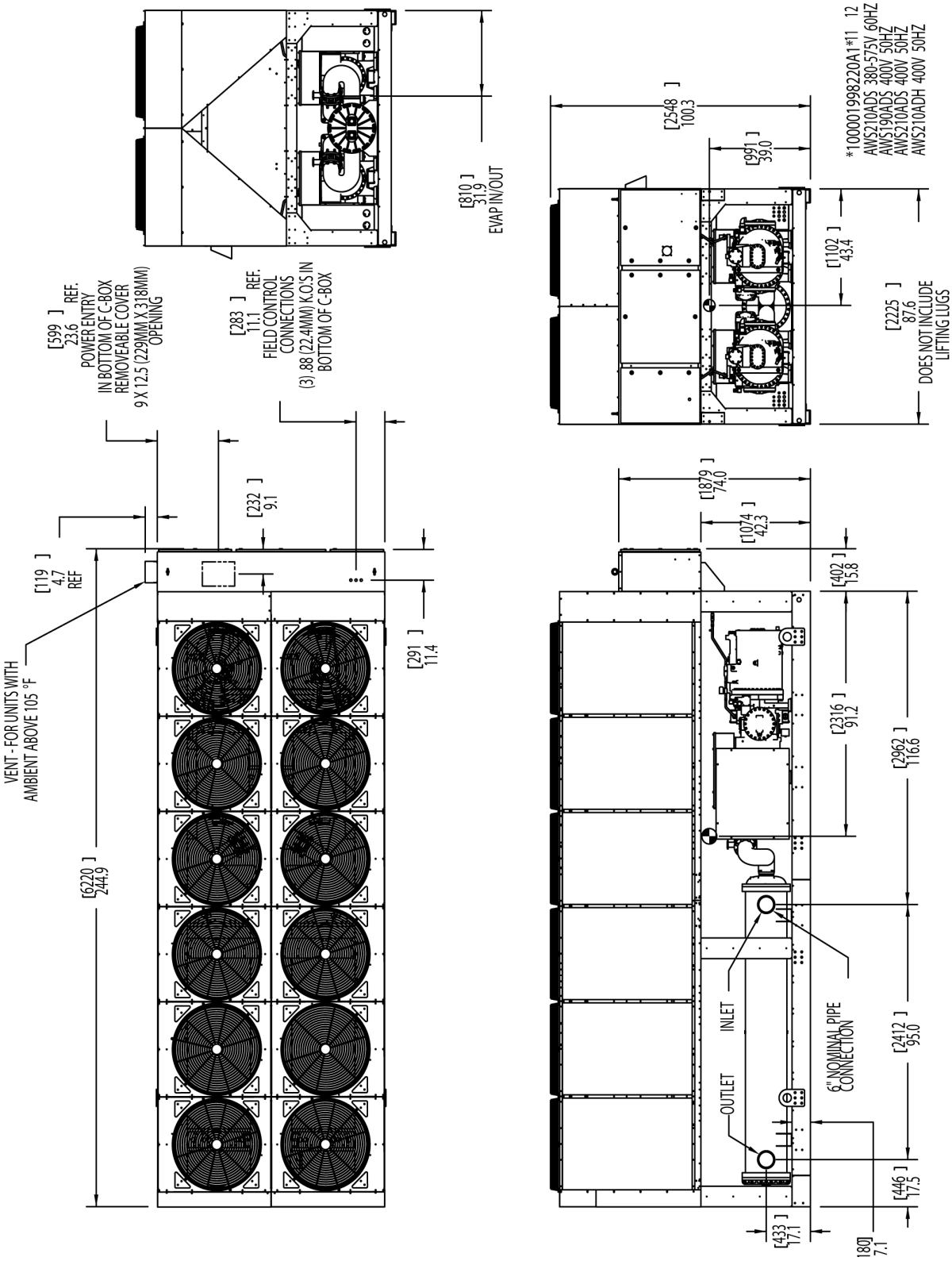
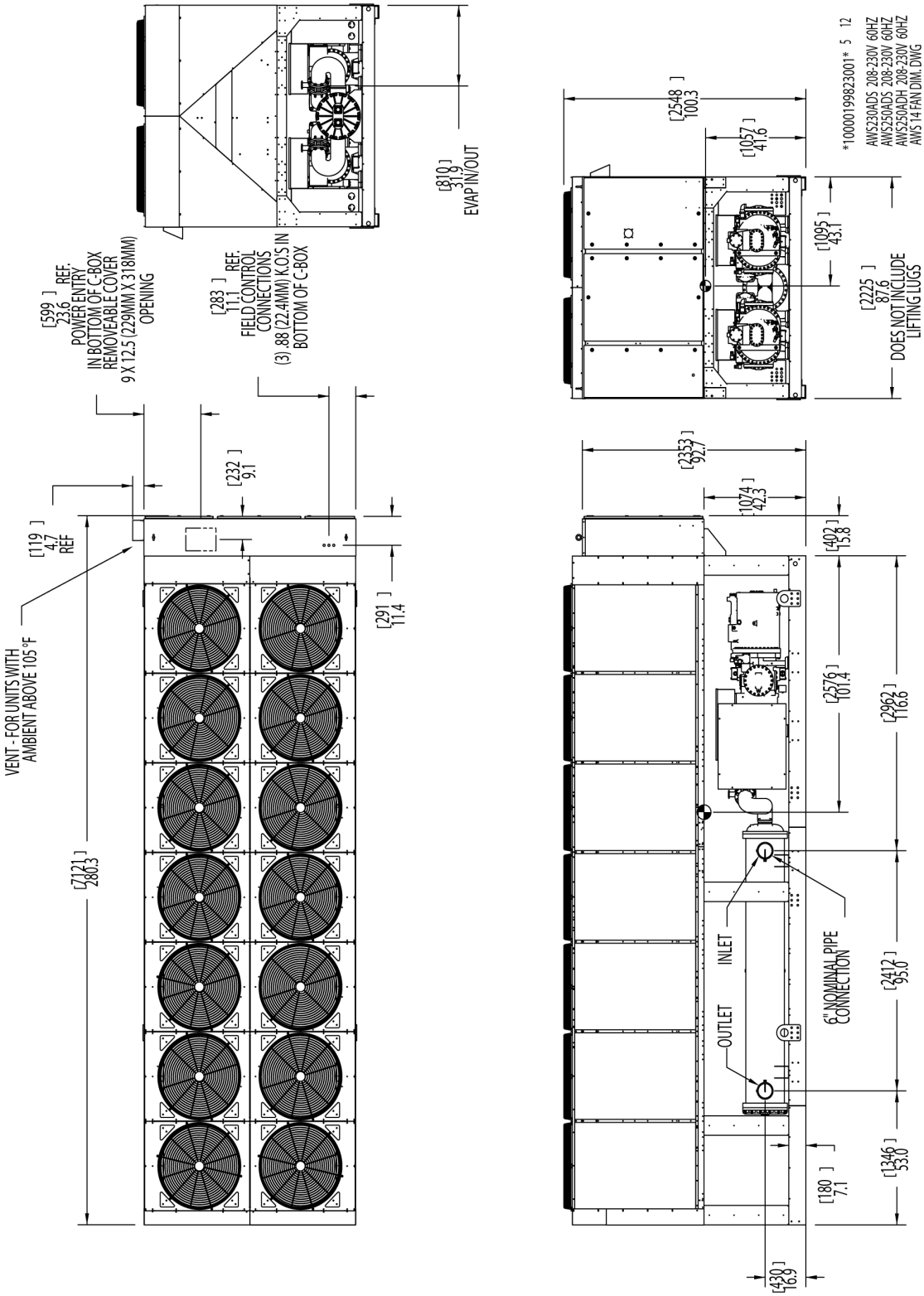


Figure 33: Dimensions - AWS230 & AWS250 Standard Efficiency, 60Hz (208-230V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Standard Efficiency (non-VFD)

Figure 34: Dimensions - AWS230 & AWS250 Standard Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

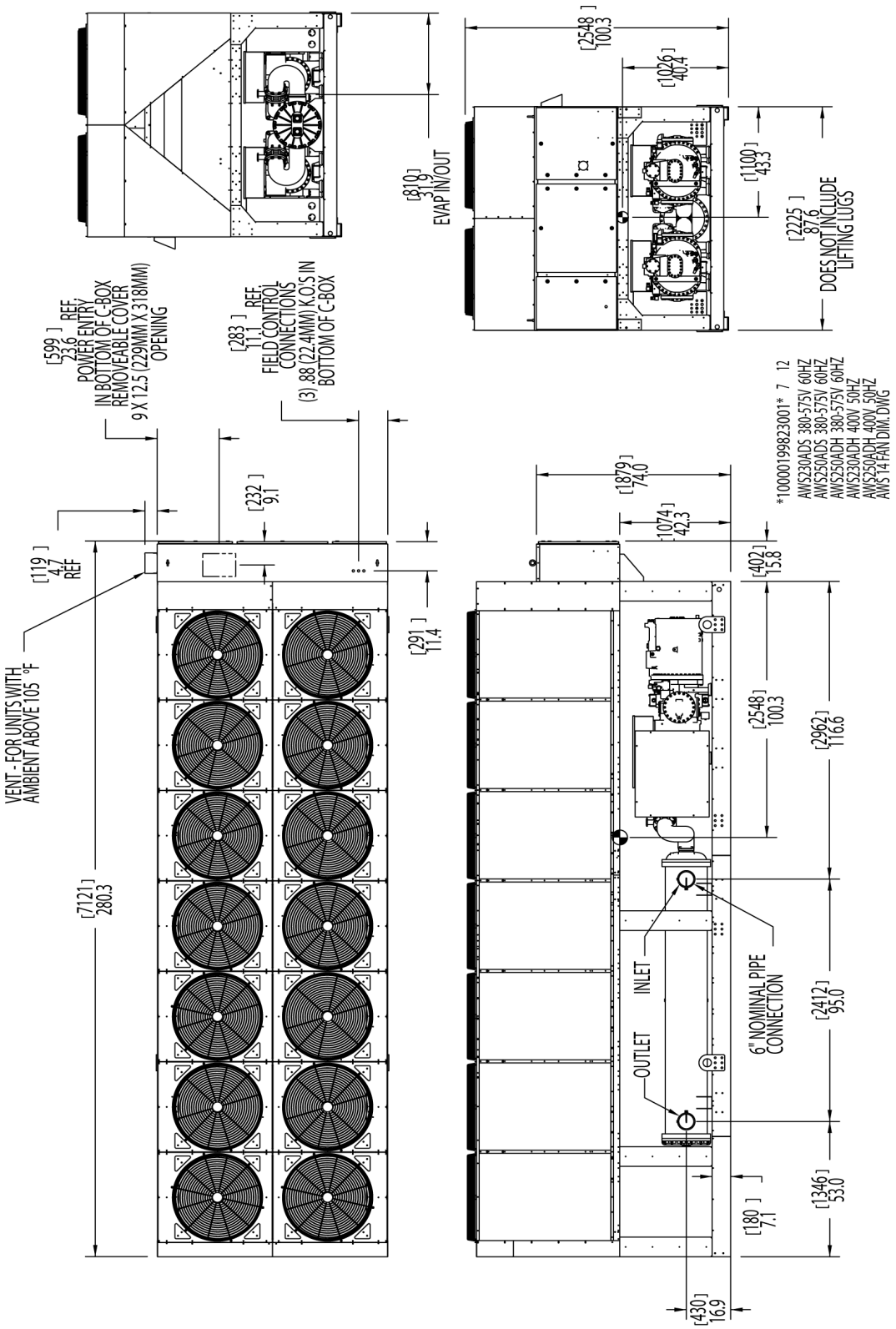
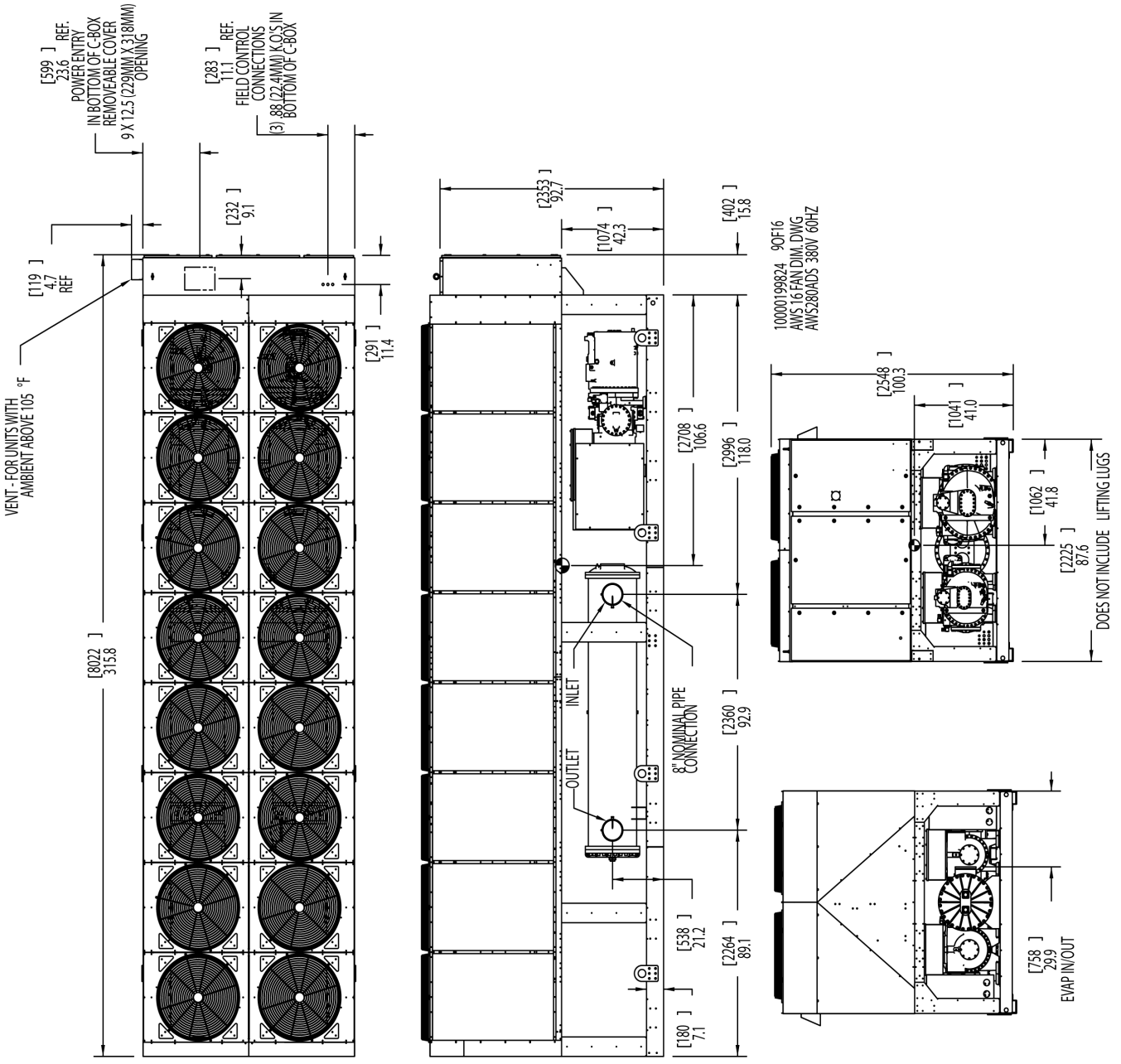


Figure 35: Dimensions - AWS280 Standard Efficiency, 60Hz (380V)

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Standard Efficiency (non-VFD)

Figure 36: Dimensions - AWS280 Standard Efficiency, 60Hz (460-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

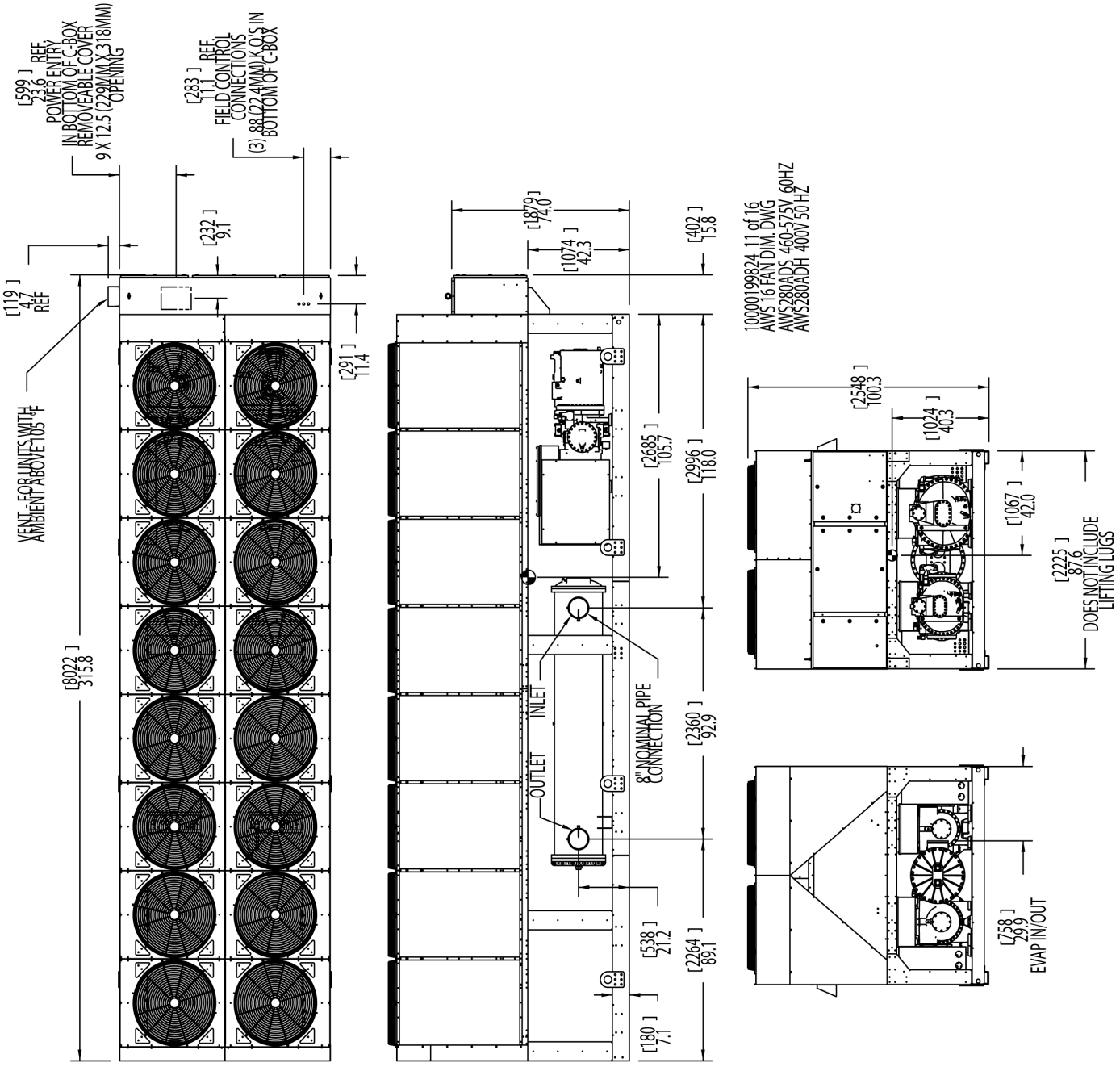
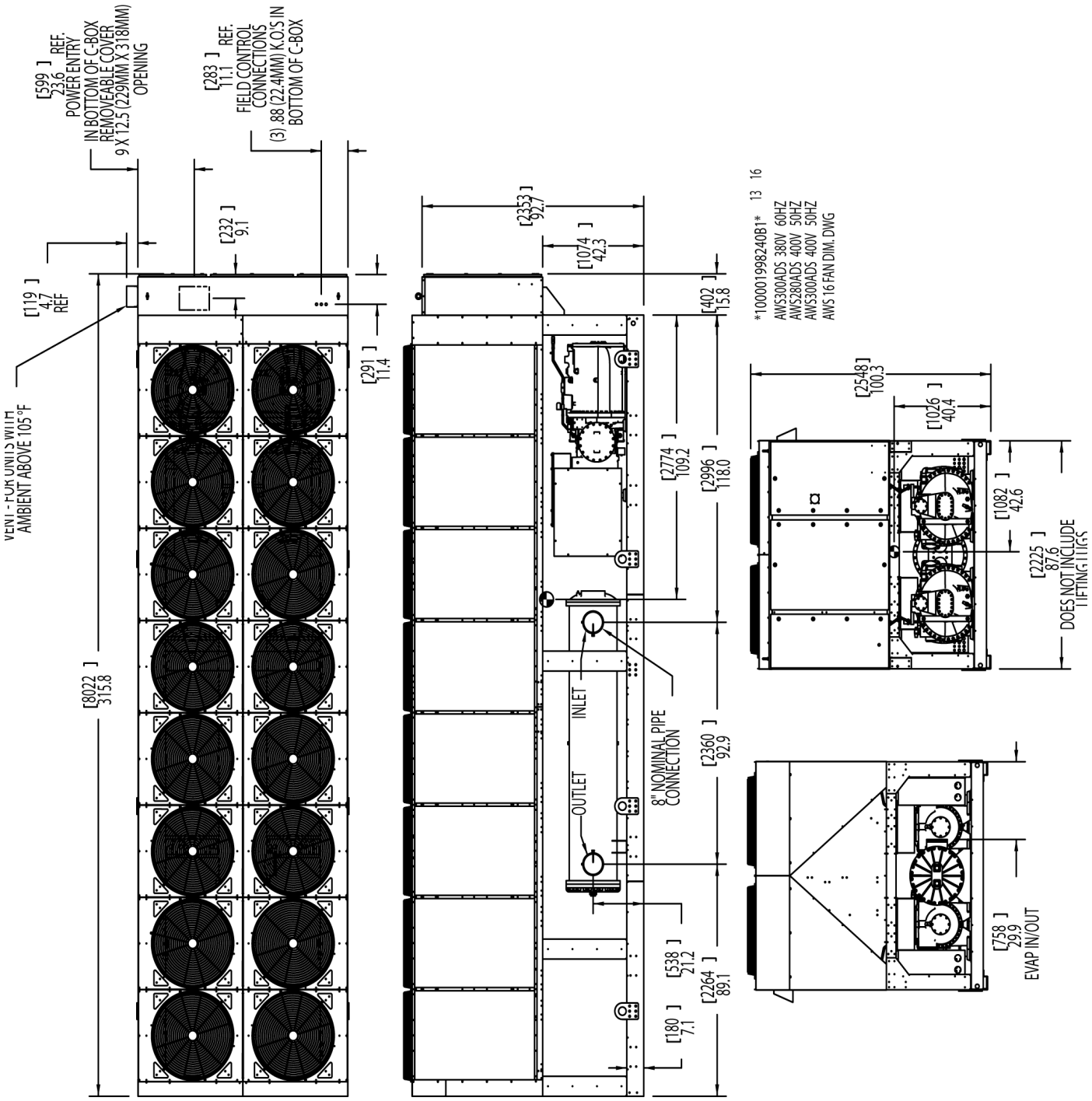


Figure 37: Dimensions - AWS300 Standard Efficiency, 60Hz (380V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Standard Efficiency (non-VFD)

Figure 38: Dimensions - AWS300 Standard Efficiency, 60Hz (460-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

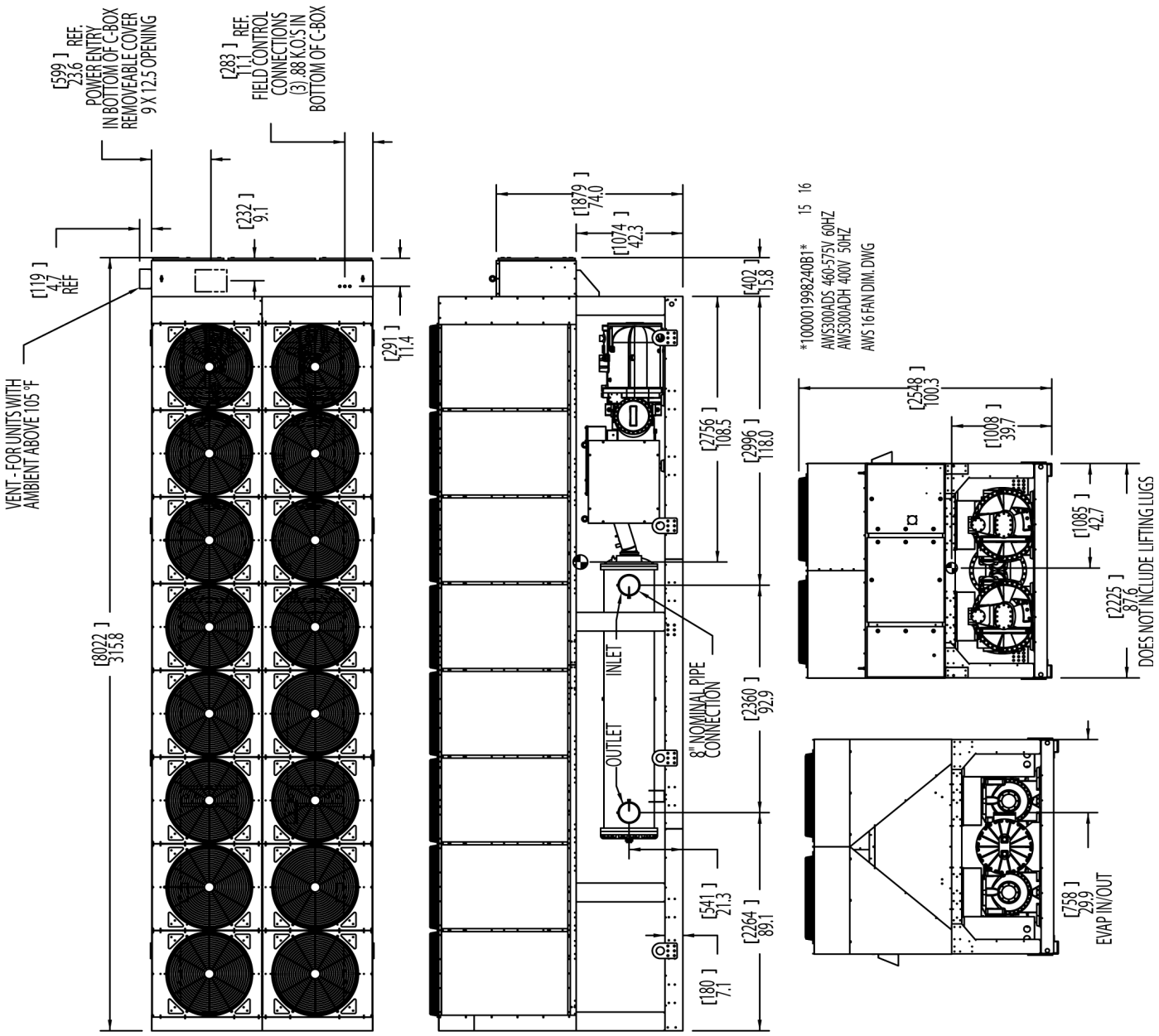
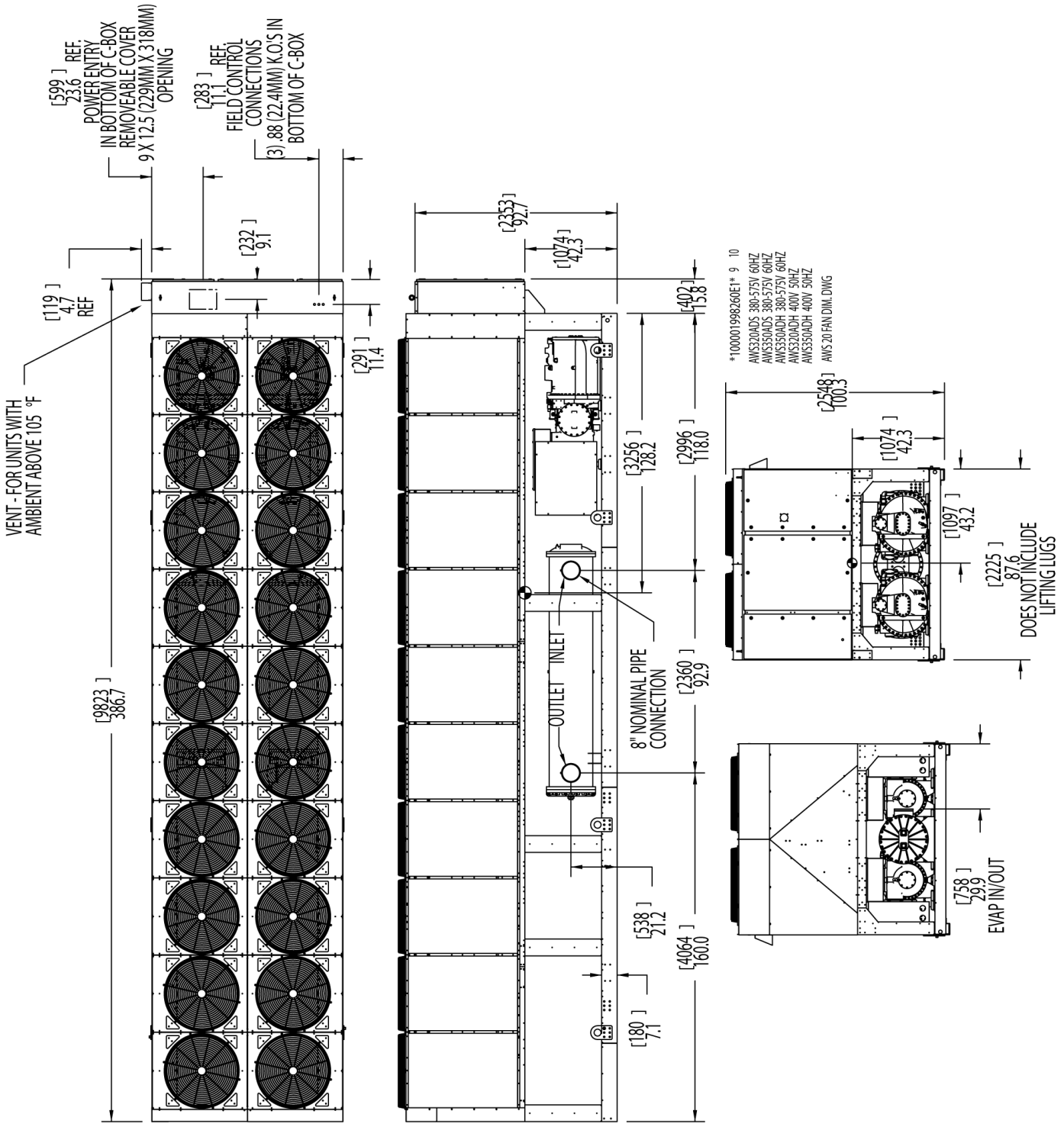


Figure 39: Dimensions - AWS320 &AWS350 Standard Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Standard Efficiency (non-VFD)

Figure 40: Dimensions - AWS375 Standard Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

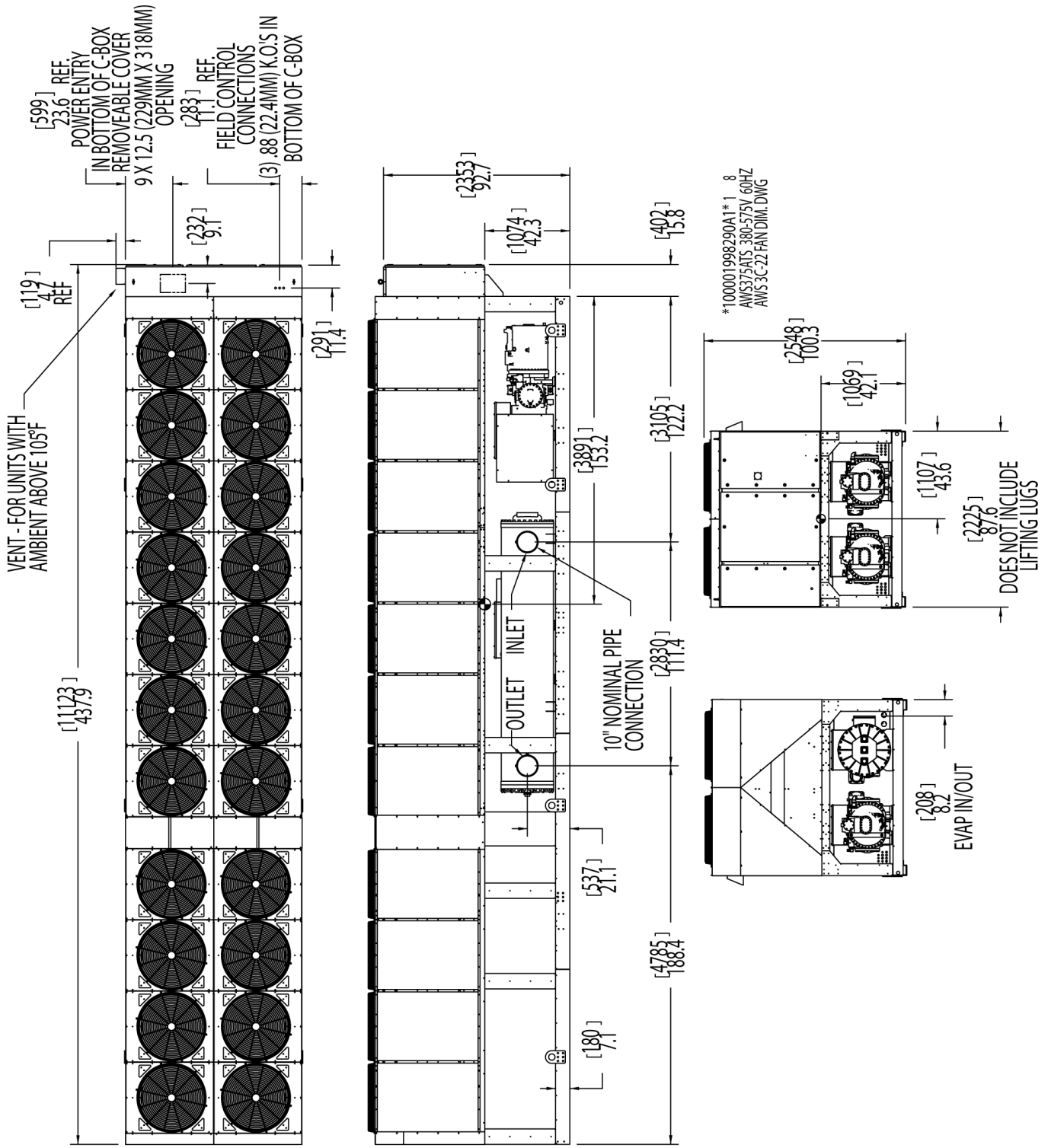
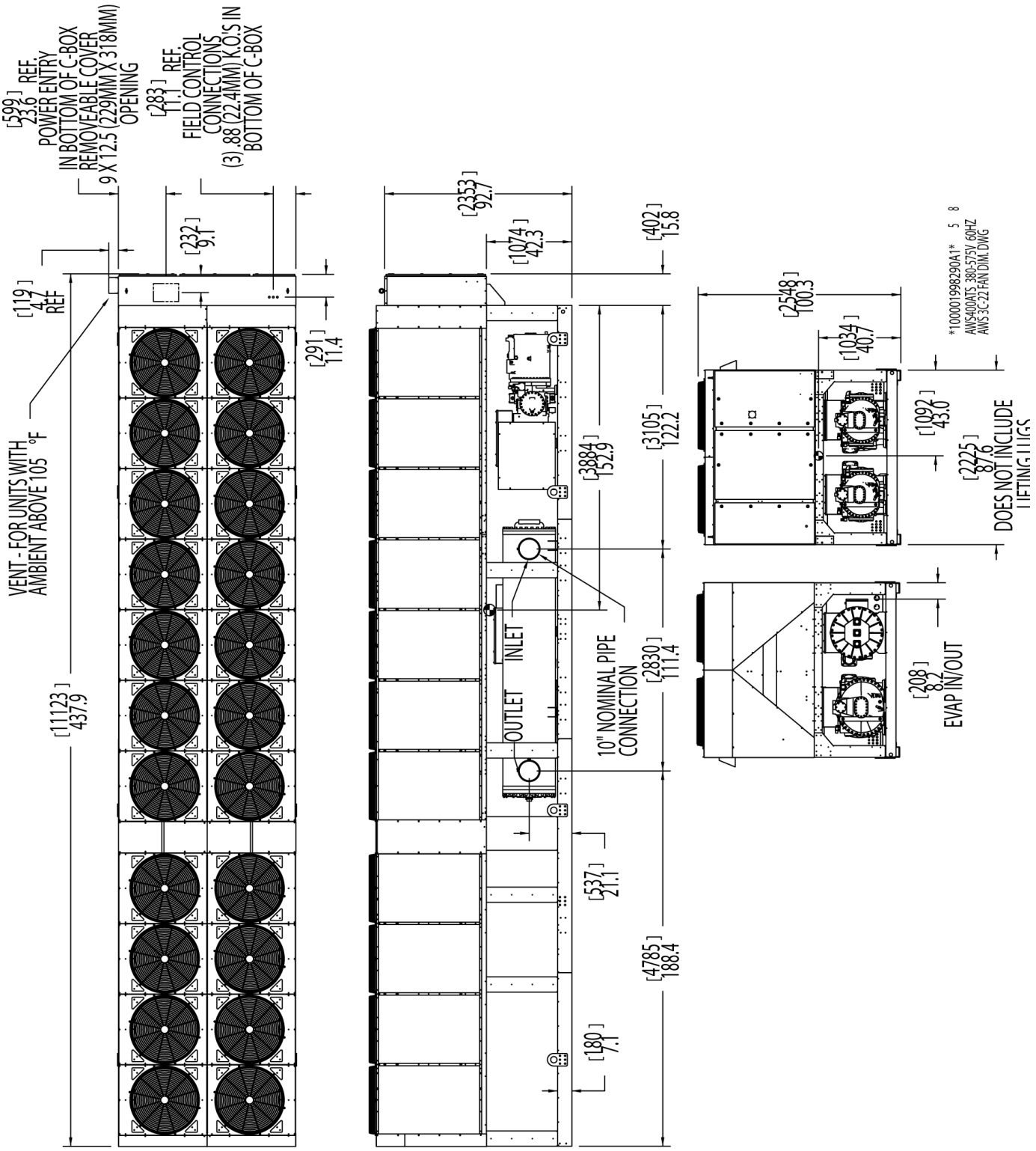


Figure 41: Dimensions - AWS400 Standard Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Standard Efficiency (non-VFD)

Figure 42: Dimensions - AWS425 Standard Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

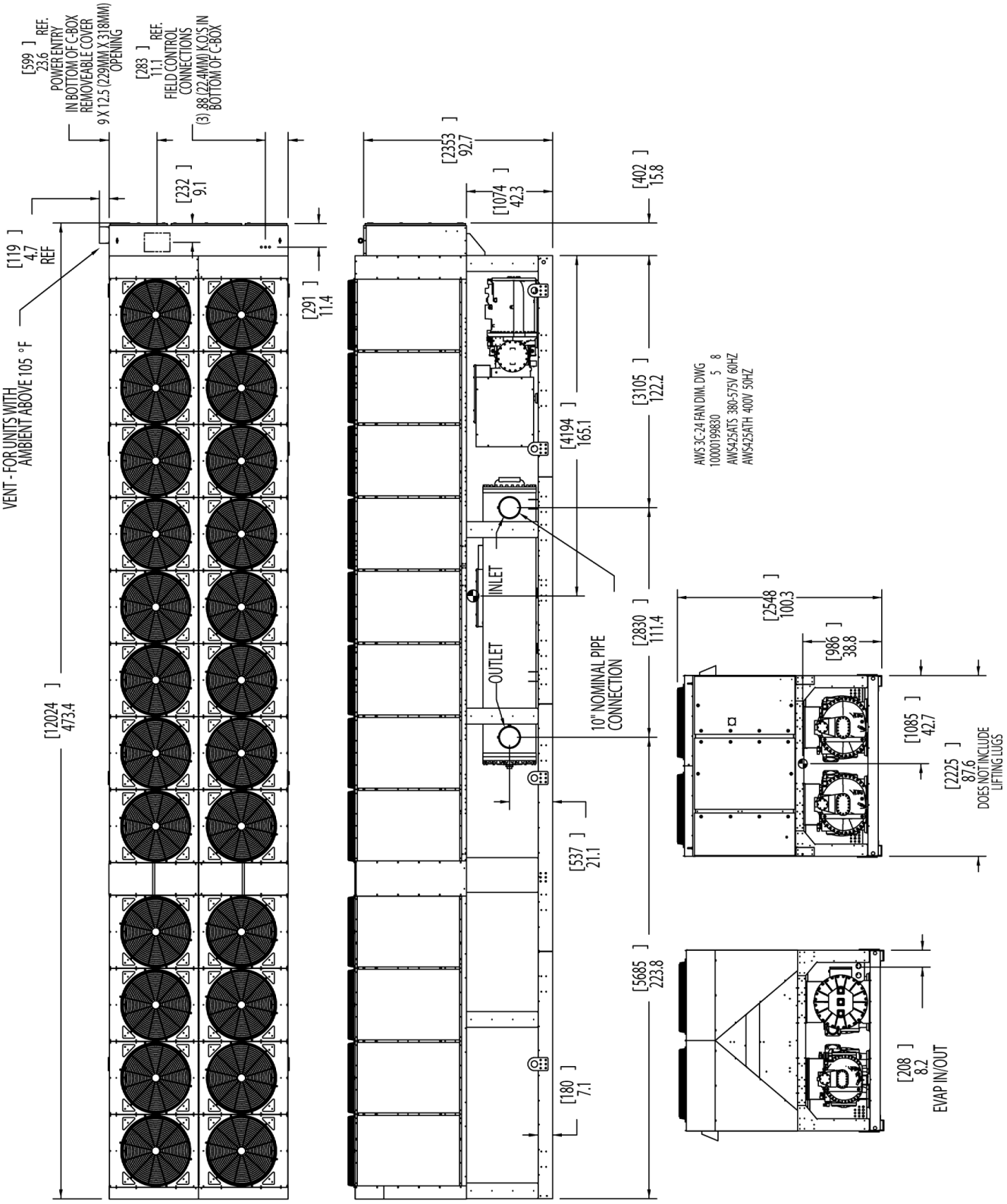
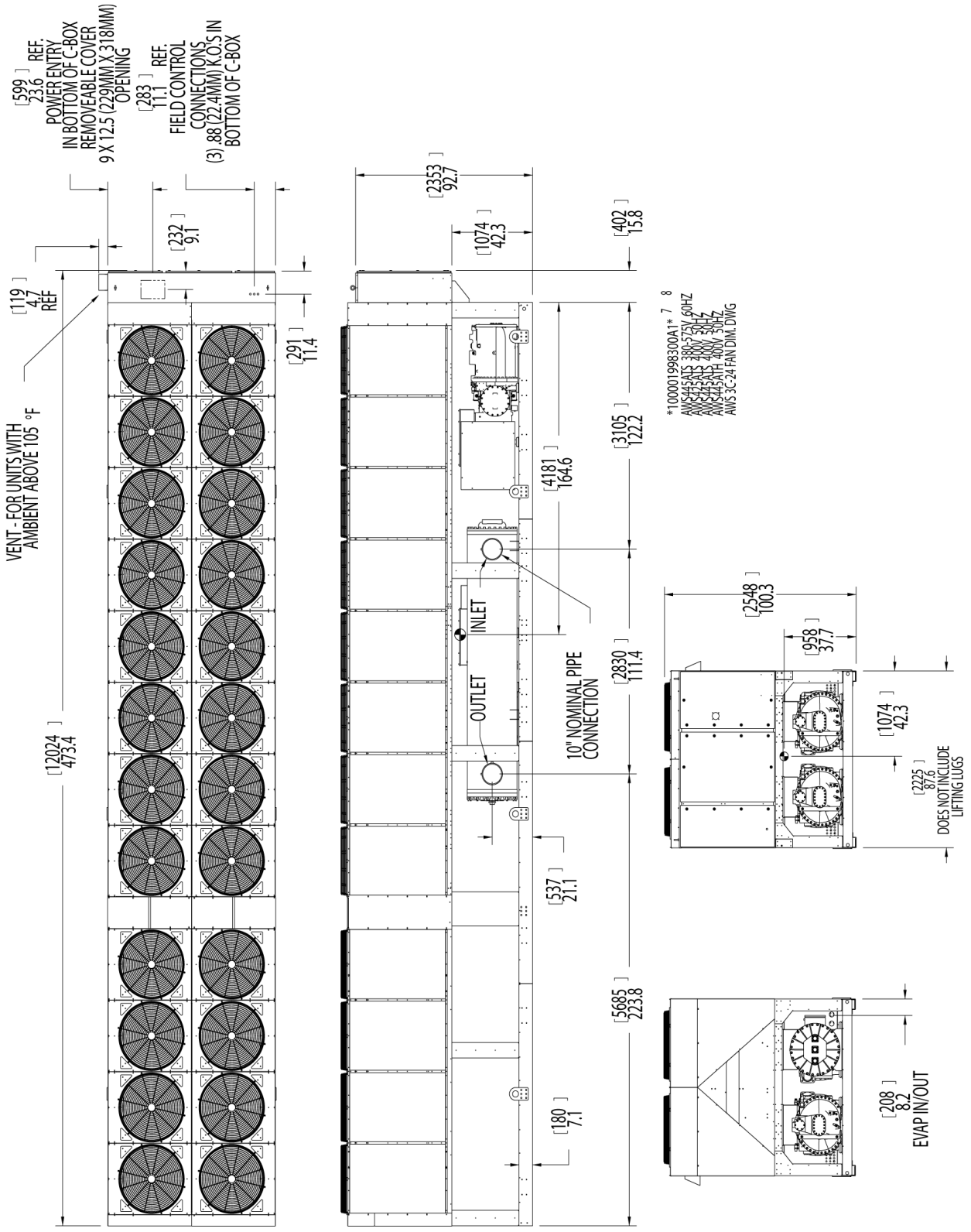


Figure 43: Dimensions - AWS445 Standard Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Standard Efficiency (non-VFD)

Figure 44: Dimensions - AWS470 Standard Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

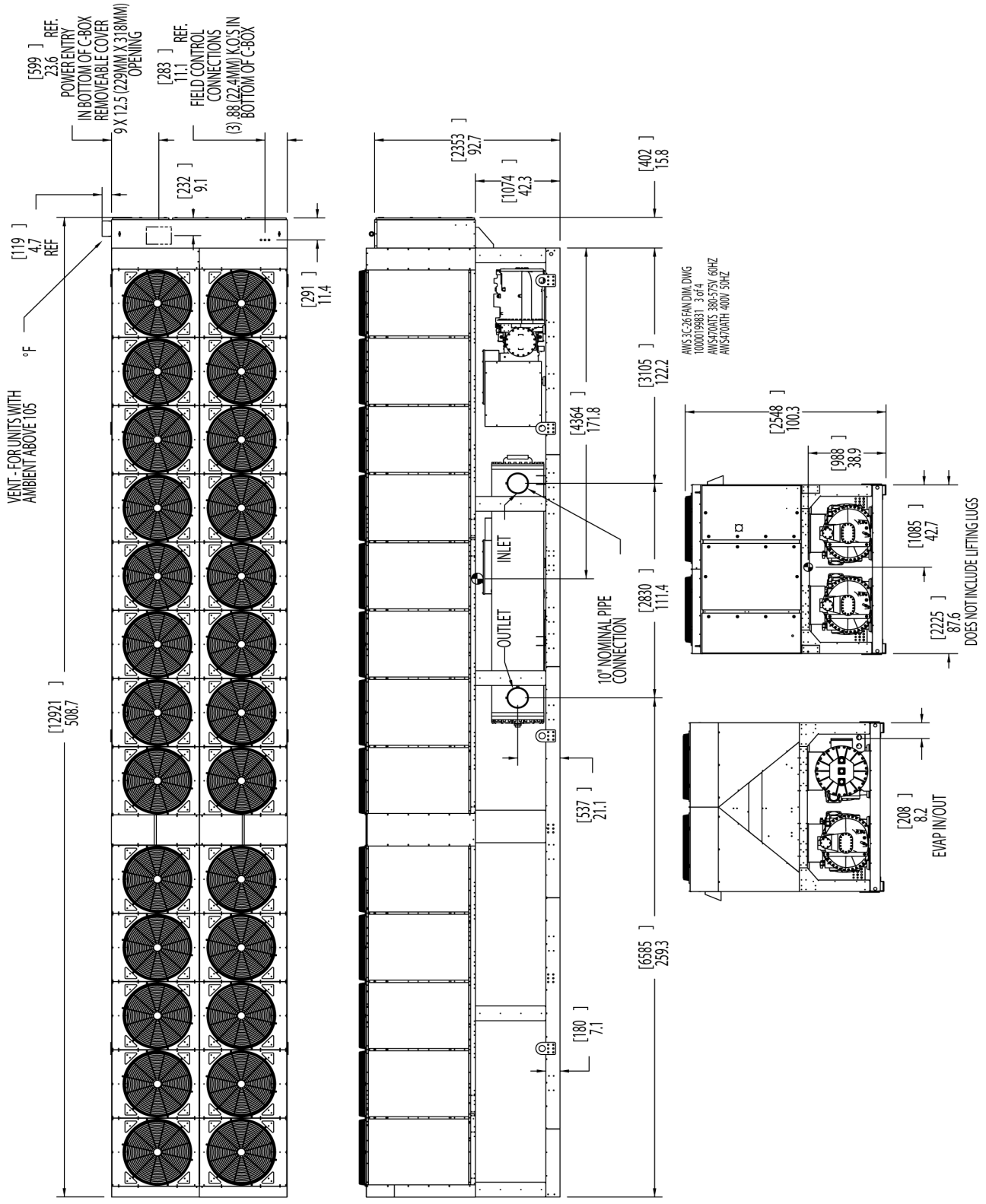
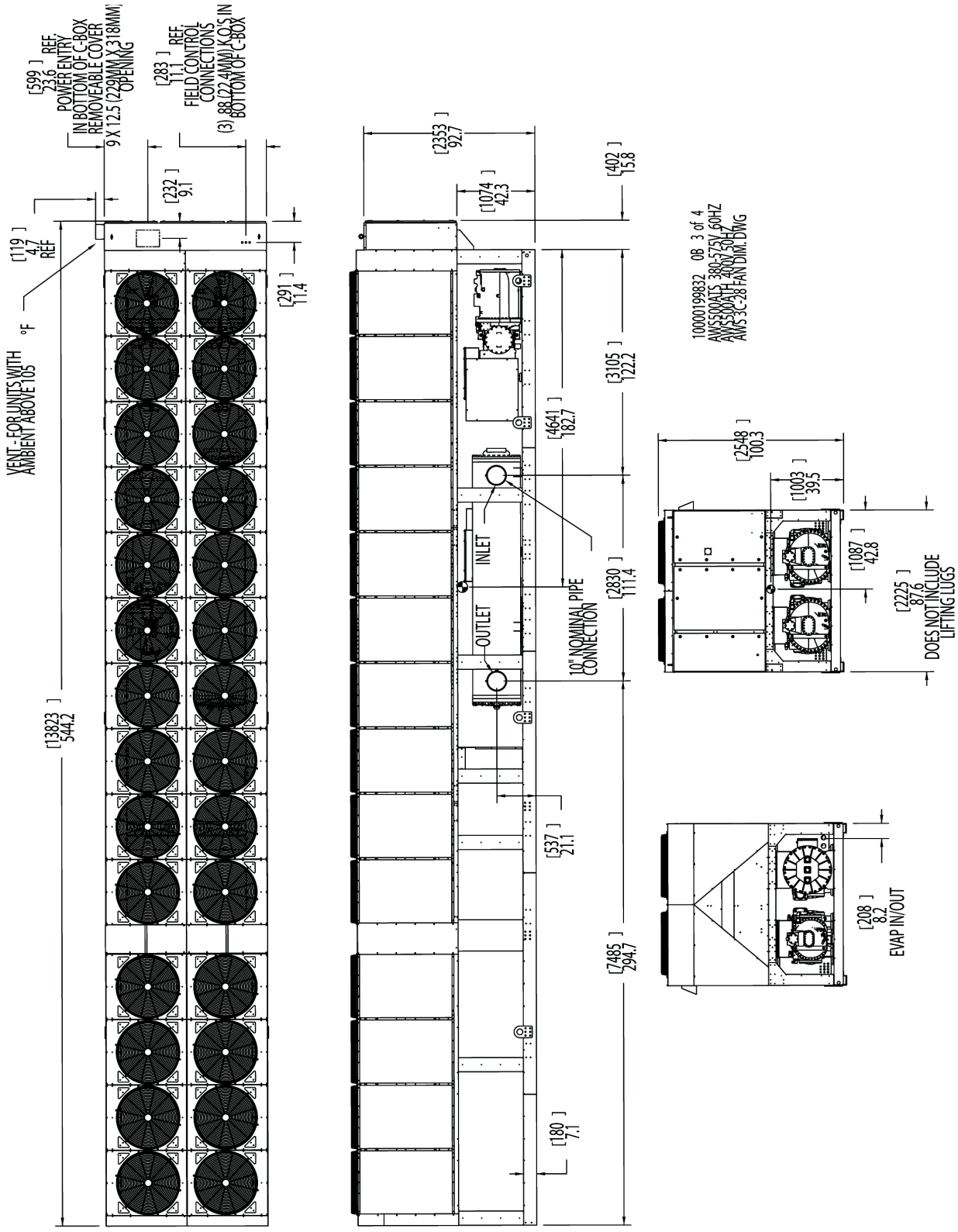


Figure 45: Dimensions - AWS500 Standard Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Standard Efficiency (non-VFD)

Figure 46: Dimensions - AWS530 Standard Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

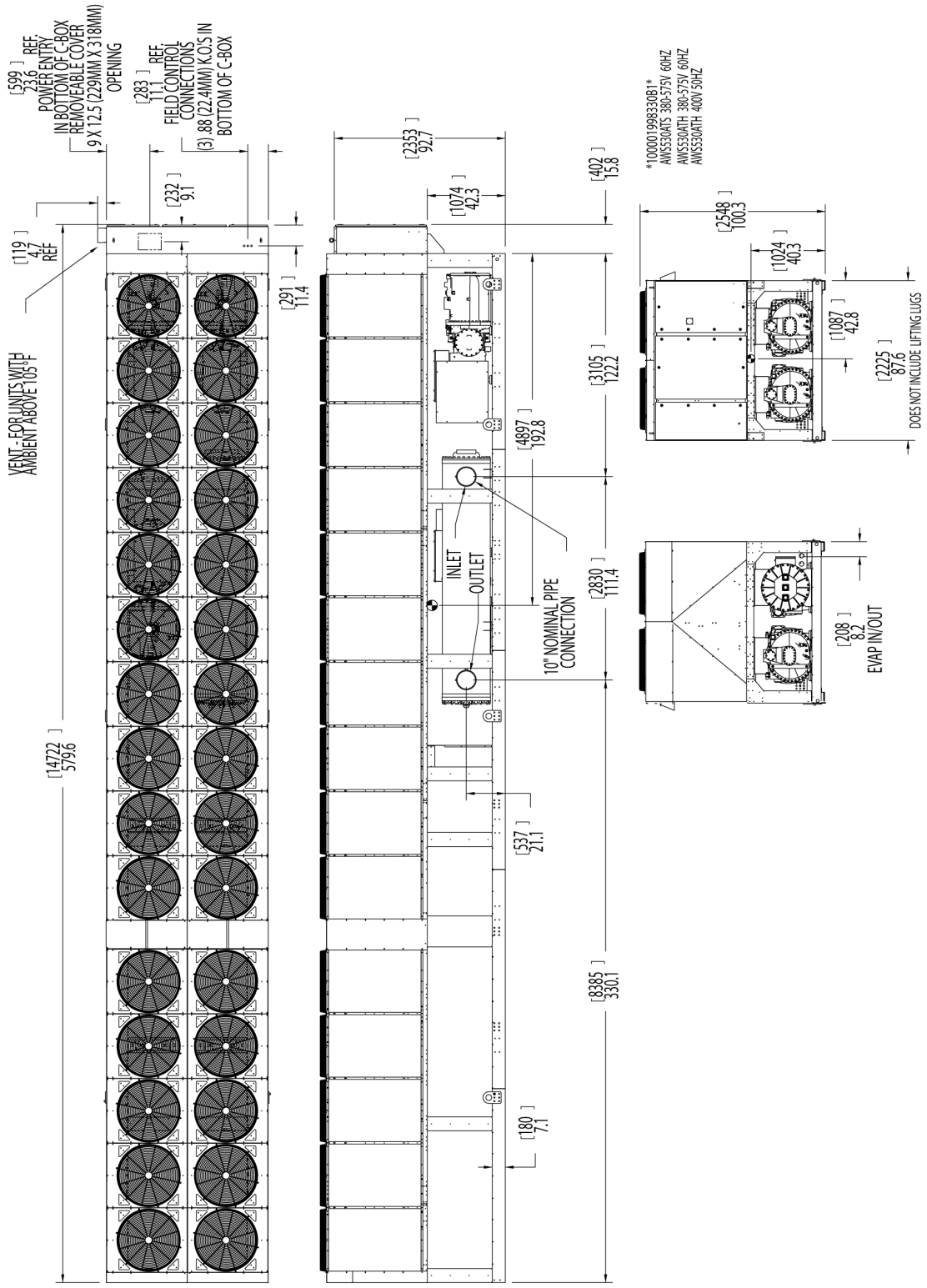
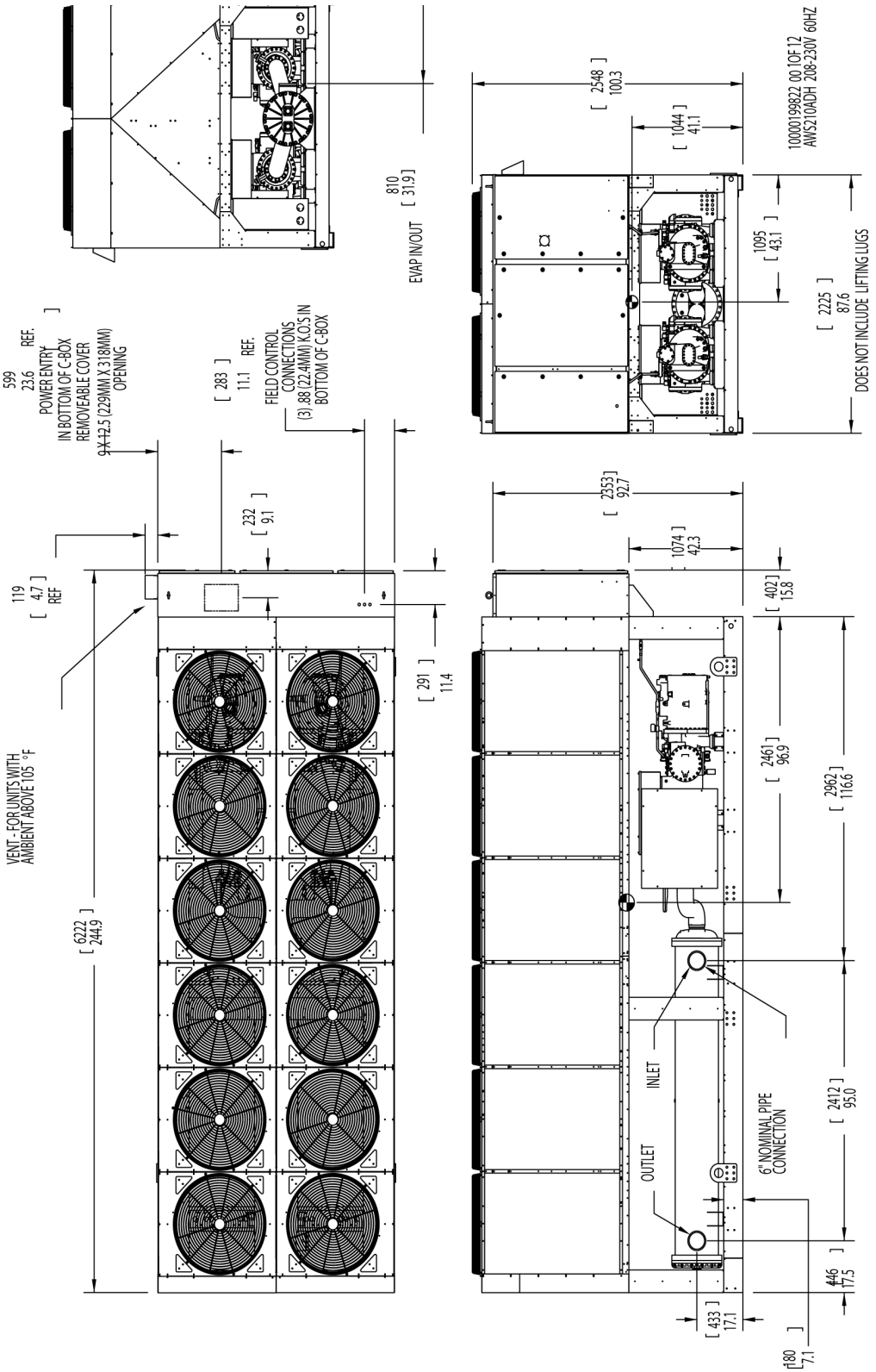


Figure 47: Dimensions - AWS210 High Efficiency, 60Hz (208-230V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency (non-VFD)

Figure 48: Dimensions - AWS210 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

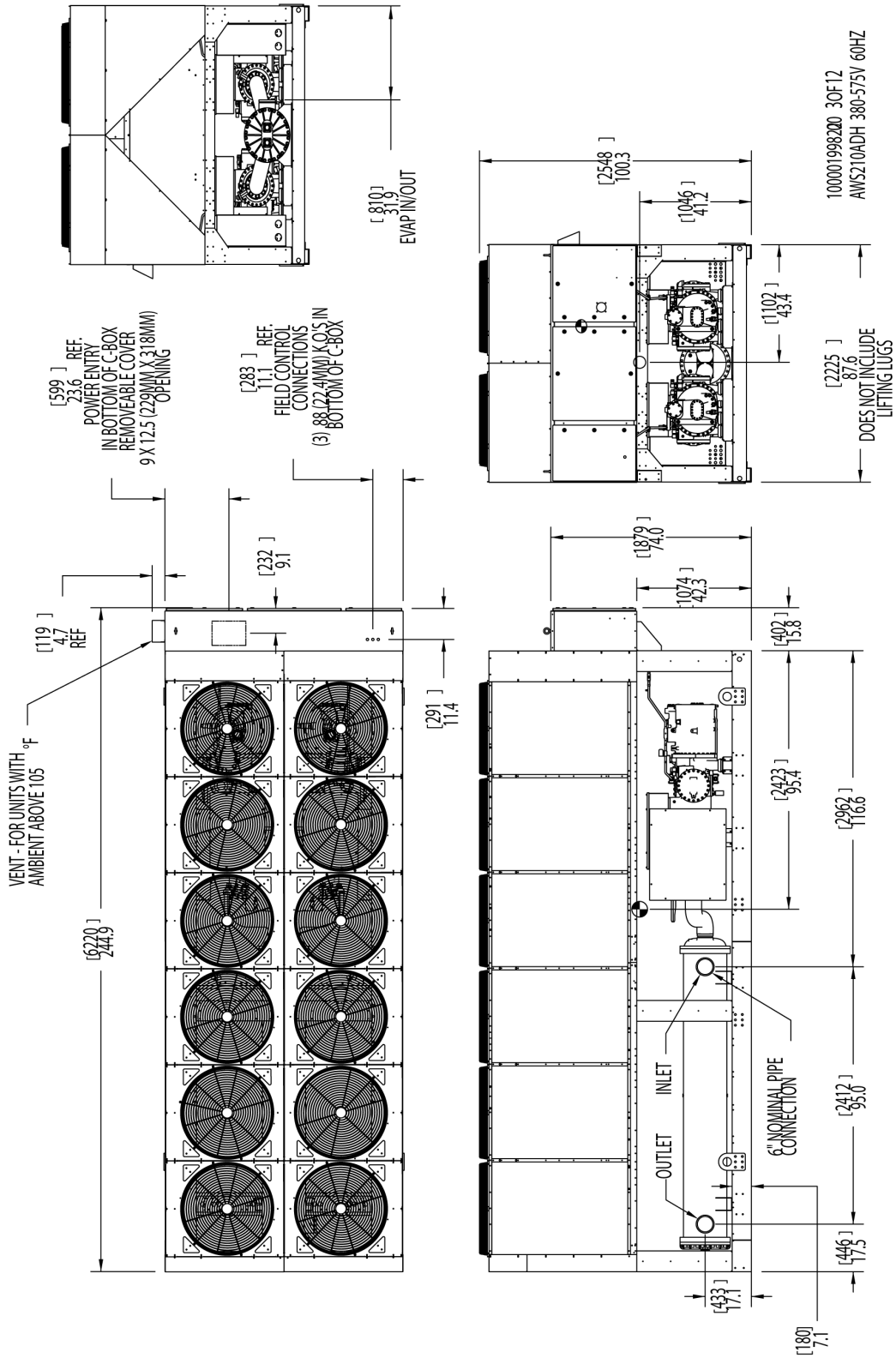
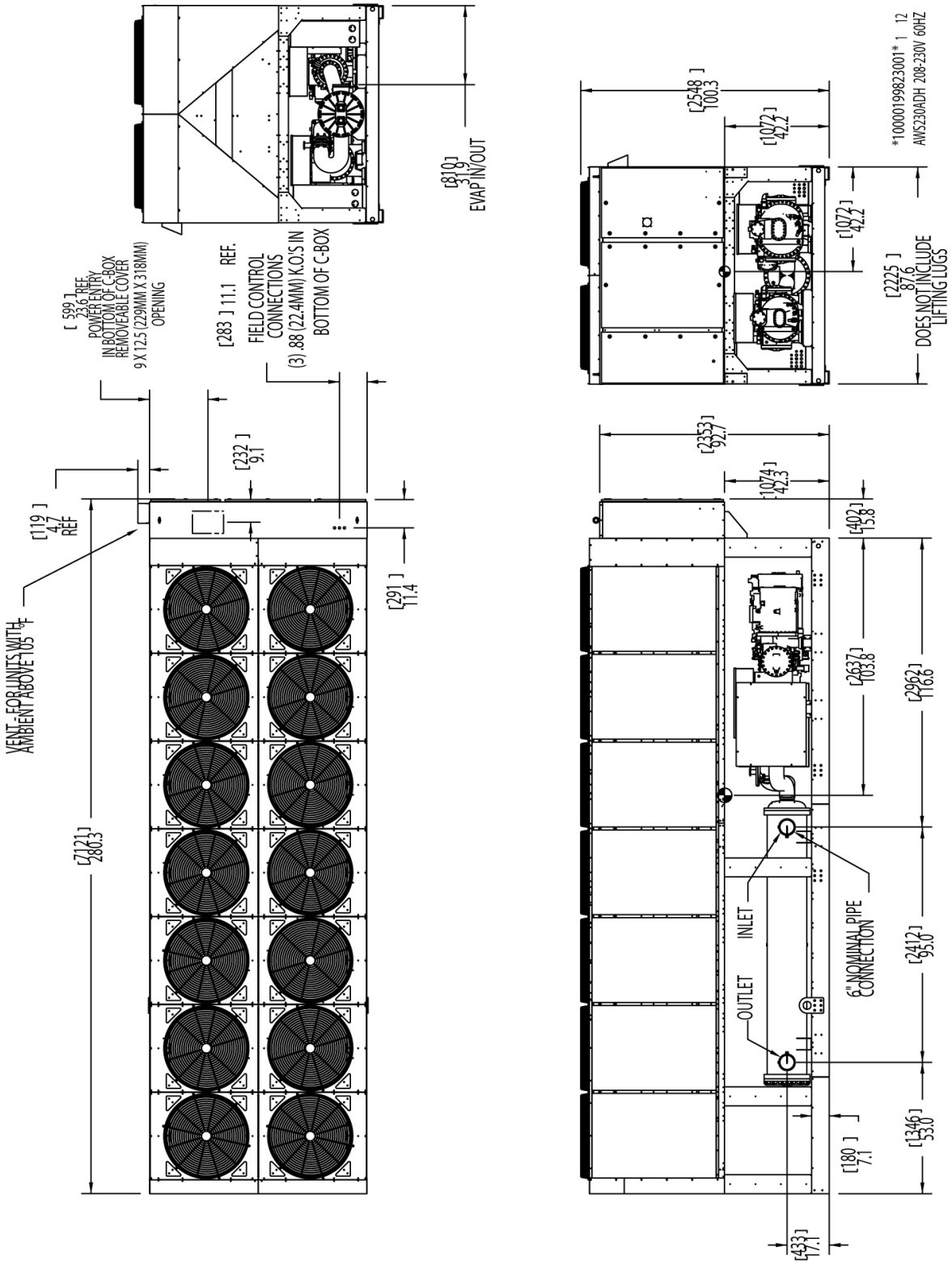


Figure 49: Dimensions - AWS230 High Efficiency, 60Hz (208-230V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency (non-VFD)

Figure 50: Dimensions - AWS230 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

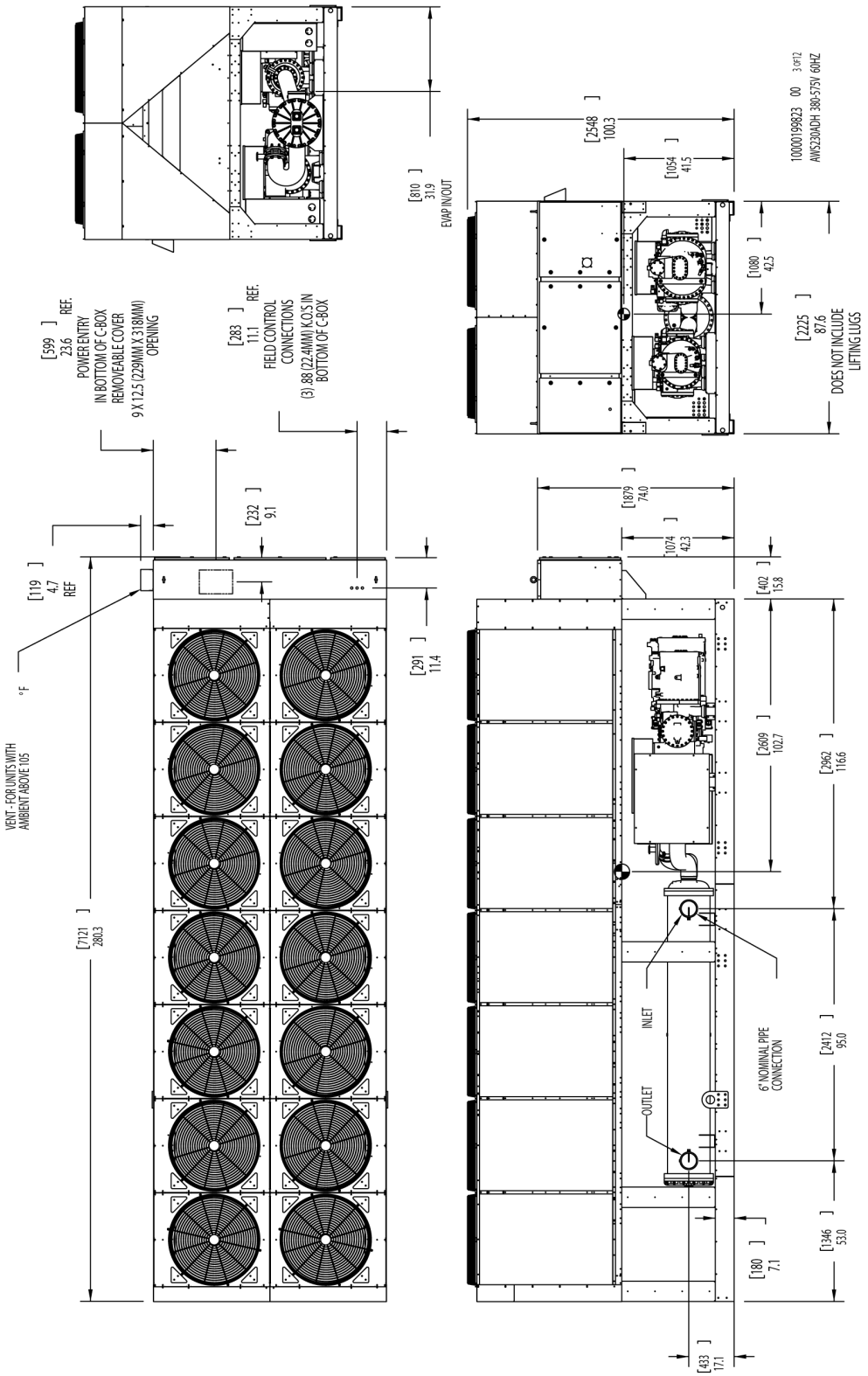
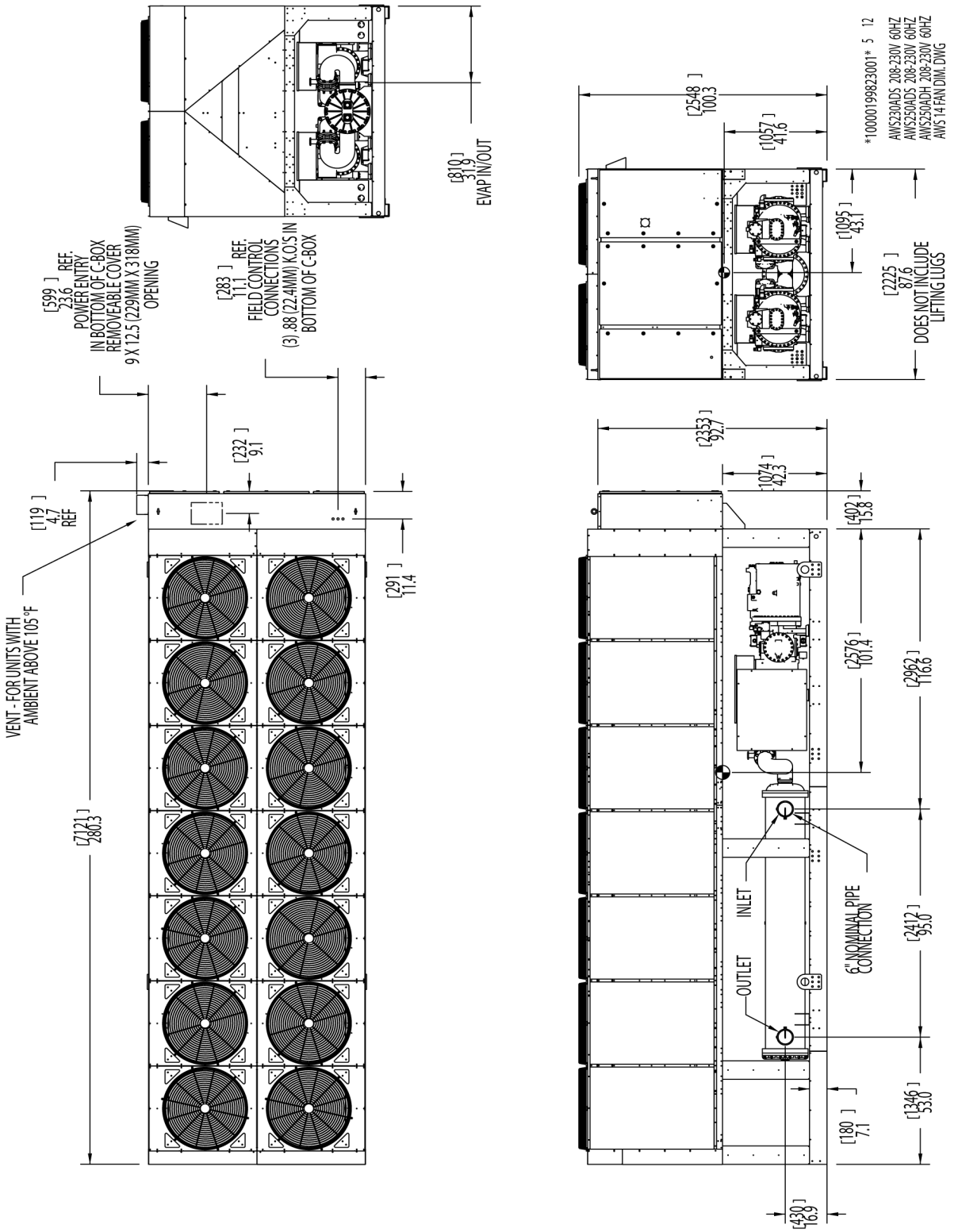


Figure 51: Dimensions - AWS250 High Efficiency, 60Hz (208-230V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency (non-VFD)

Figure 52: Dimensions - AWS250 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

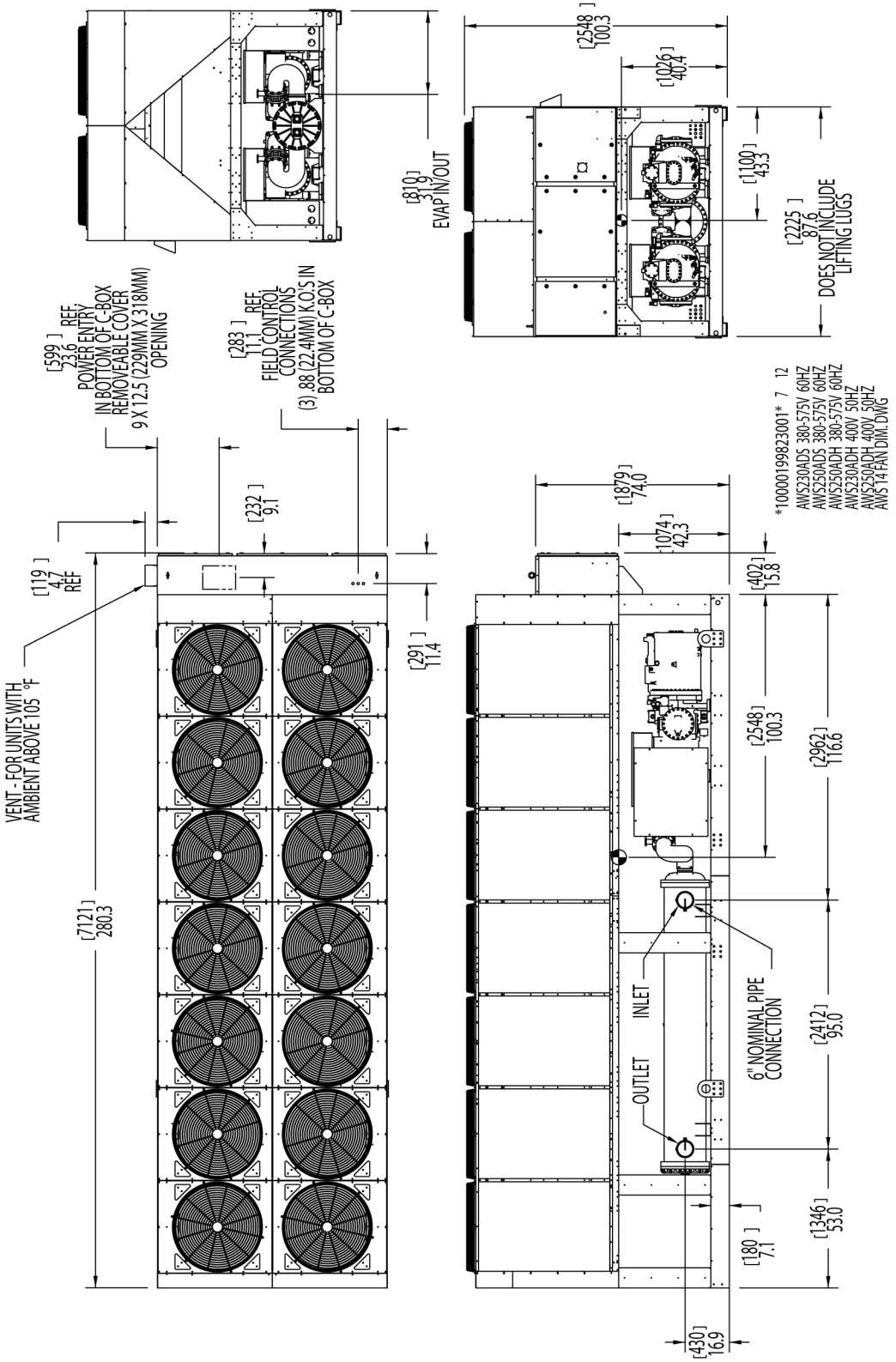
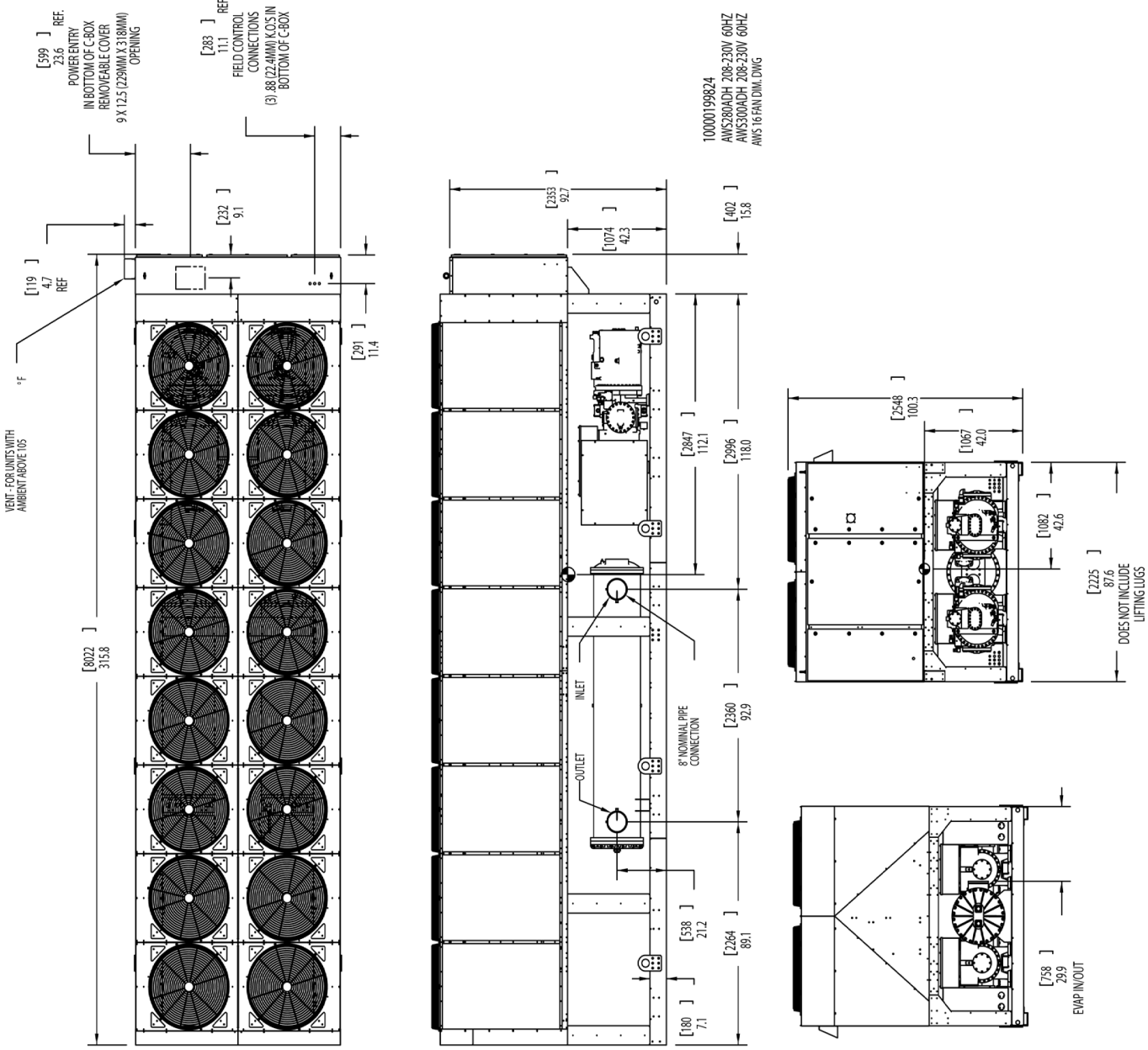


Figure 53: Dimensions - AWS280 & AWS300 High Efficiency, 60Hz (208-230V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency (non-VFD)

Figure 54: Dimensions - AWS280 & AWS300 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

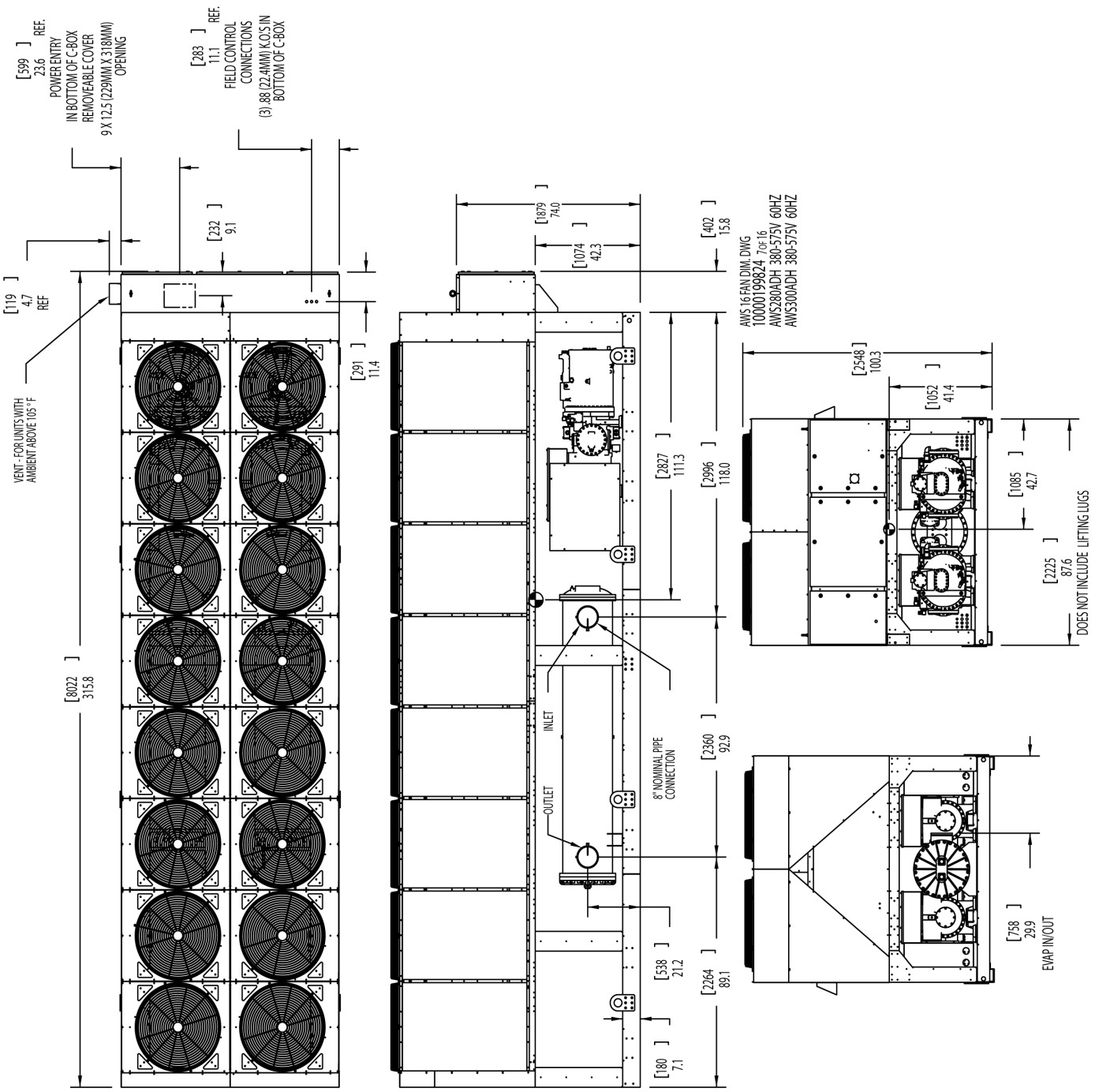
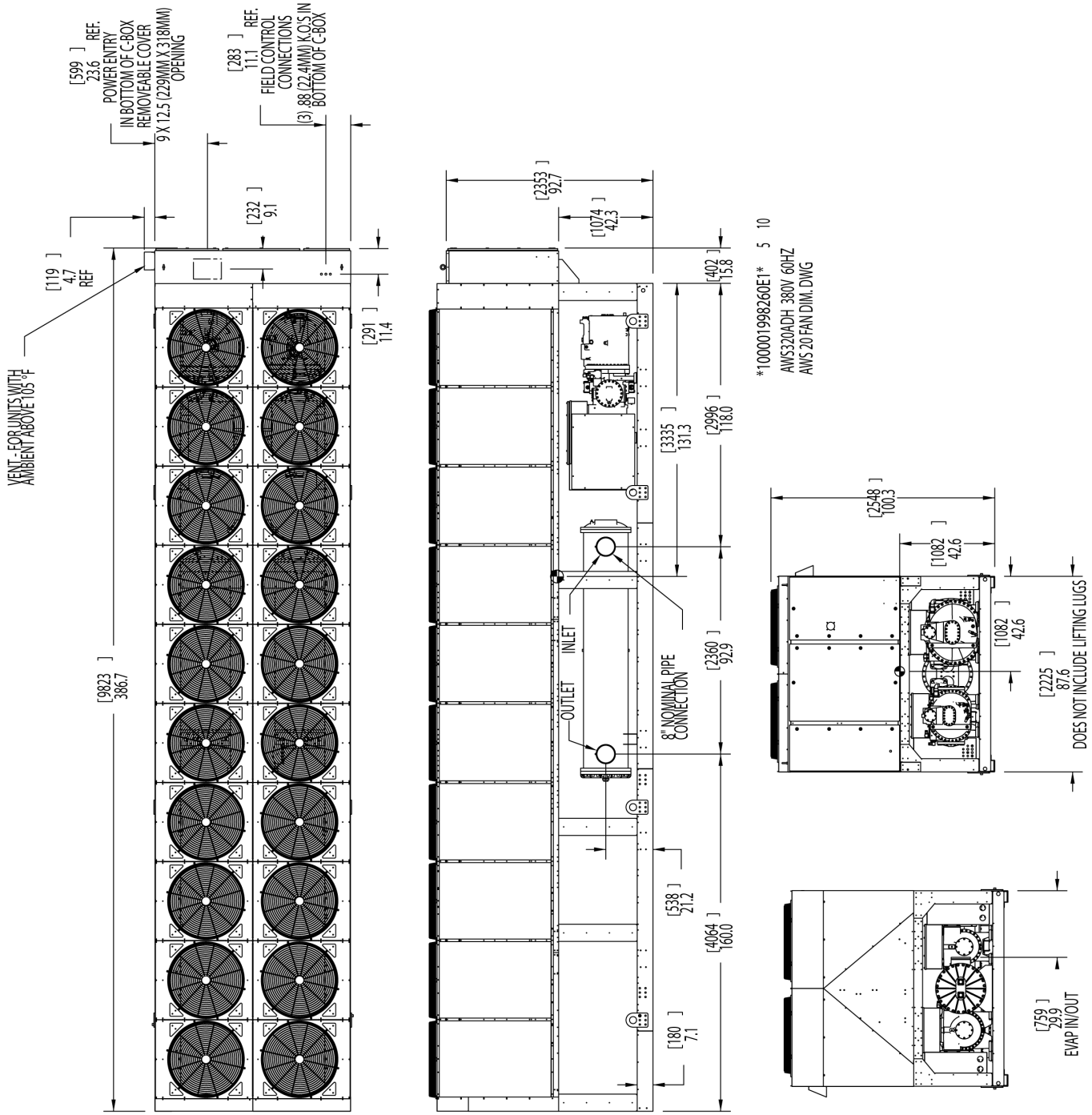


Figure 55: Dimensions - AWS320 High Efficiency, 60Hz (380V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency (non-VFD)

Figure 56: Dimensions - AWS320 High Efficiency, 60Hz (460-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

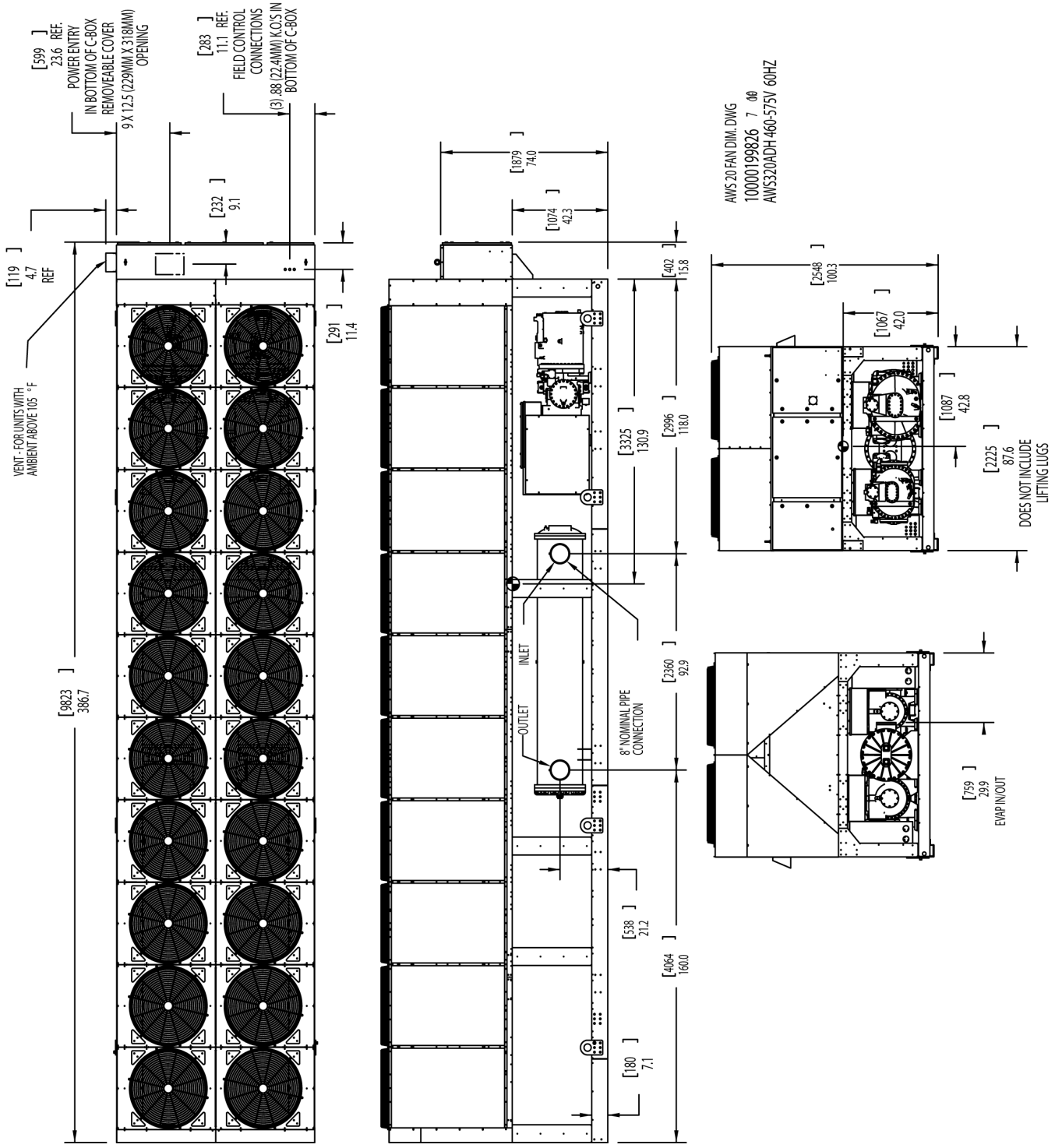
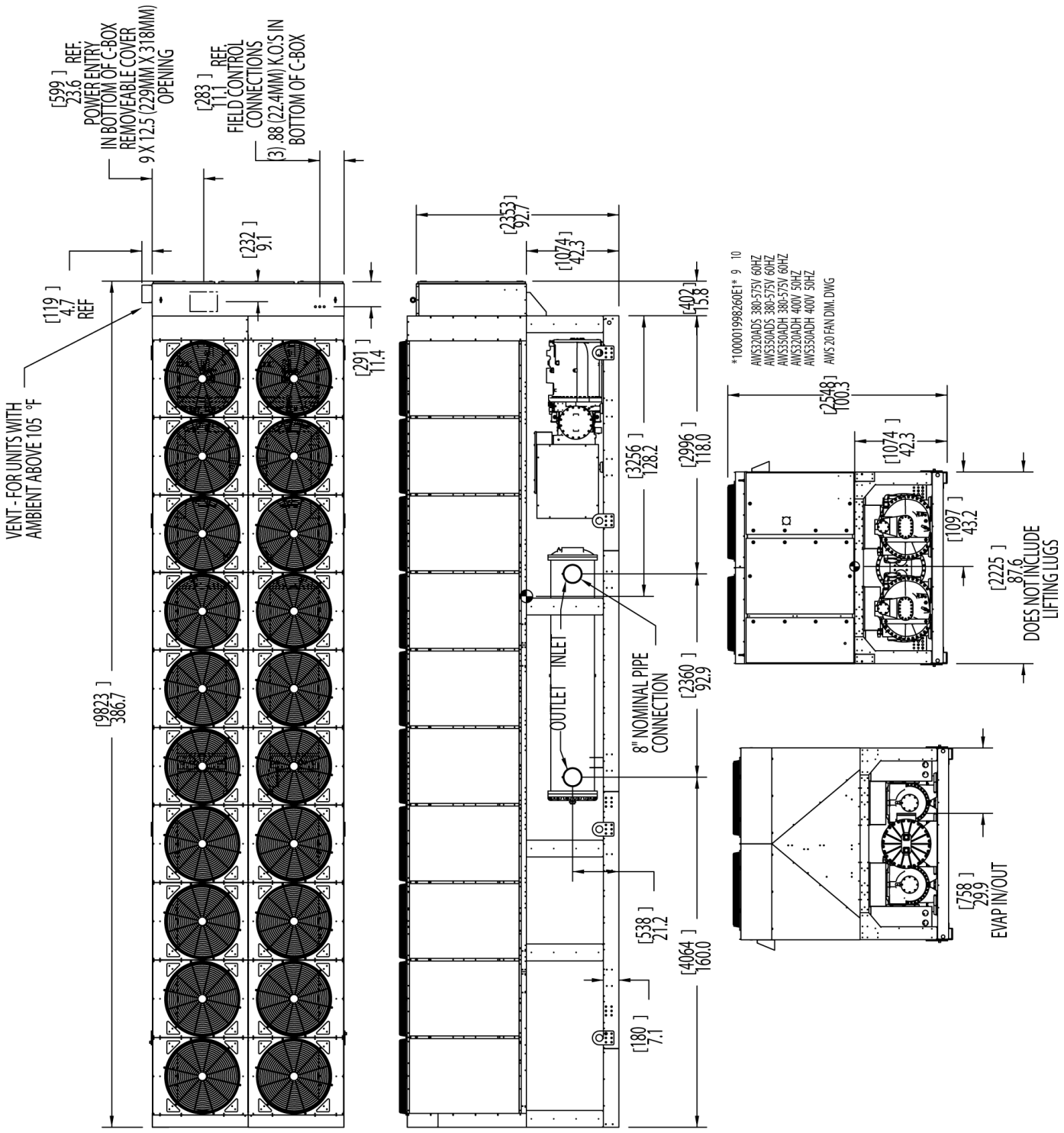


Figure 57: Dimensions - AWS350 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency (non-VFD)

Figure 58: Dimensions - AWS380 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

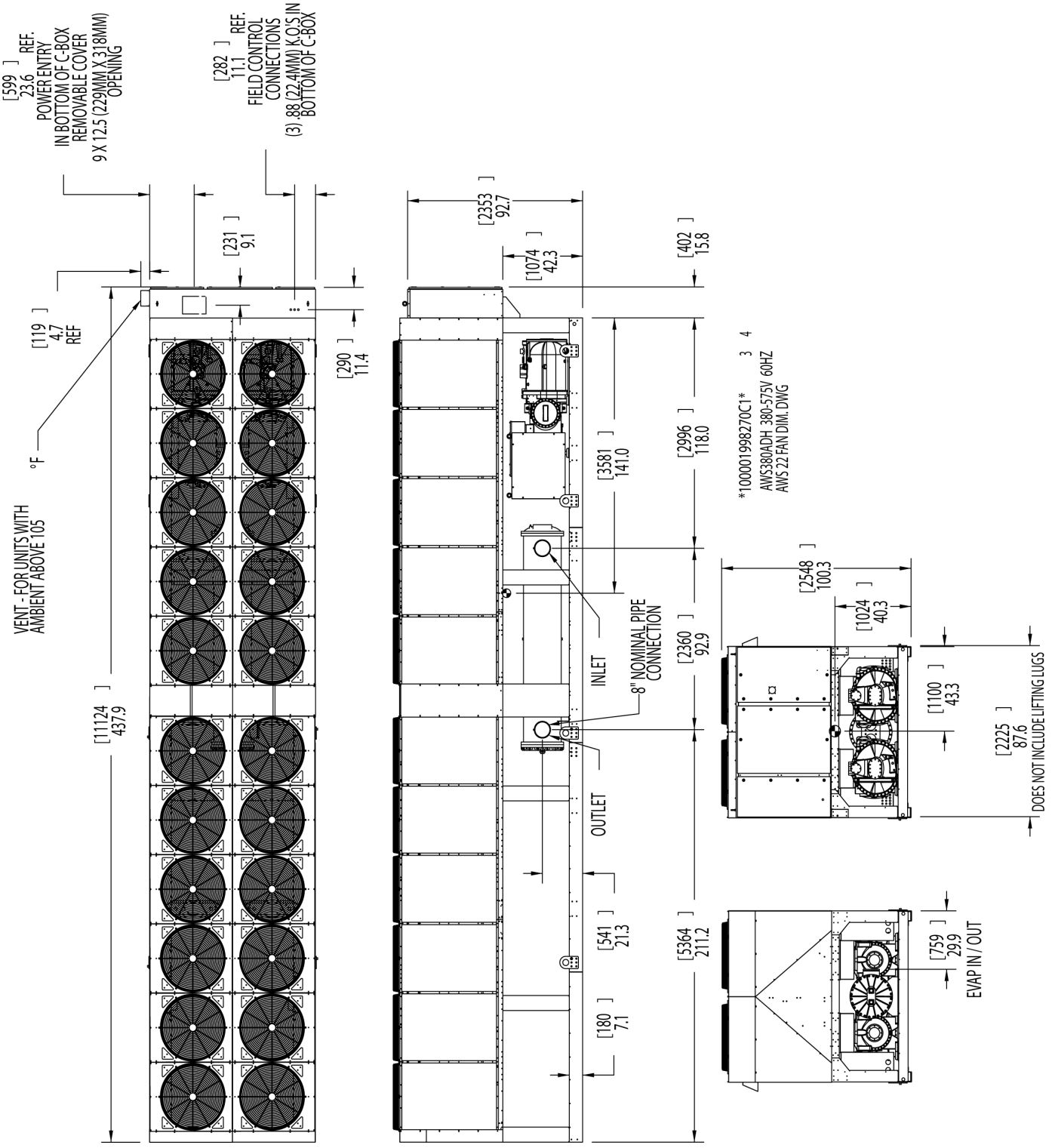
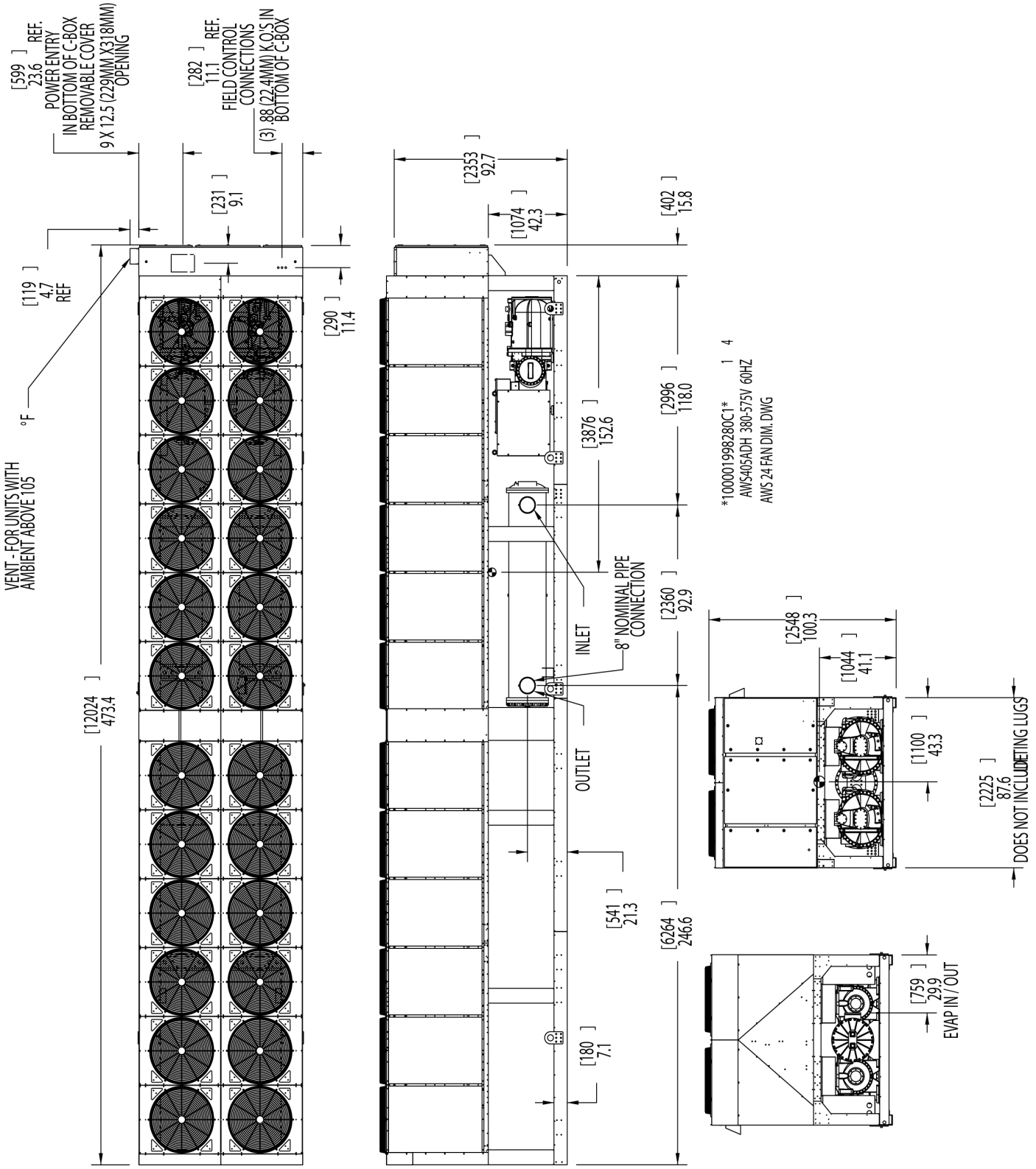


Figure 59: Dimensions - AWS405 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency (non-VFD)

Figure 60: Dimensions - AWS445 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

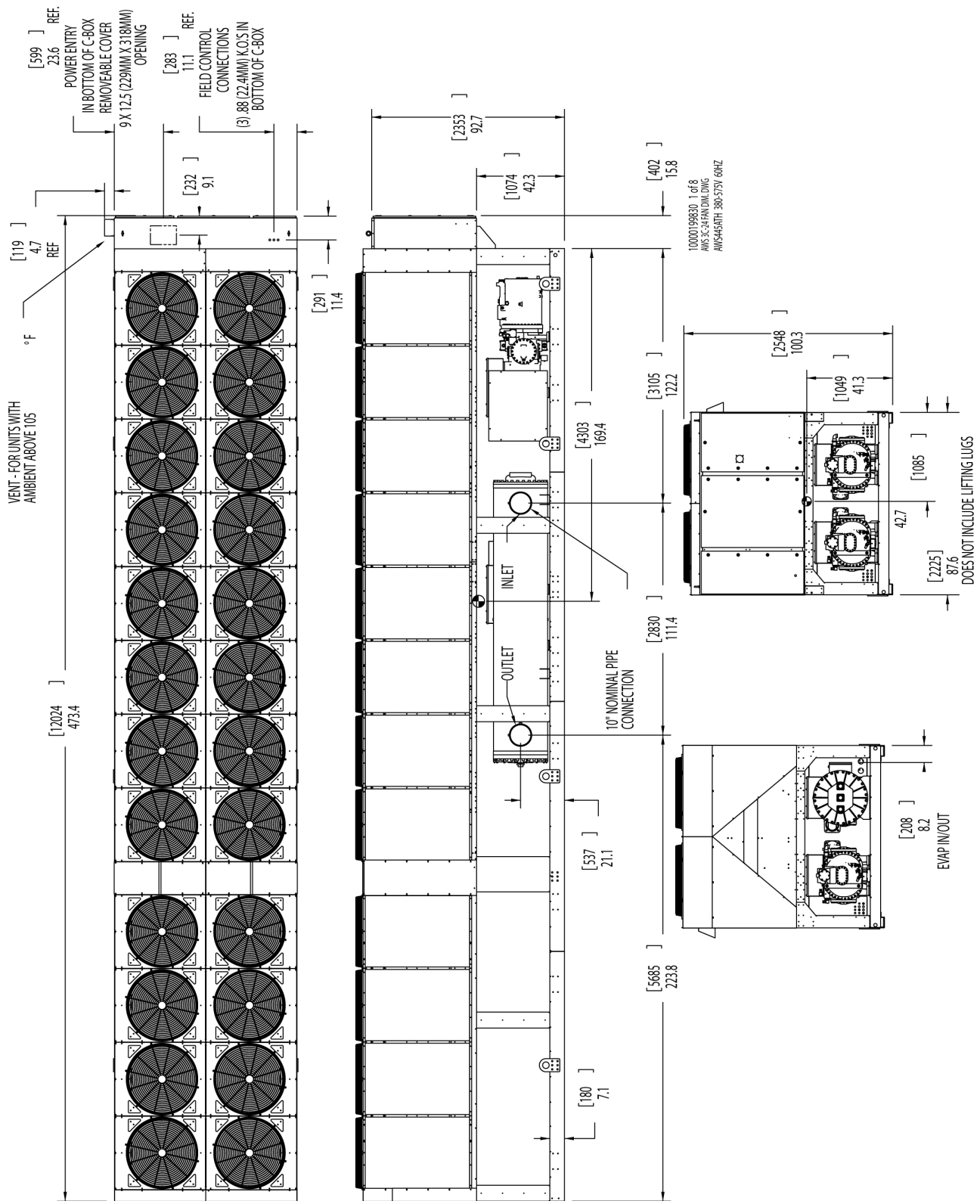
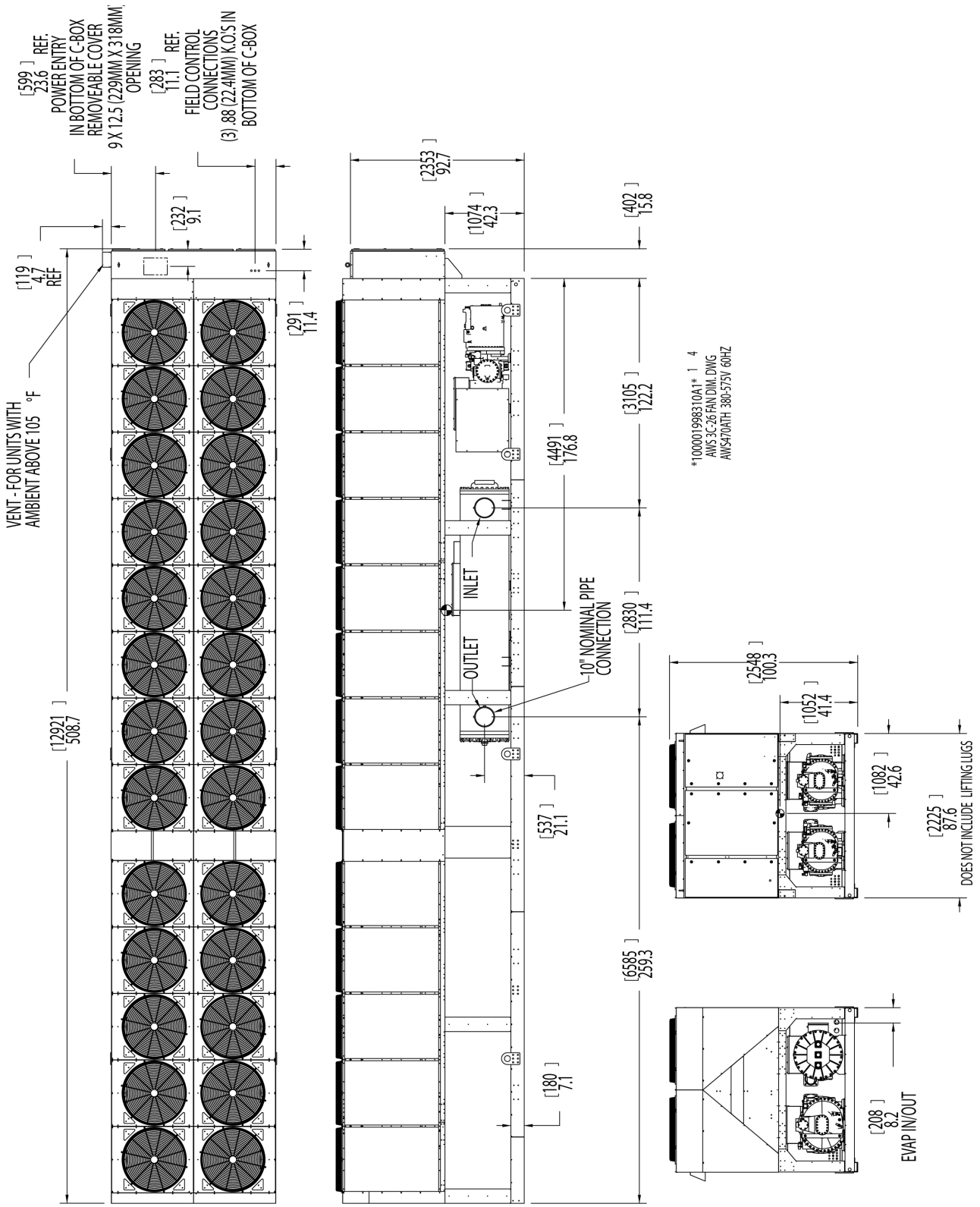


Figure 61: Dimensions - AWS470 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency (non-VFD)

Figure 62: Dimensions - AWS500 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

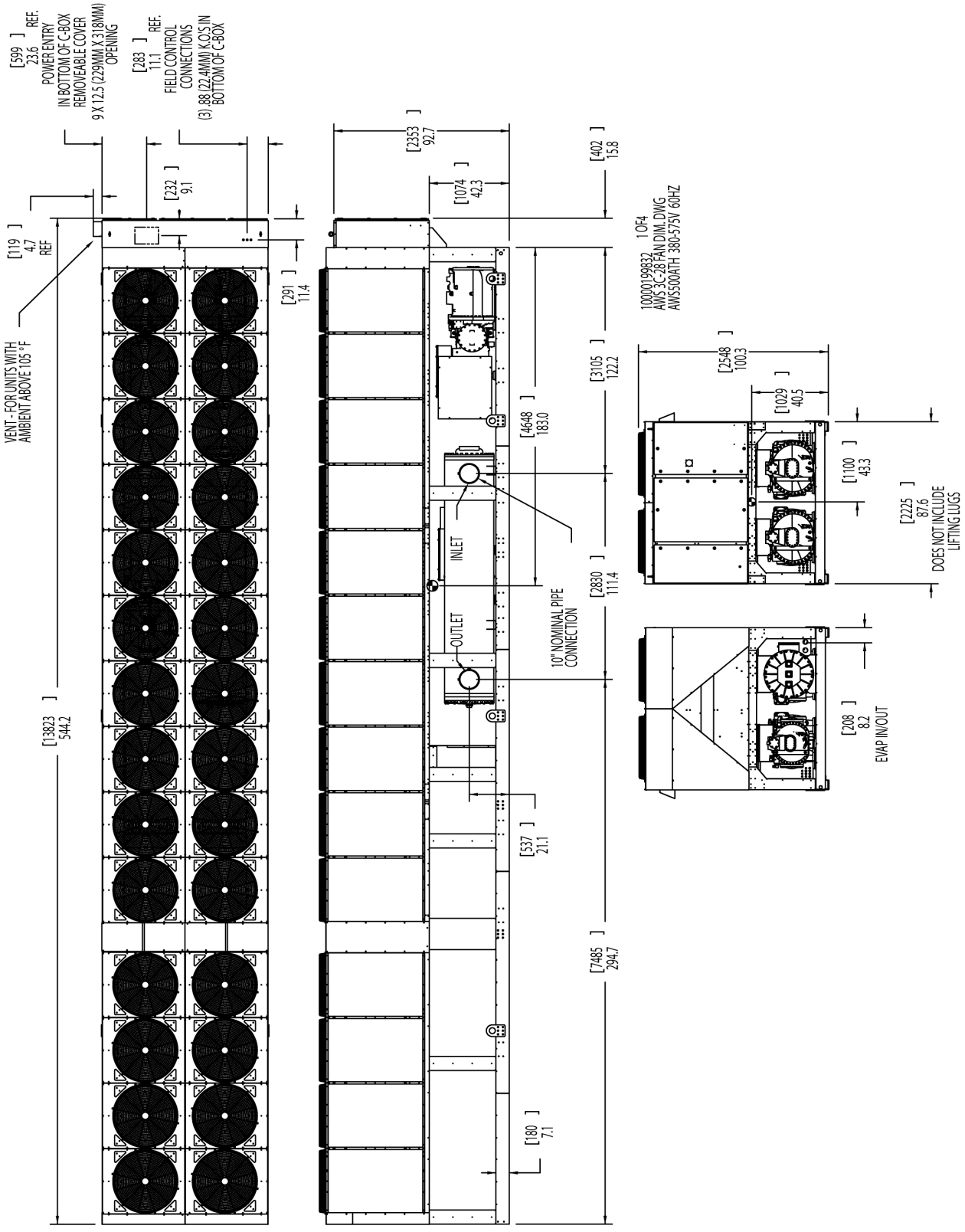
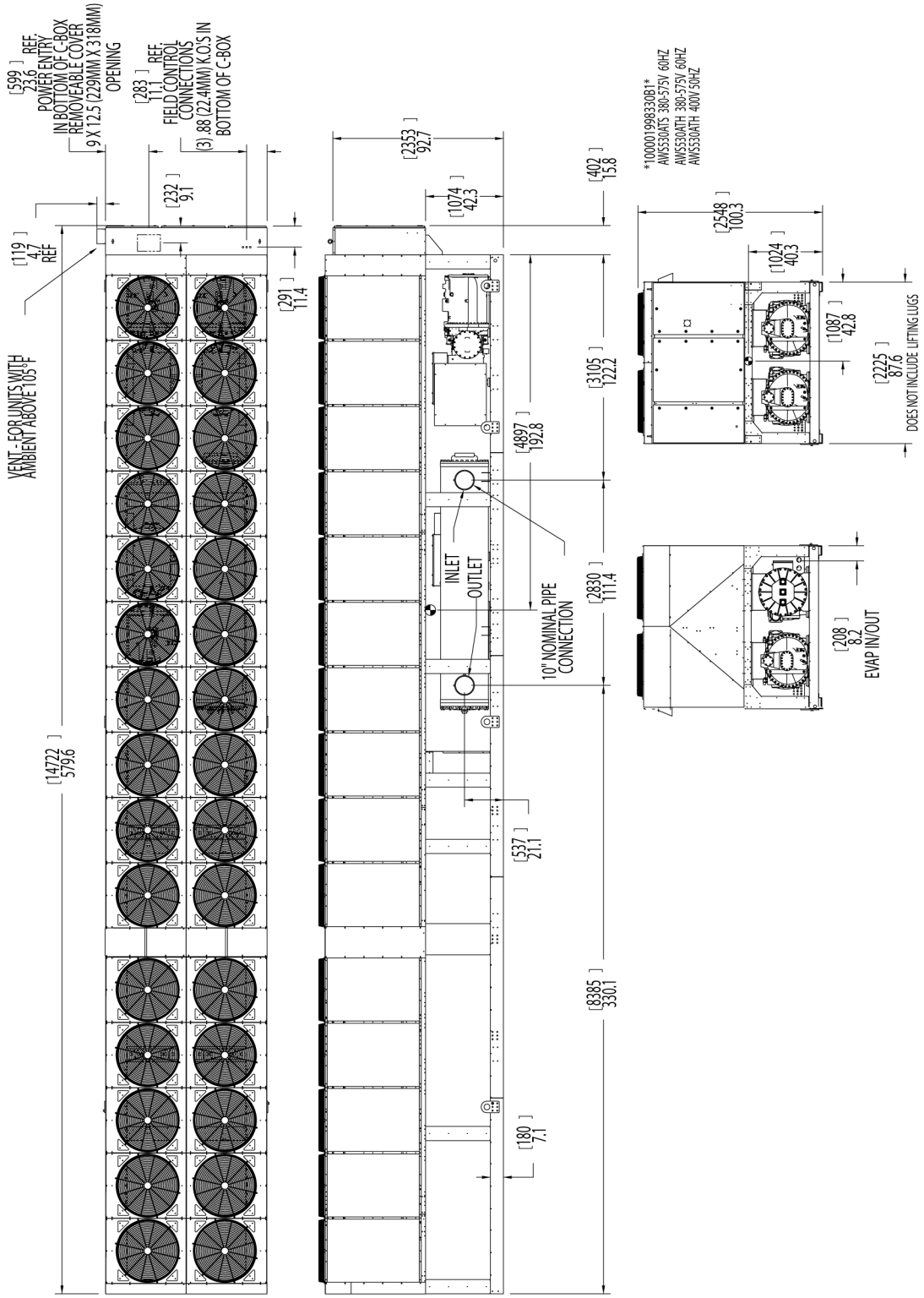


Figure 63: Dimensions - AWS530 High Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Premium Efficiency (non-VFD)

Figure 64: Dimensions - AWS210 Premium Efficiency, 60Hz (208-230V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

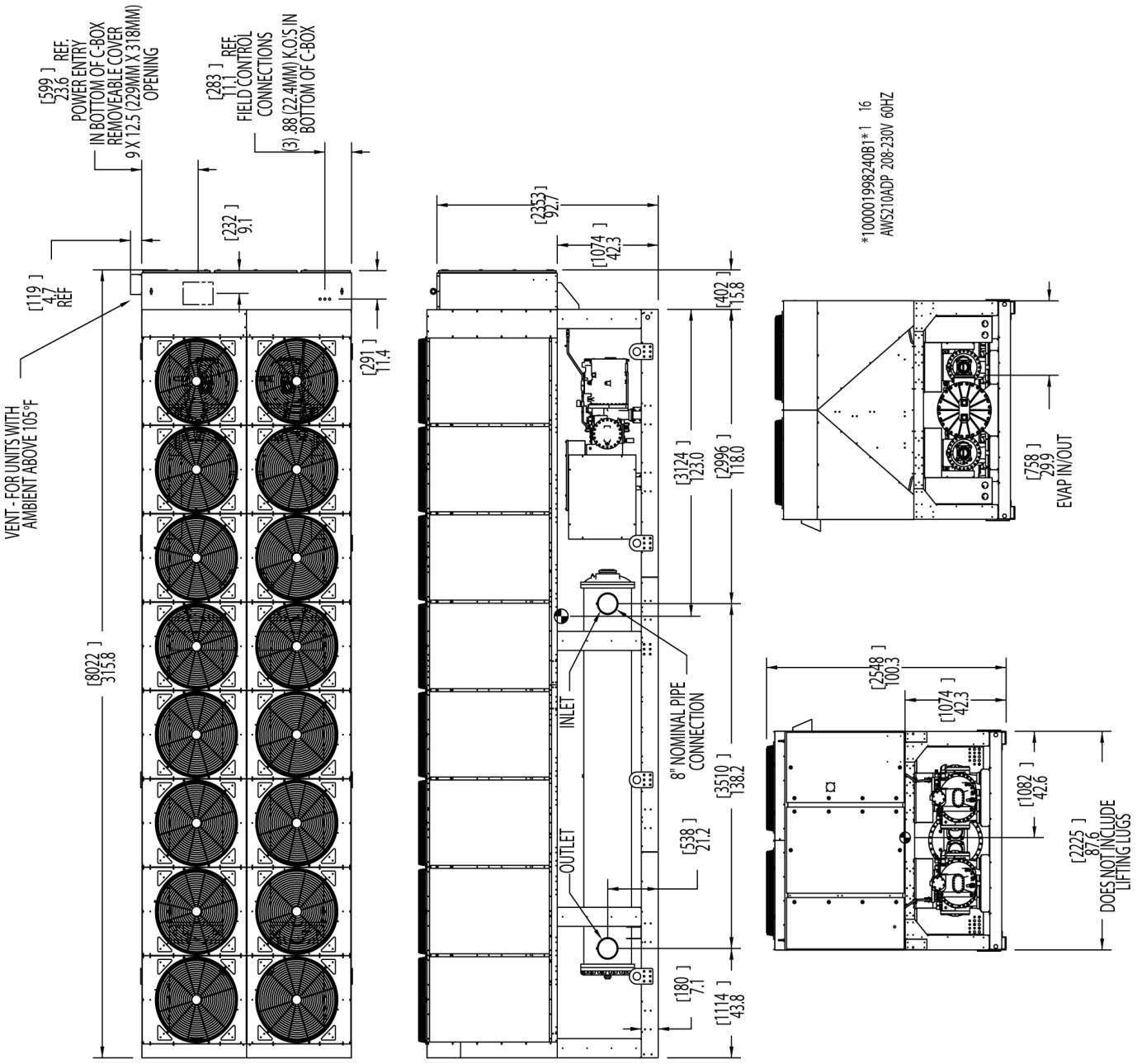
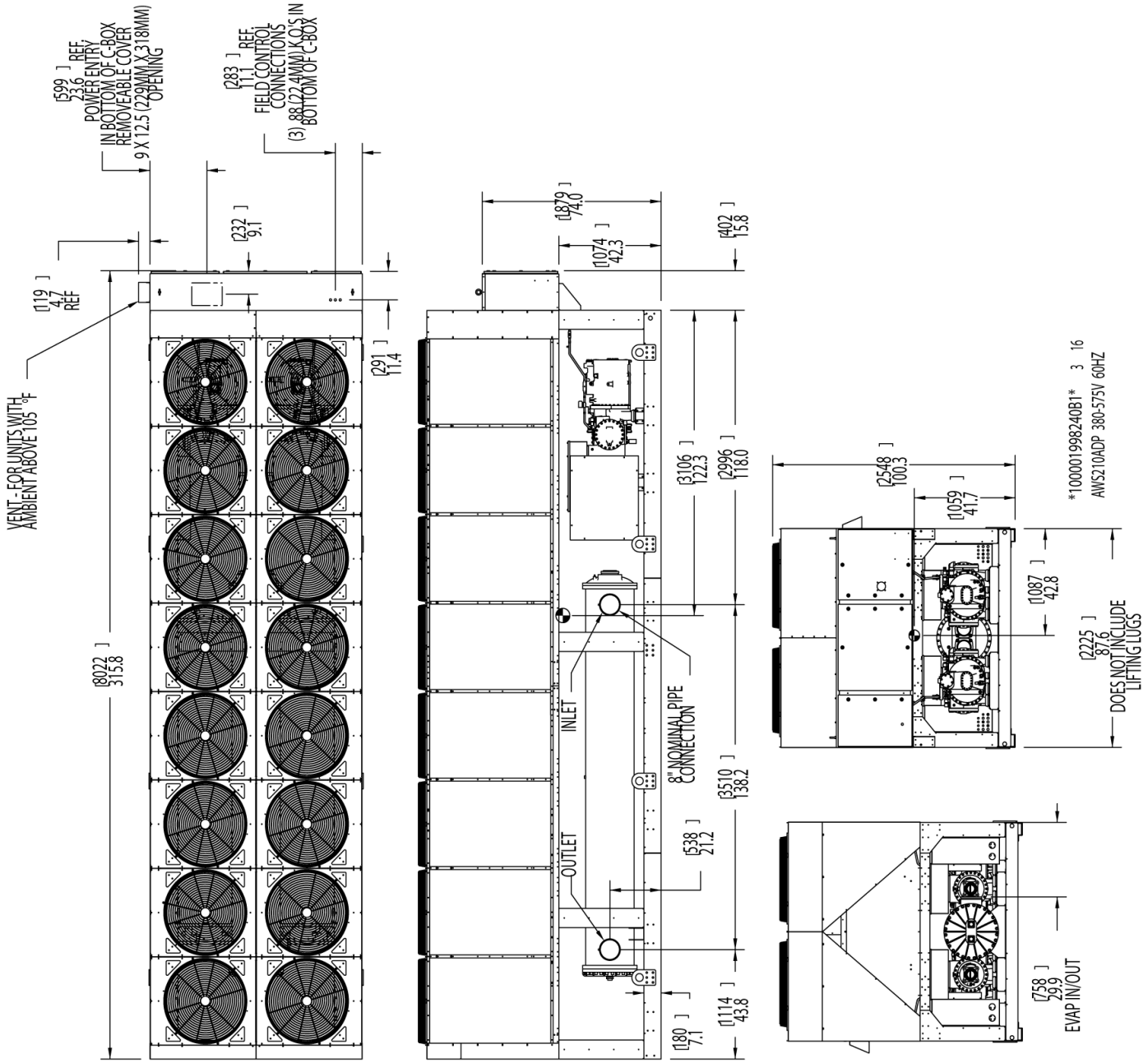


Figure 65: Dimensions - AWS210 Premium Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Premium Efficiency (non-VFD)

Figure 66: Dimensions - AWS230 Premium Efficiency, 60Hz (208-230V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

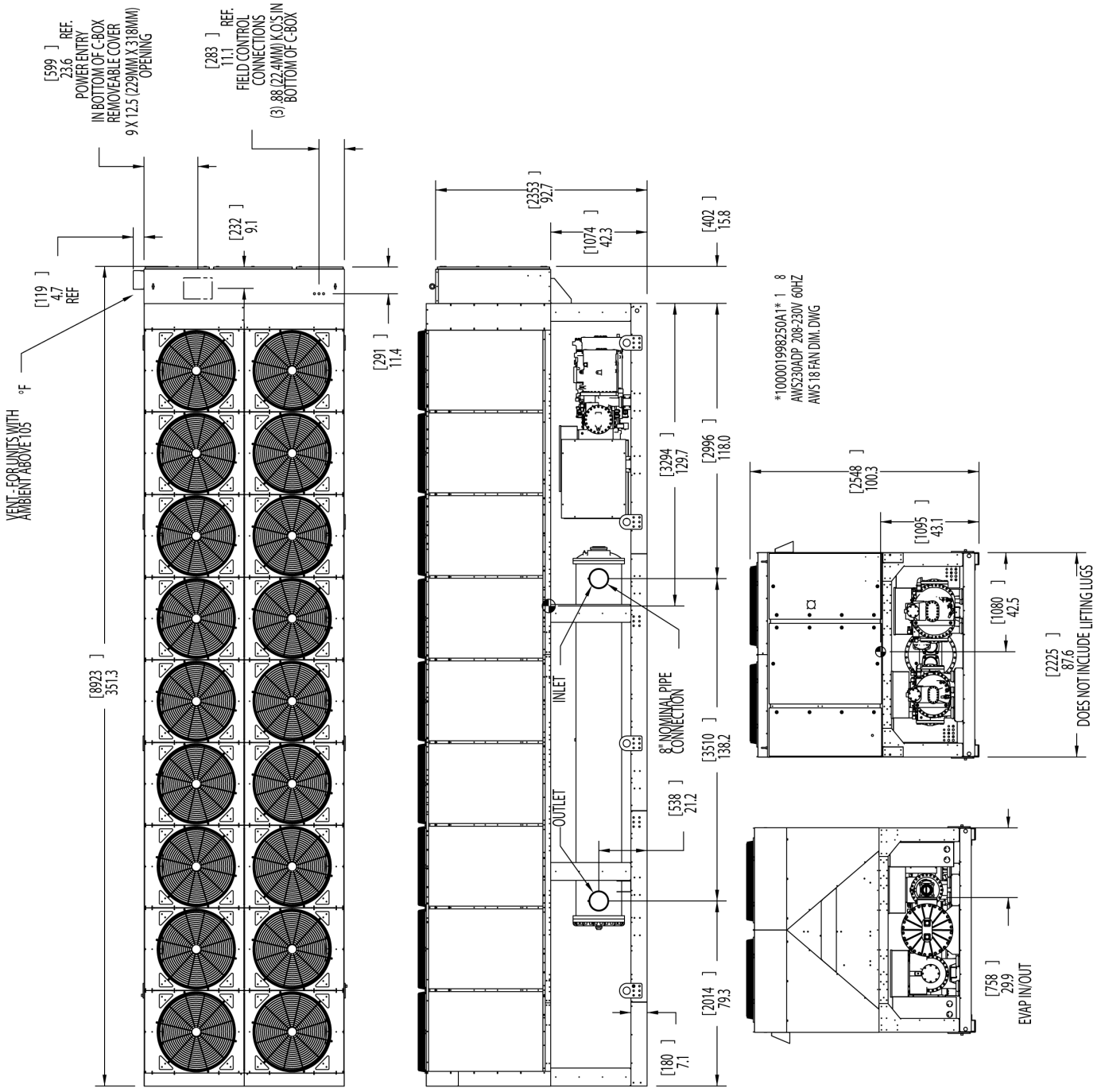
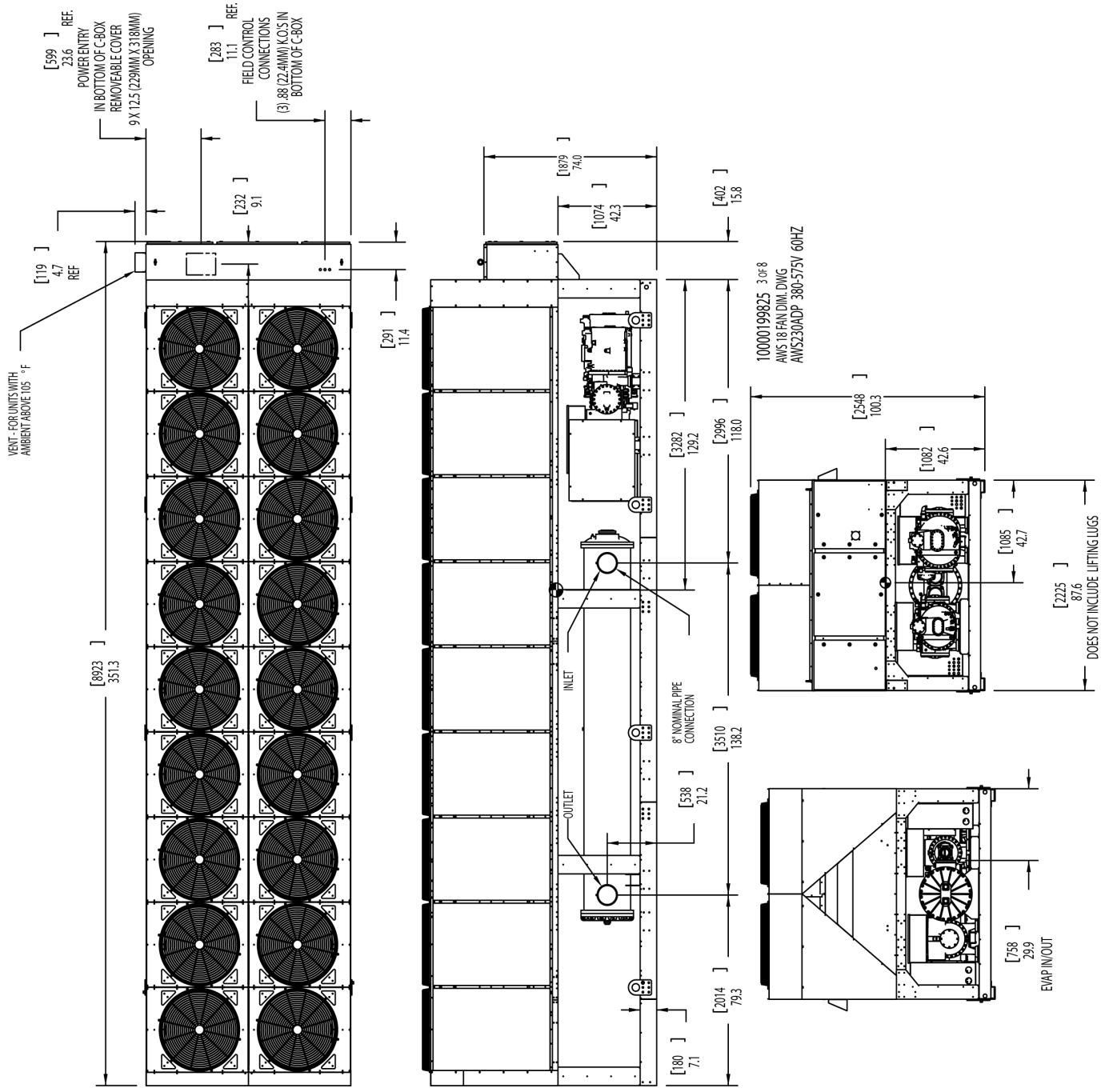


Figure 67: Dimensions - AWS230 Premium Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Premium Efficiency (non-VFD)

Figure 68: Dimensions - AWS250 Premium Efficiency, 60Hz (208-230V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

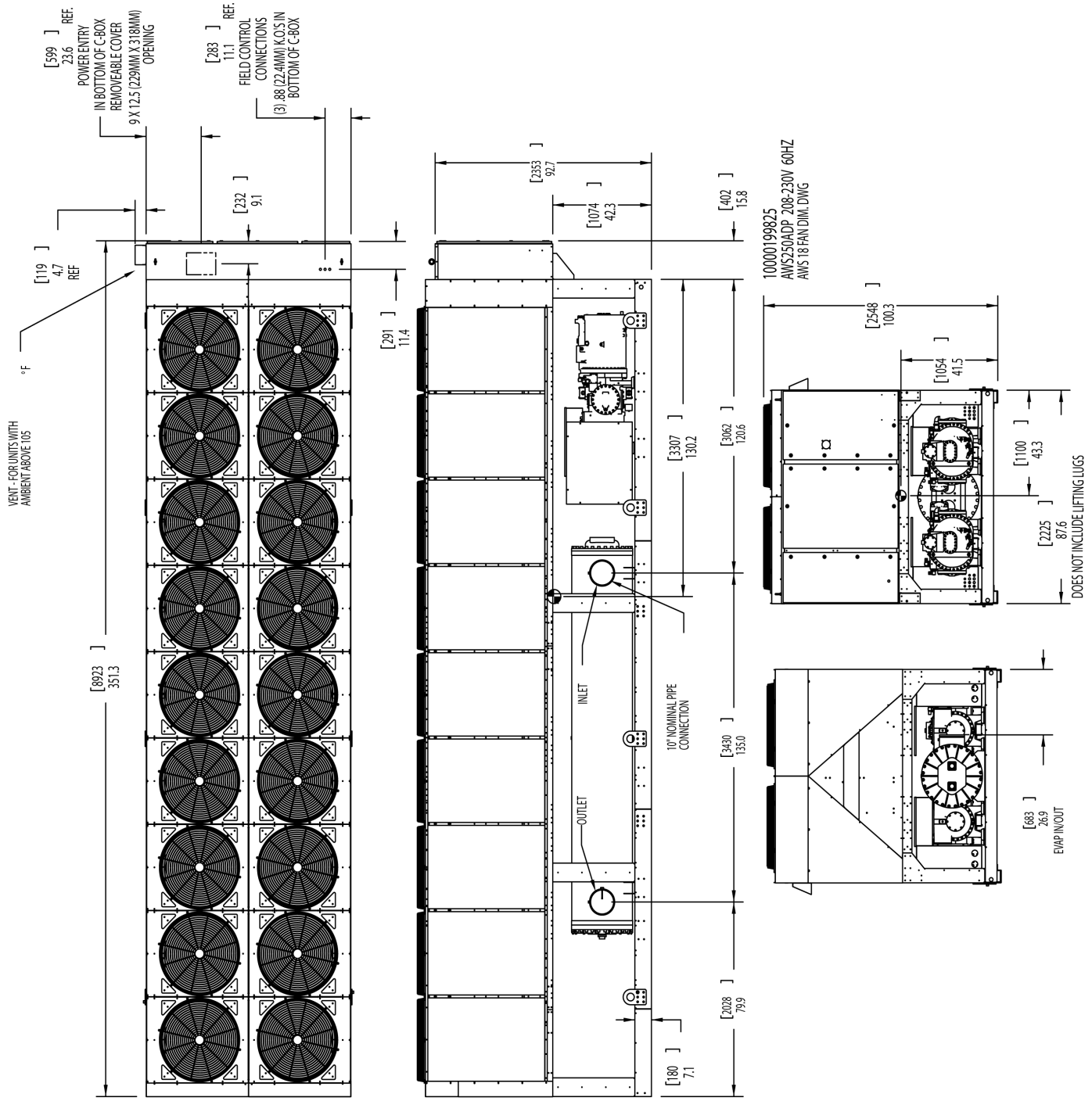
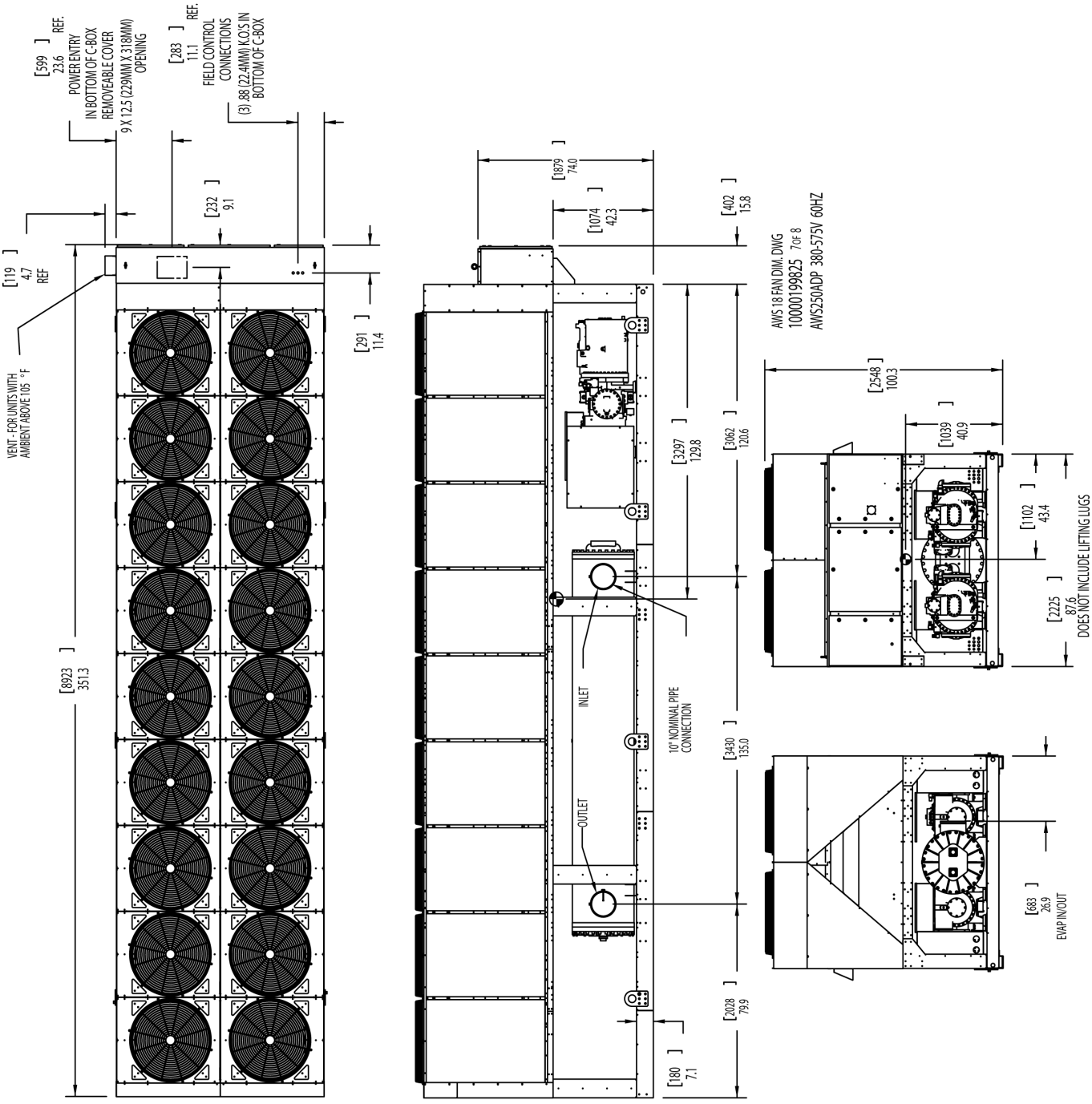


Figure 69: Dimensions - AWS250 Premium Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Premium Efficiency (non-VFD)

Figure 70: Dimensions - AWS280 & AWS300 Premium Efficiency, 60Hz (208-230V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

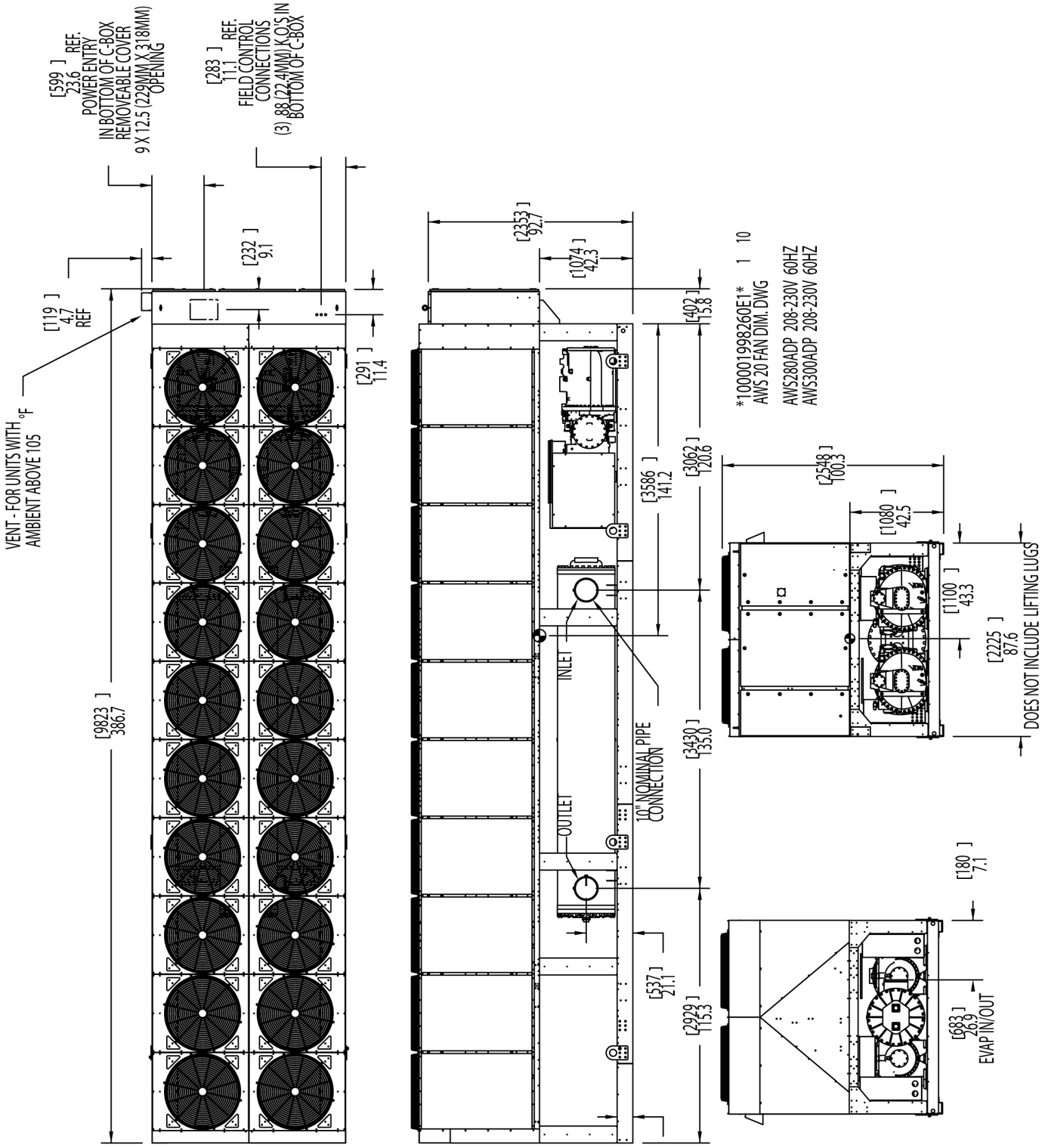
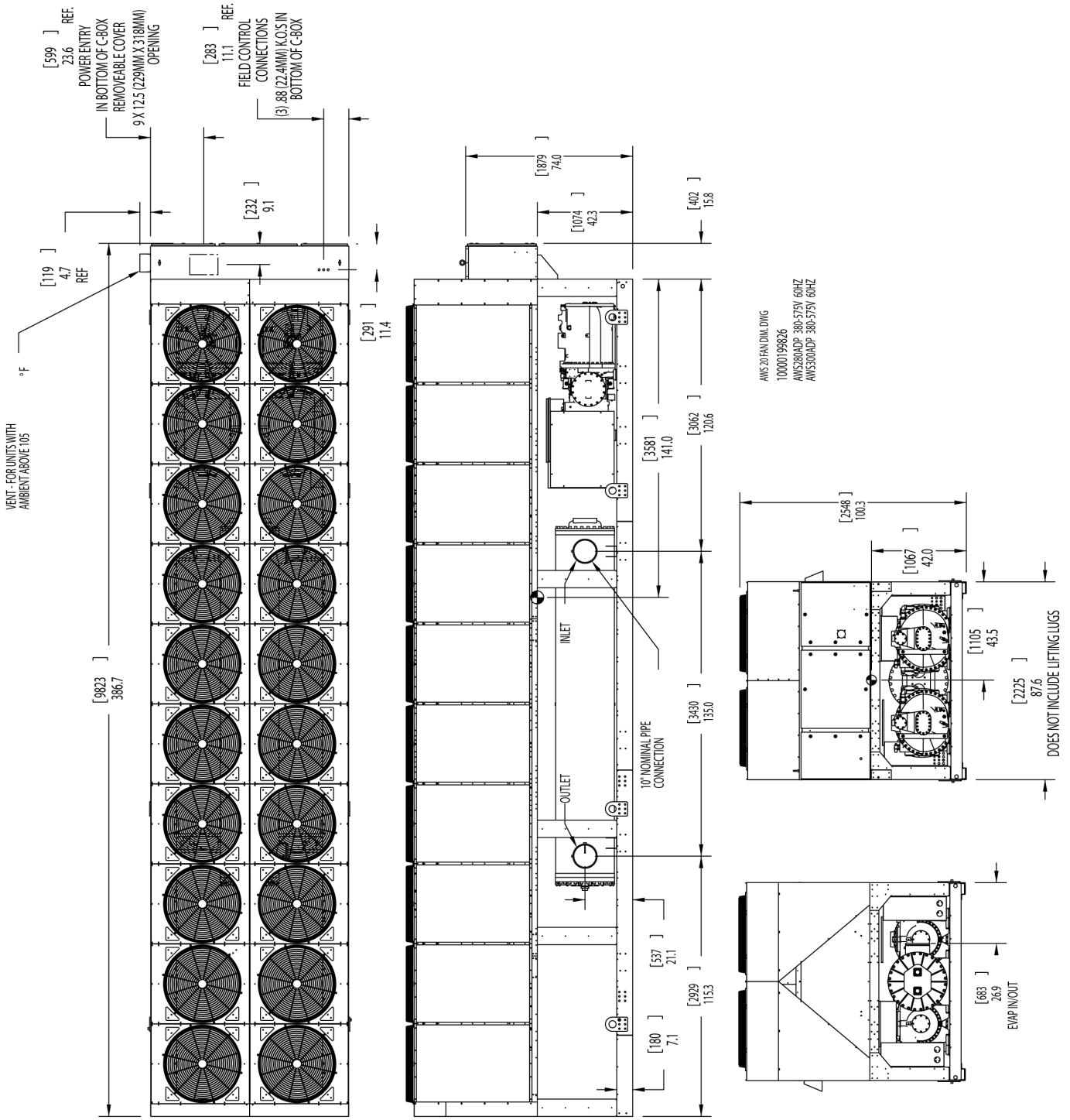


Figure 71: Dimensions - AWS280 & AWS300 Premium Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Premium Efficiency (non-VFD)

Figure 72: Dimensions - AWS320 Premium Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

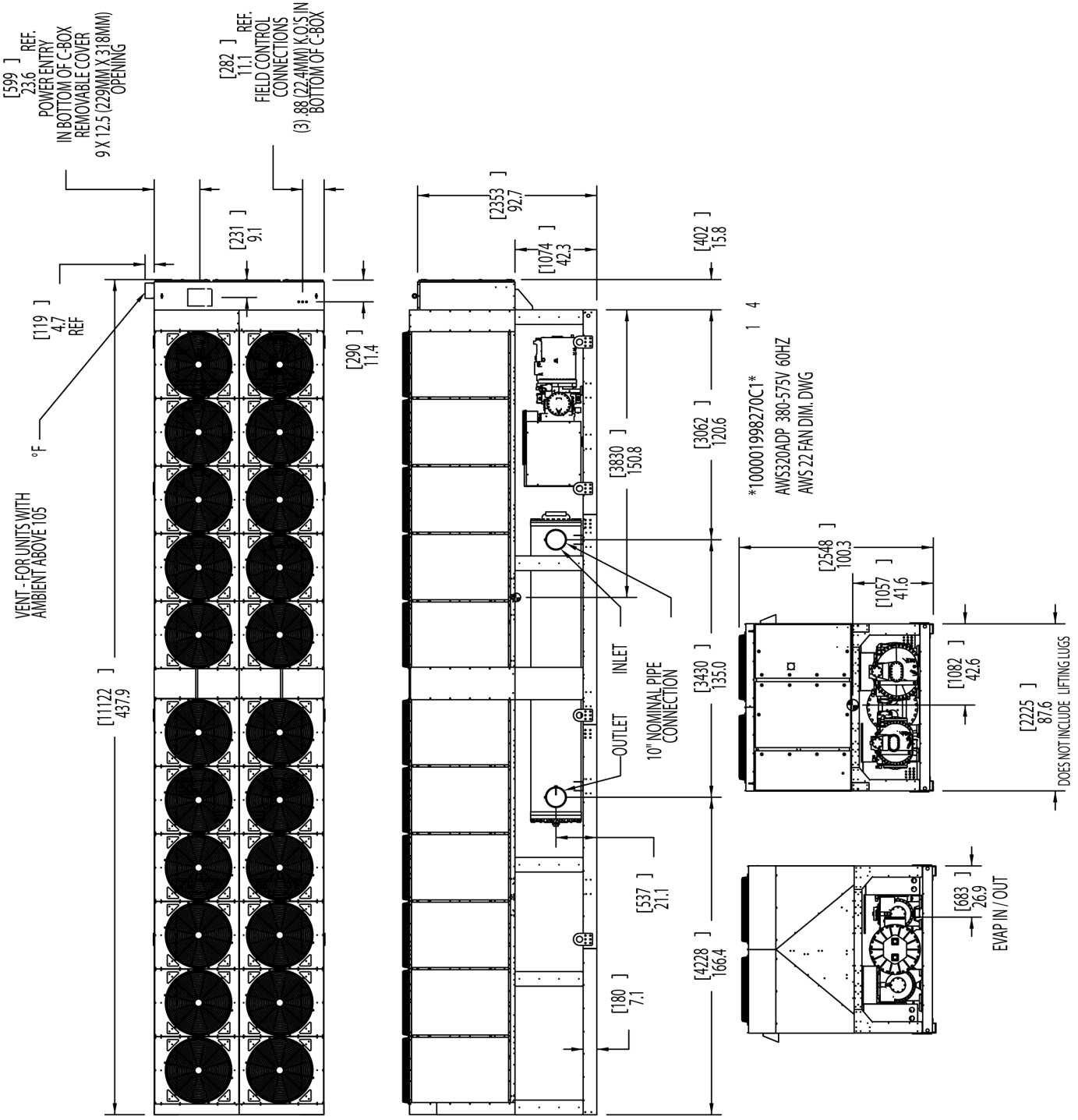
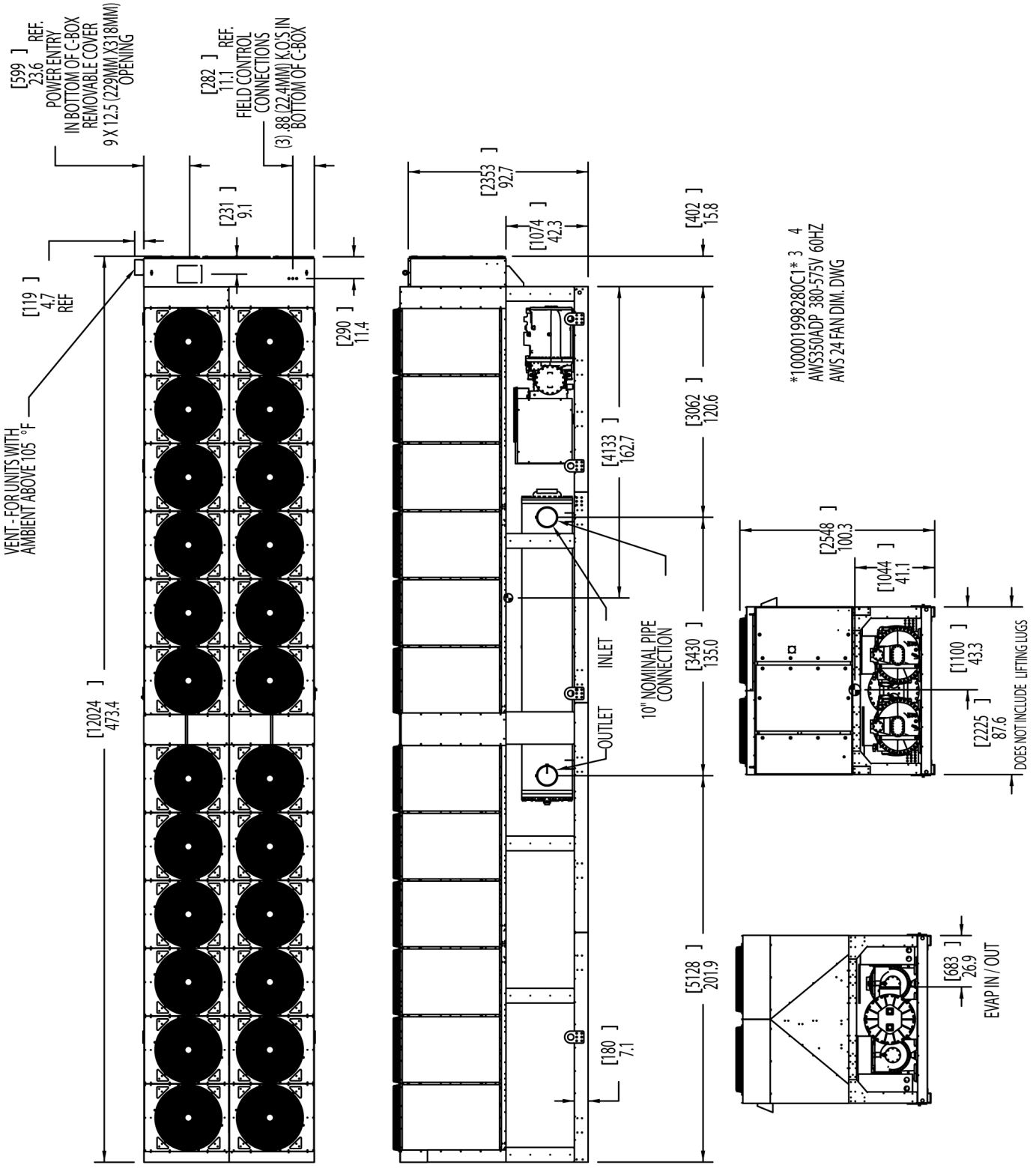


Figure 73: Dimensions - AWS350 Premium Efficiency, 60Hz (380-575V) non-VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Standard Efficiency, 60 Hz (VFD)

Figure 74: Dimensions - AWS150 Standard Efficiency, 60Hz (380/460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

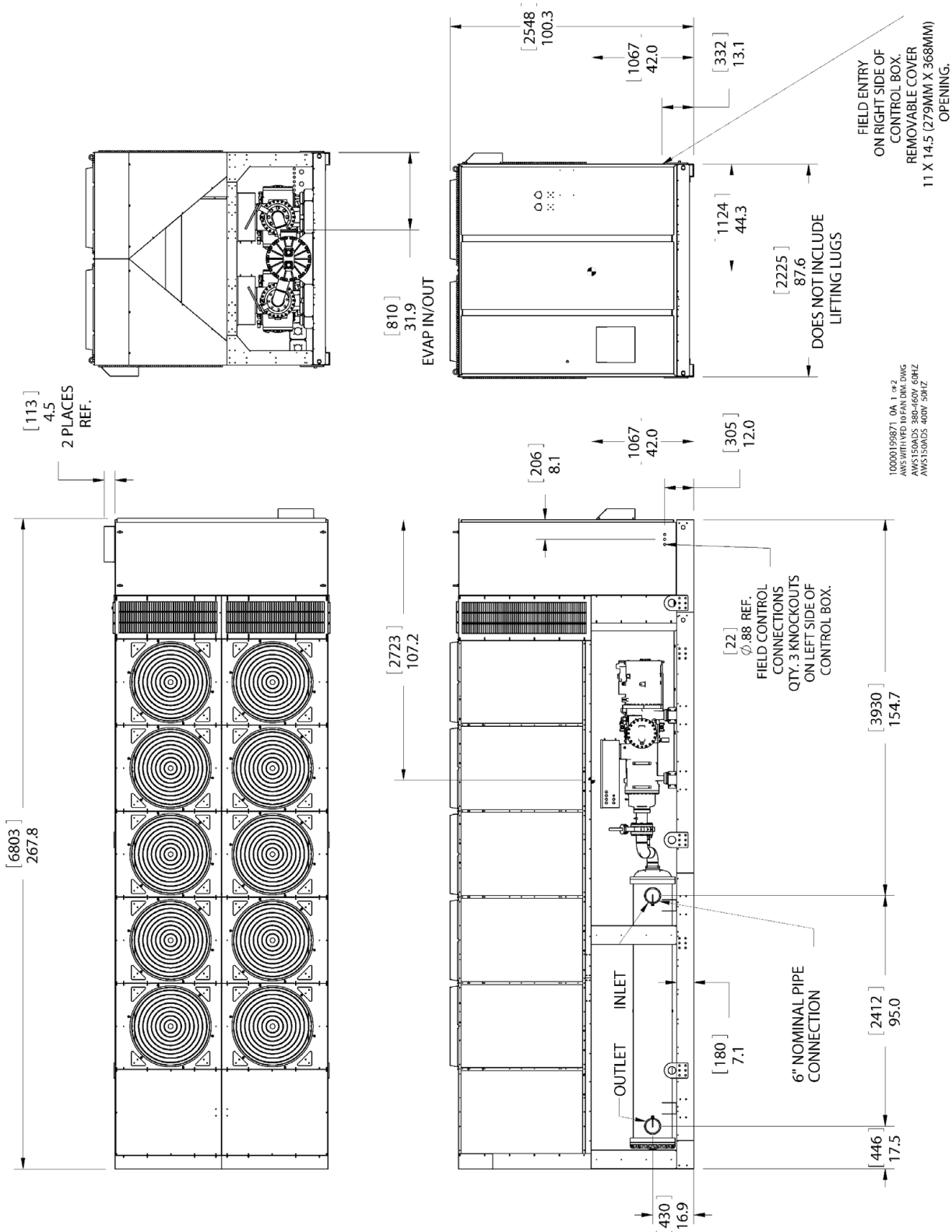
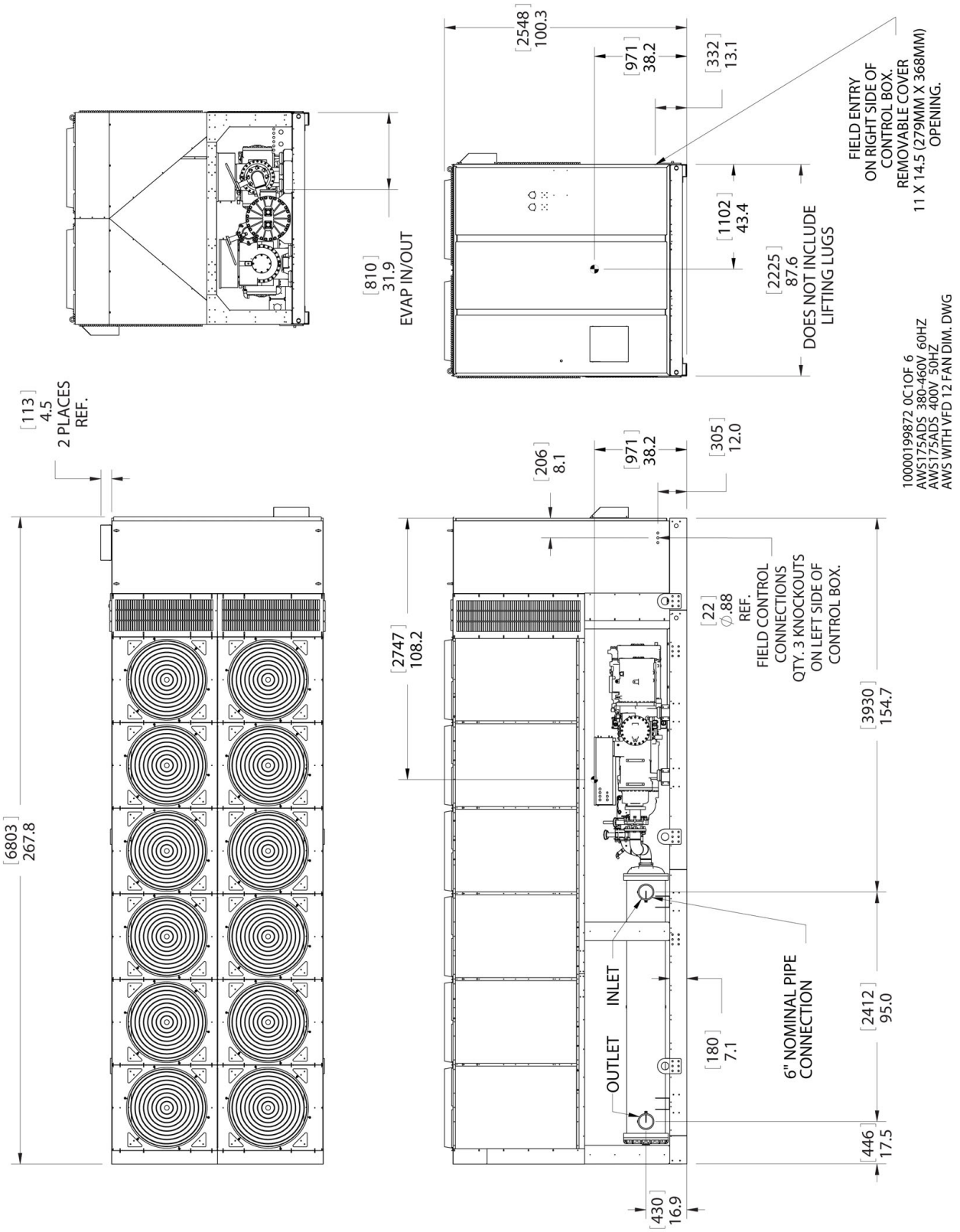


Figure 75: Dimensions - AWS175 Standard Efficiency, 60Hz (380/460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Standard Efficiency, 60 Hz (VFD)

Figure 76: Dimensions - AWS190 Standard Efficiency, 60Hz (380/460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

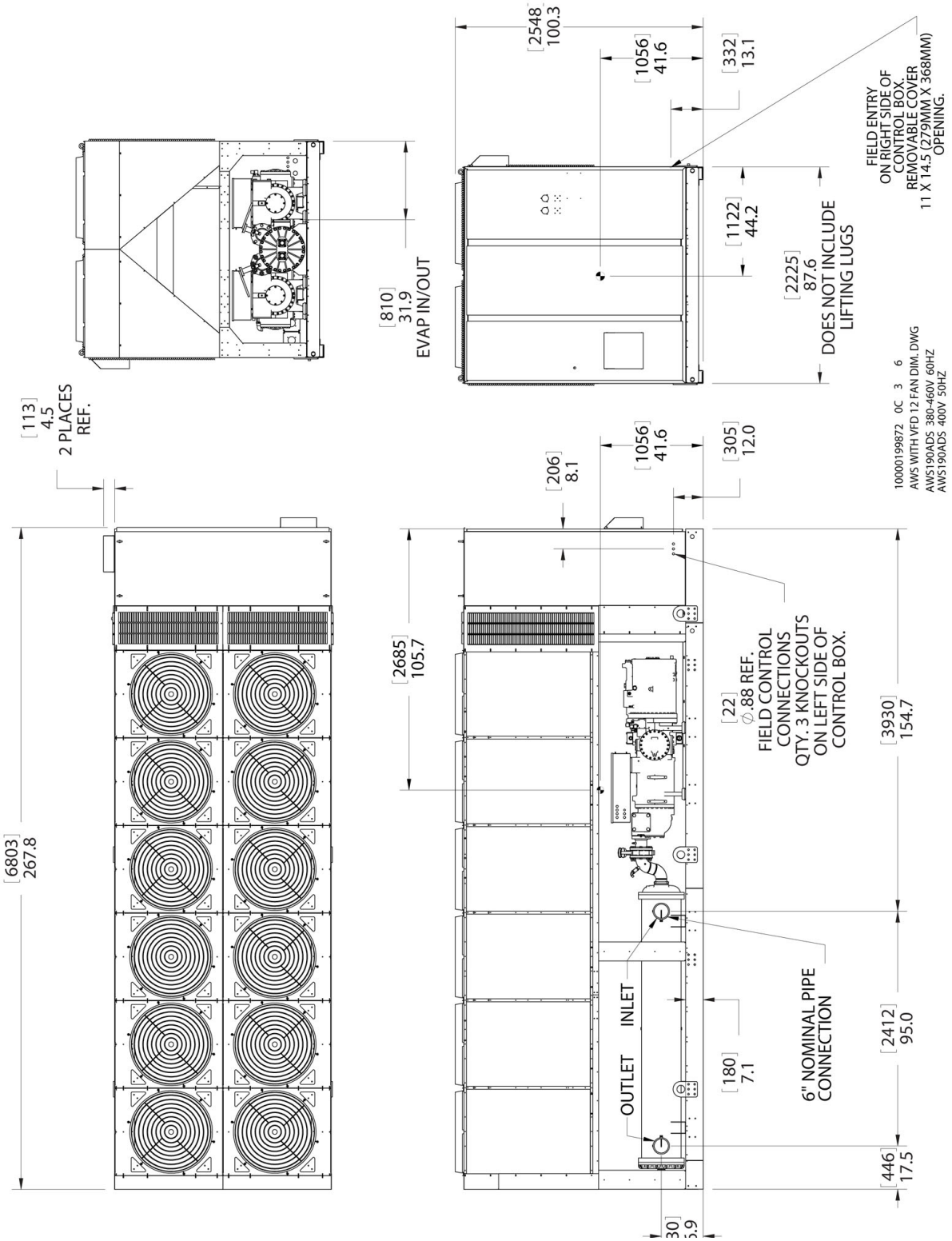
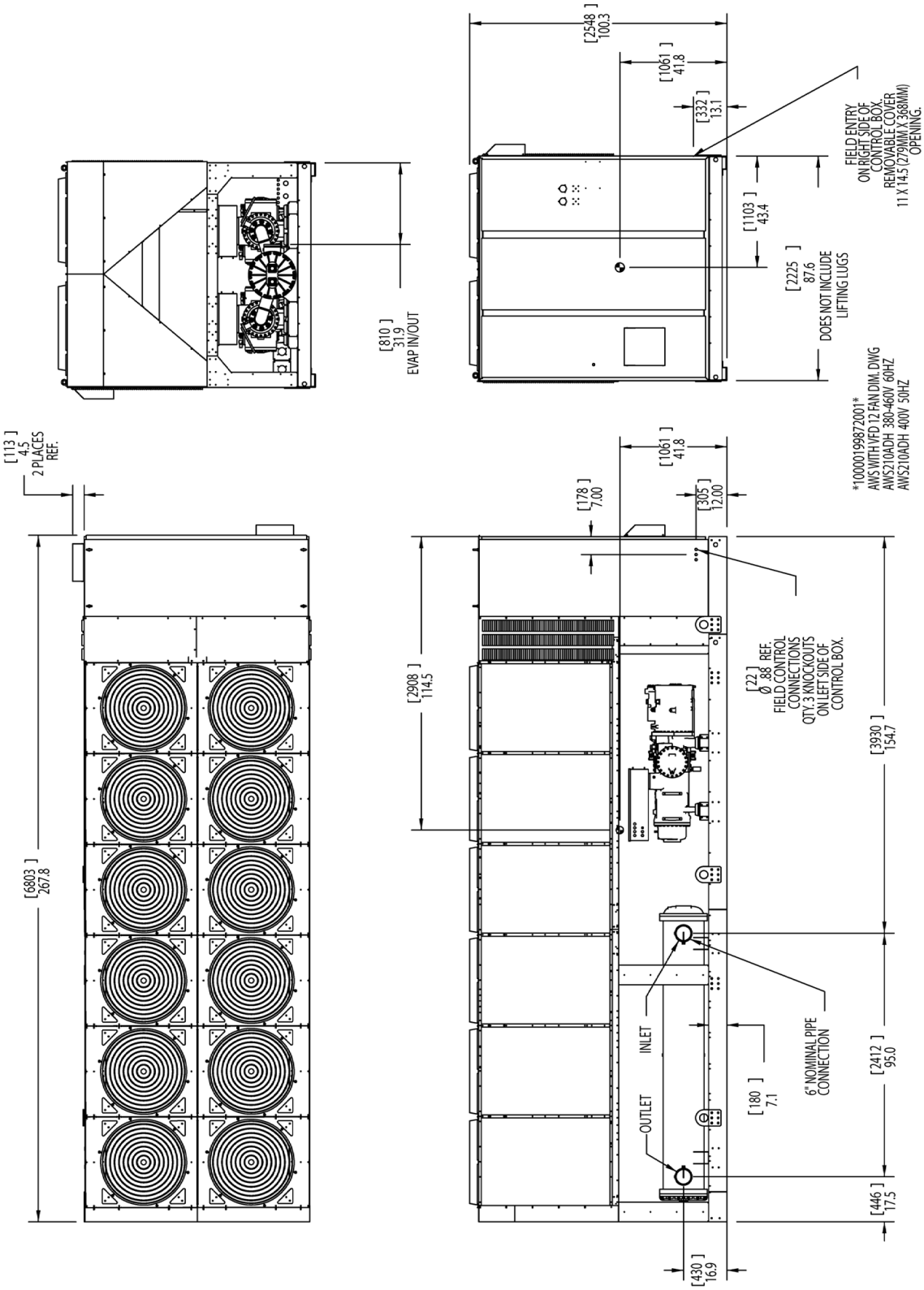


Figure 77: Dimensions - AWS210 High Efficiency, 60Hz (380/460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency, 60 Hz (VFD)

Figure 78: Dimensions - AWS230 High Efficiency, 60Hz (380-460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

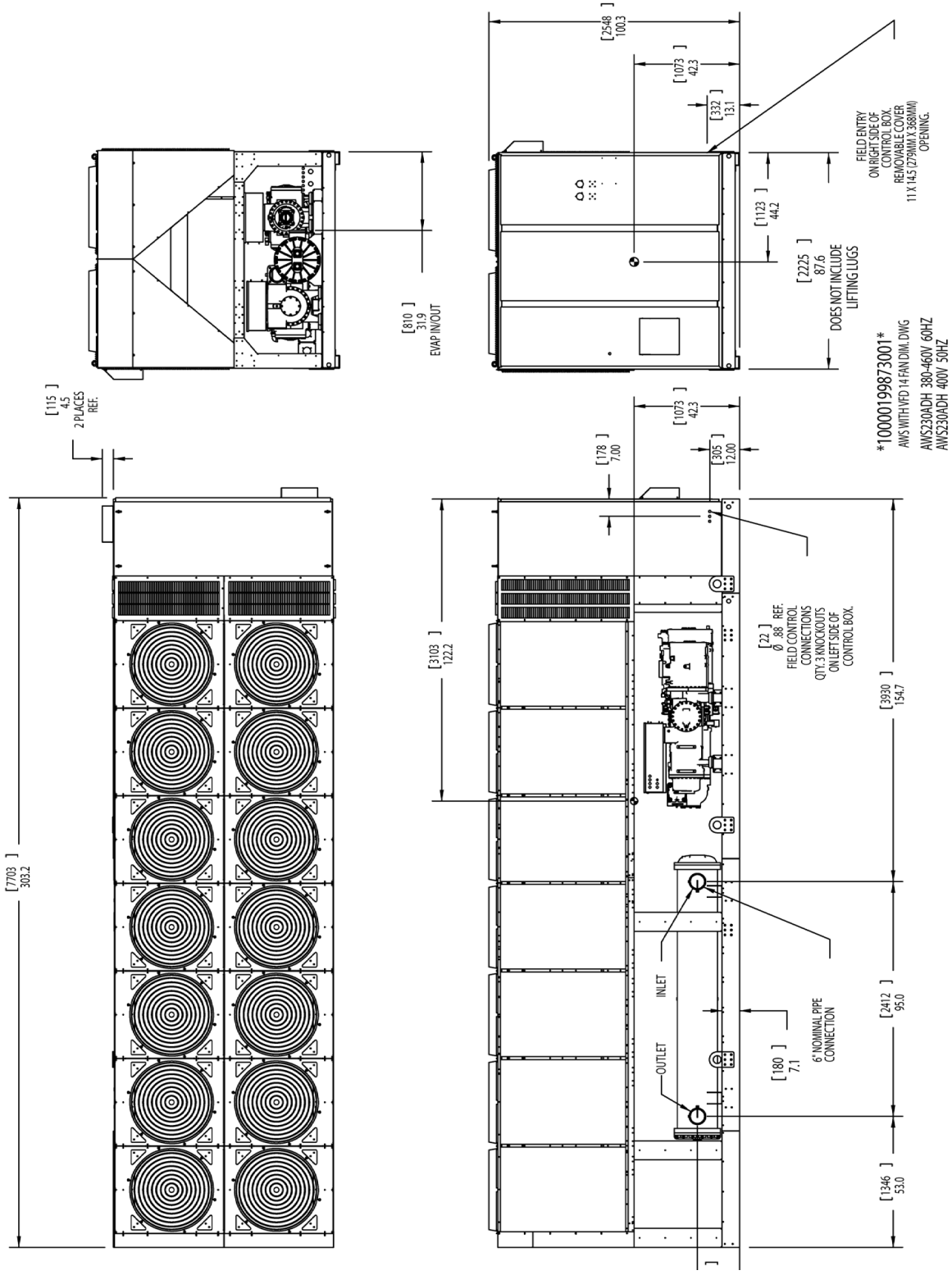
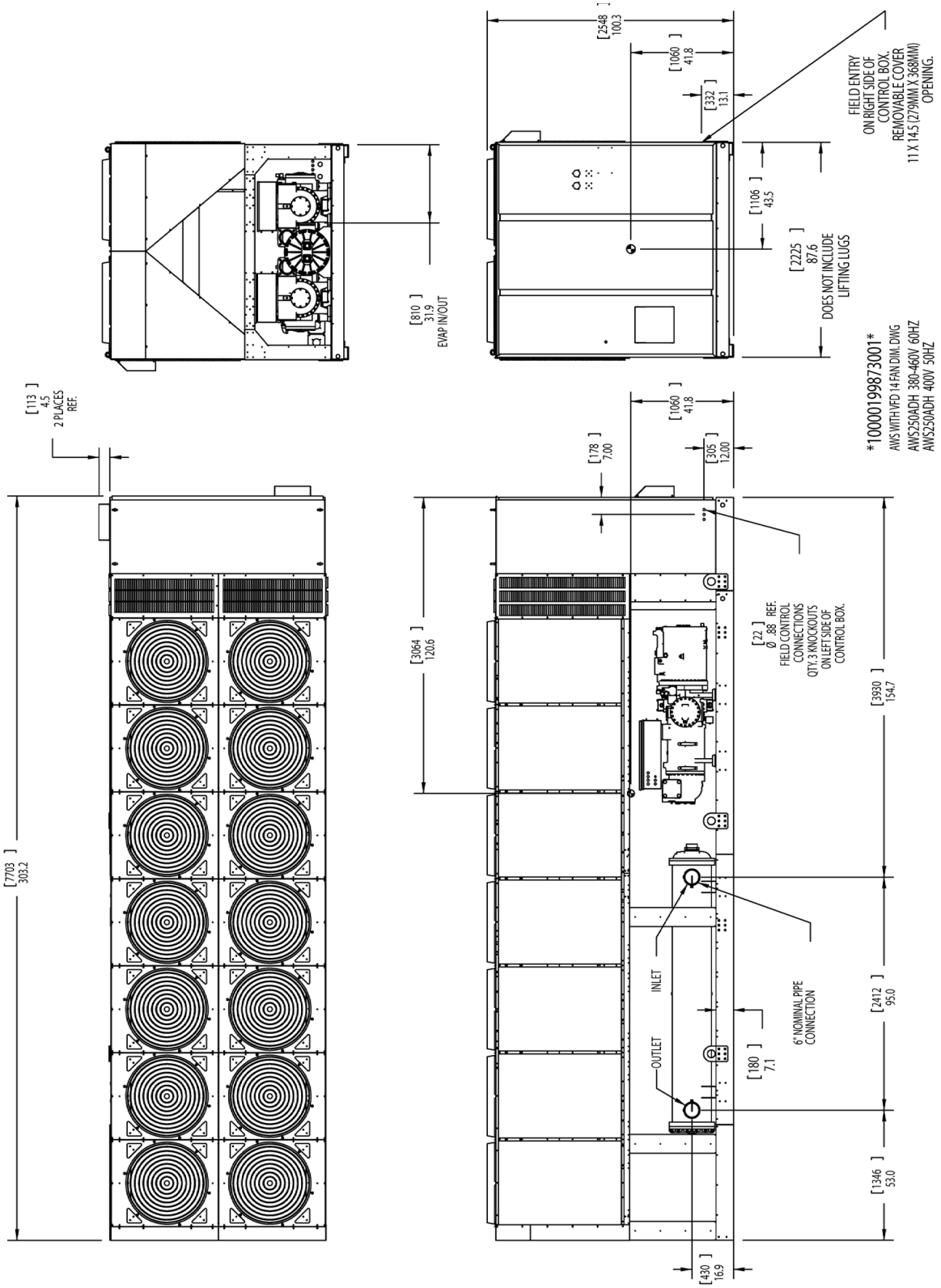


Figure 79: Dimensions - AWS250 High Efficiency, 60Hz (380-460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency, 60 Hz (VFD)

Figure 80: Dimensions - AWS280 & AWS300 High Efficiency, 60Hz (380-460V) VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

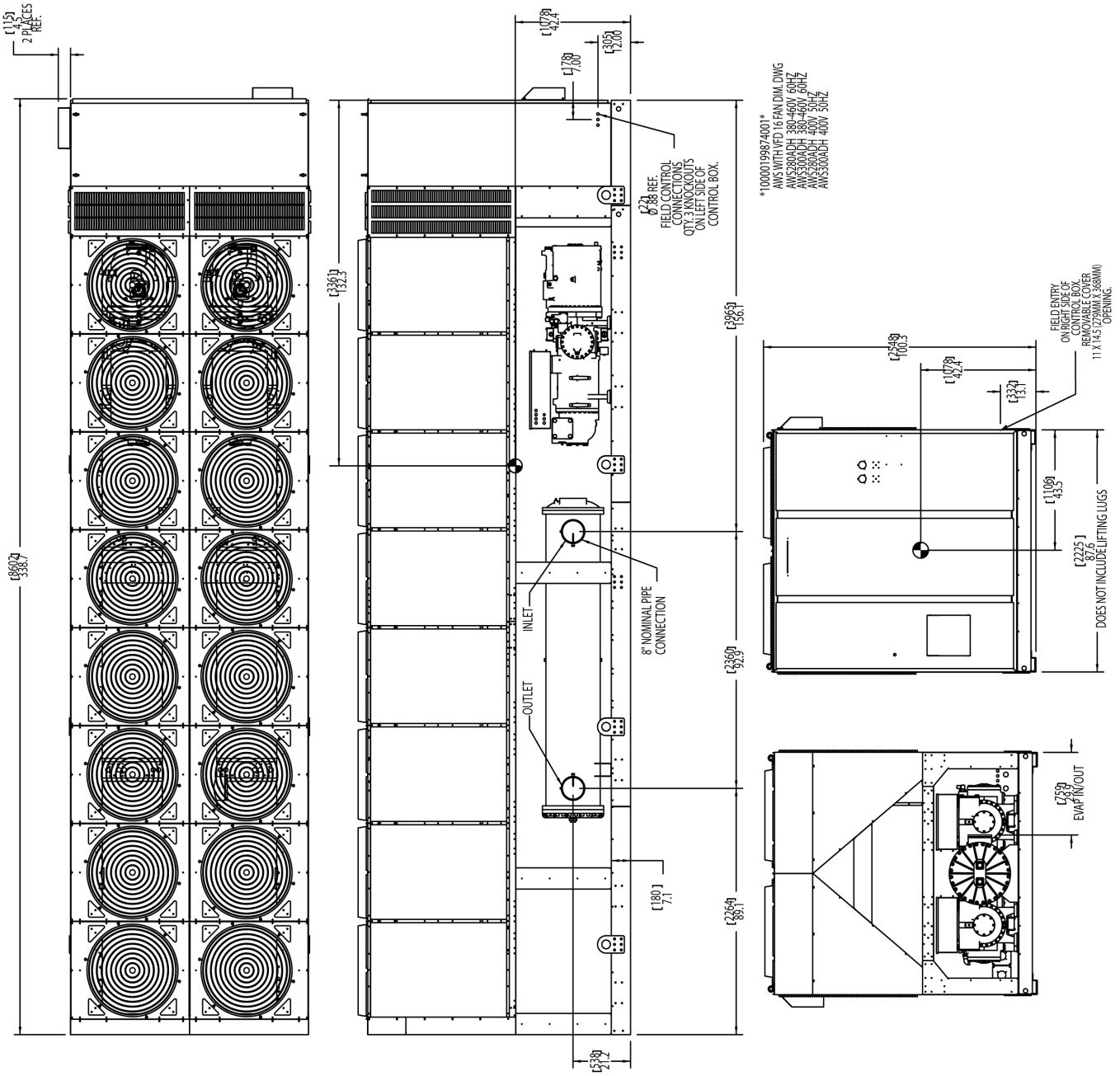
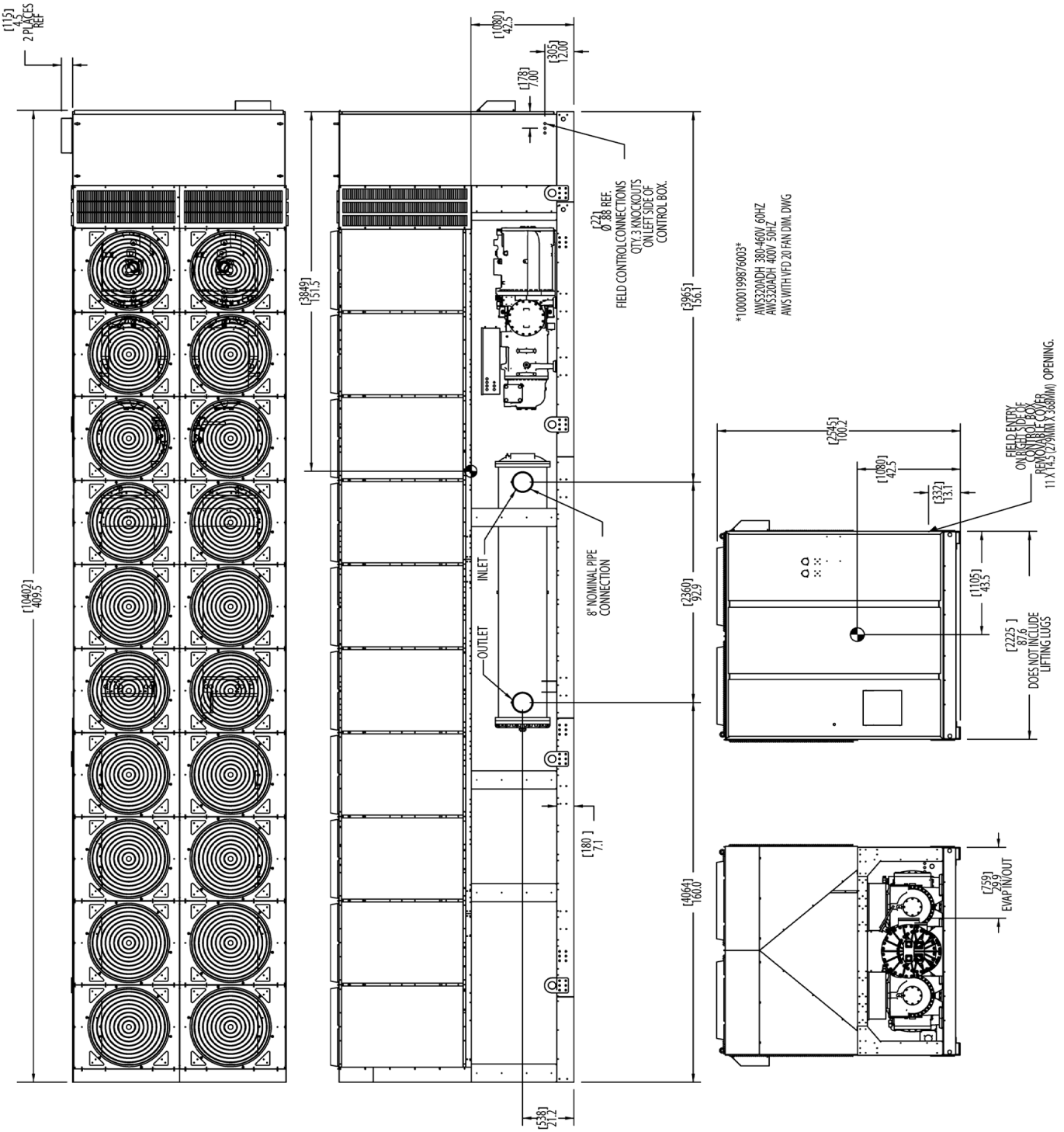


Figure 81: Dimensions - AWS320 High Efficiency, 60Hz (380-460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency, 60 Hz (VFD)

Figure 82: Dimensions - AWS350 High Efficiency, 60Hz (380-460V) VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

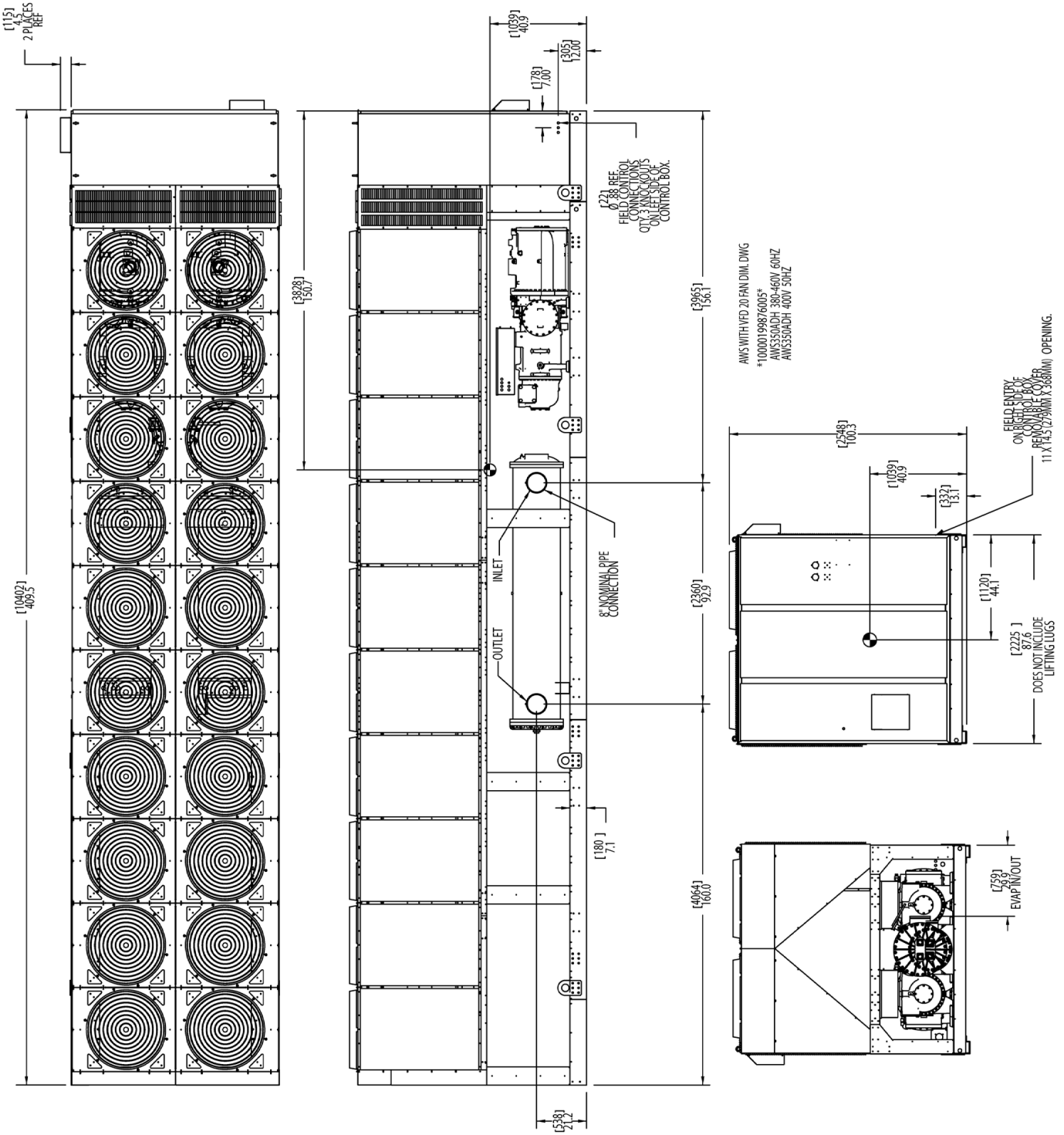
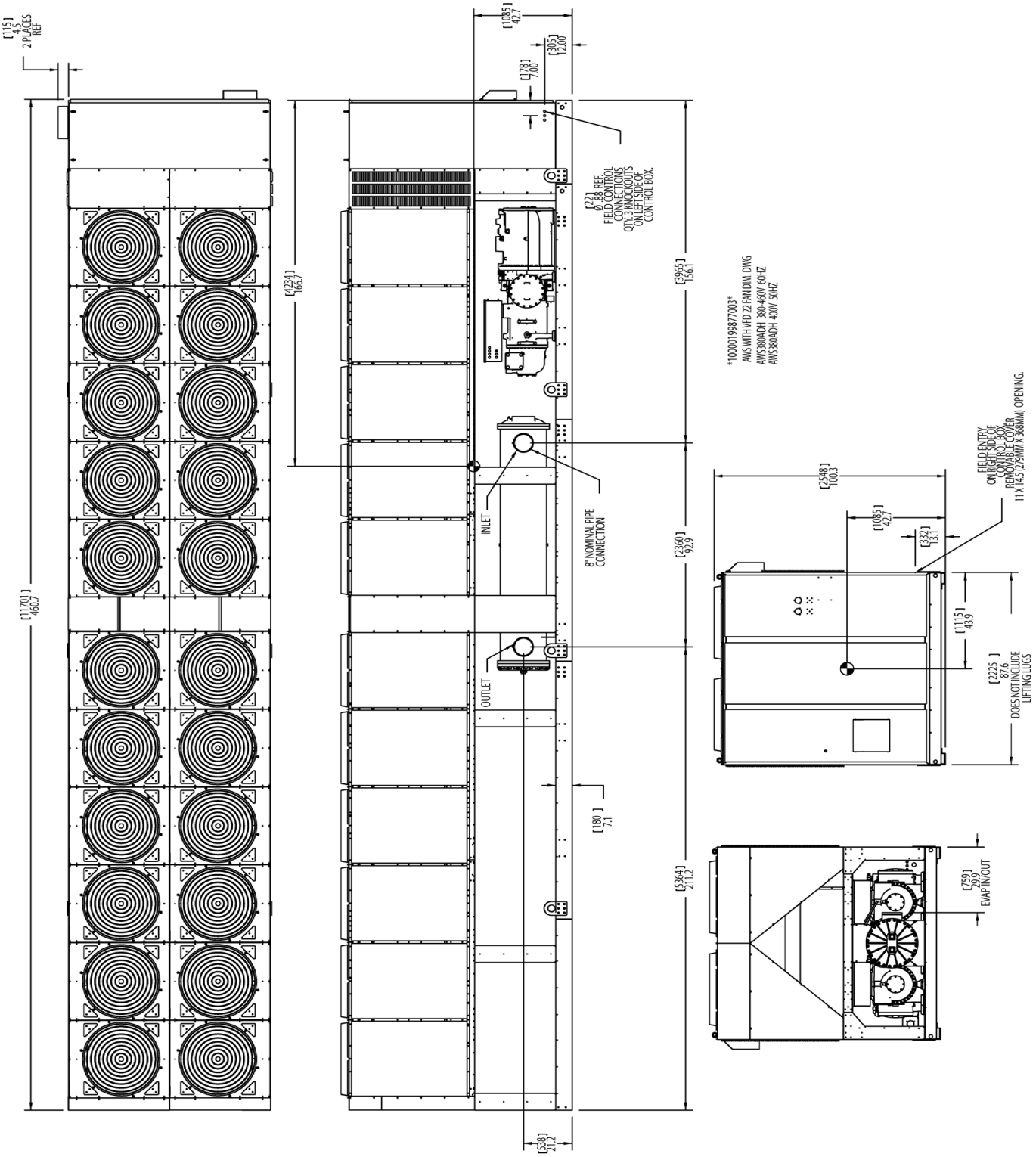


Figure 83: Dimensions - AWS380 High Efficiency, 60Hz VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency, 60 Hz (VFD)

Figure 84: Dimensions - AWS405 High Efficiency, 60Hz VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

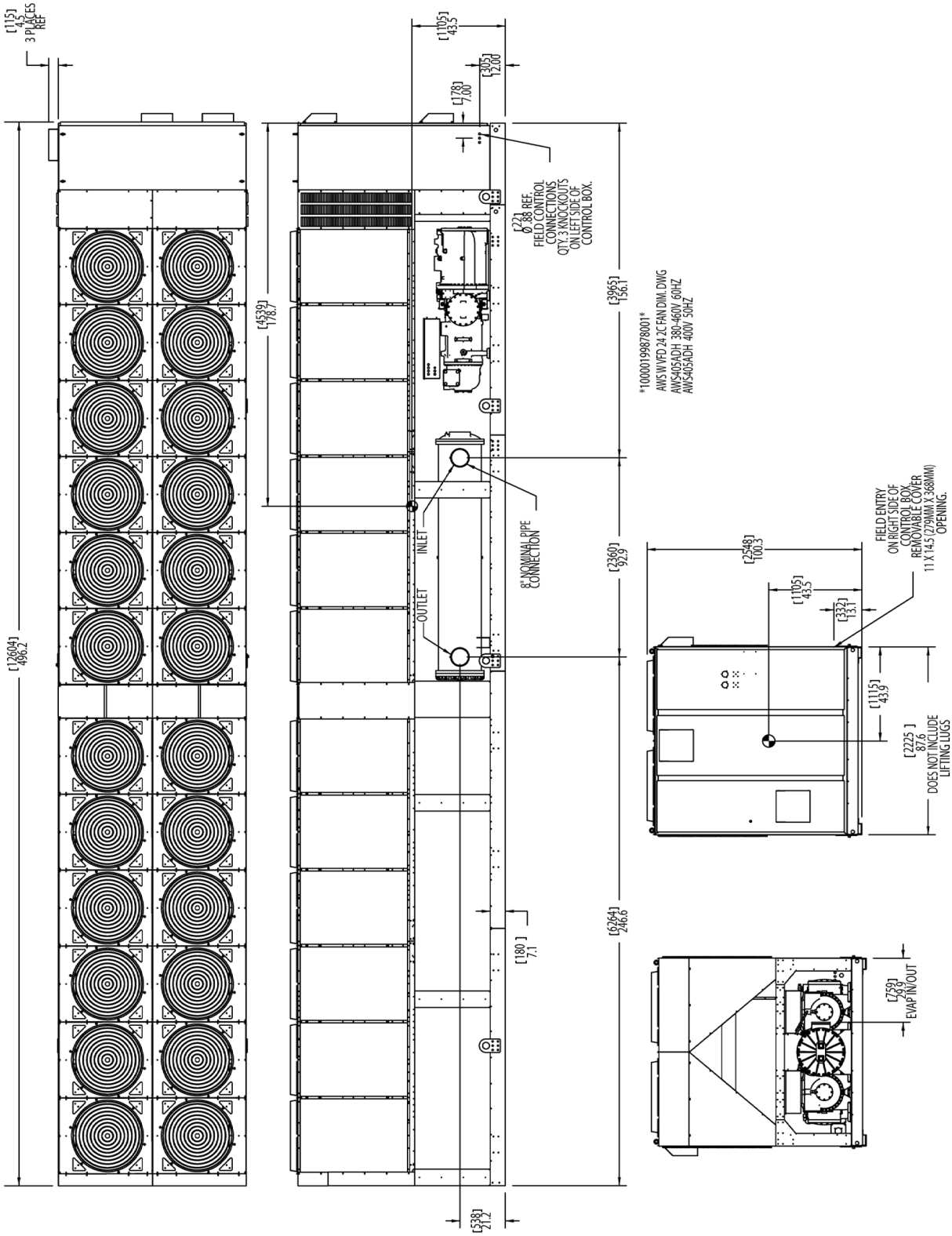
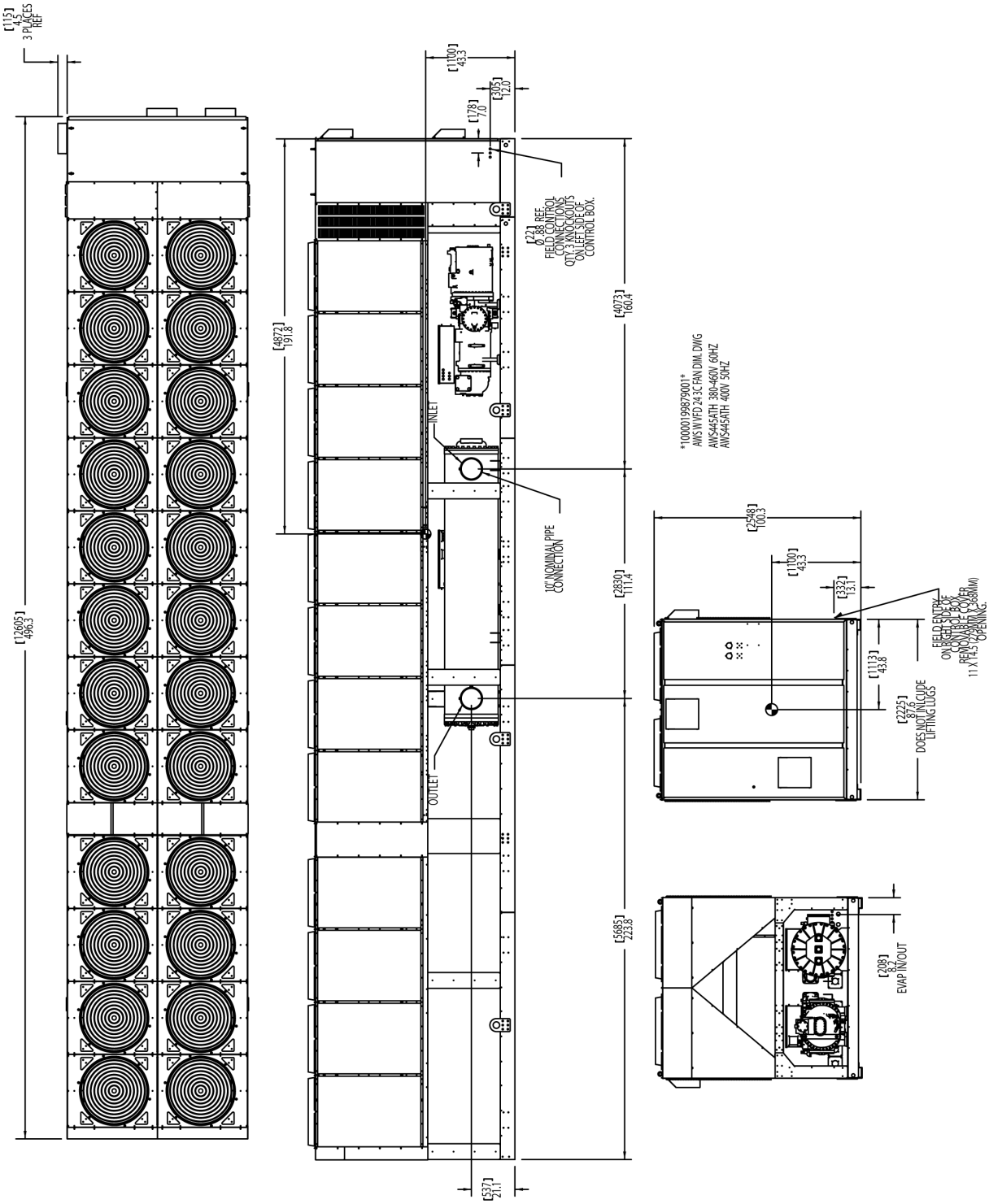


Figure 85: Dimensions - AWS445 High Efficiency, 60Hz (380-460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency, 60 Hz (VFD)

Figure 86: Dimensions - AWS470 High Efficiency, 60Hz (460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

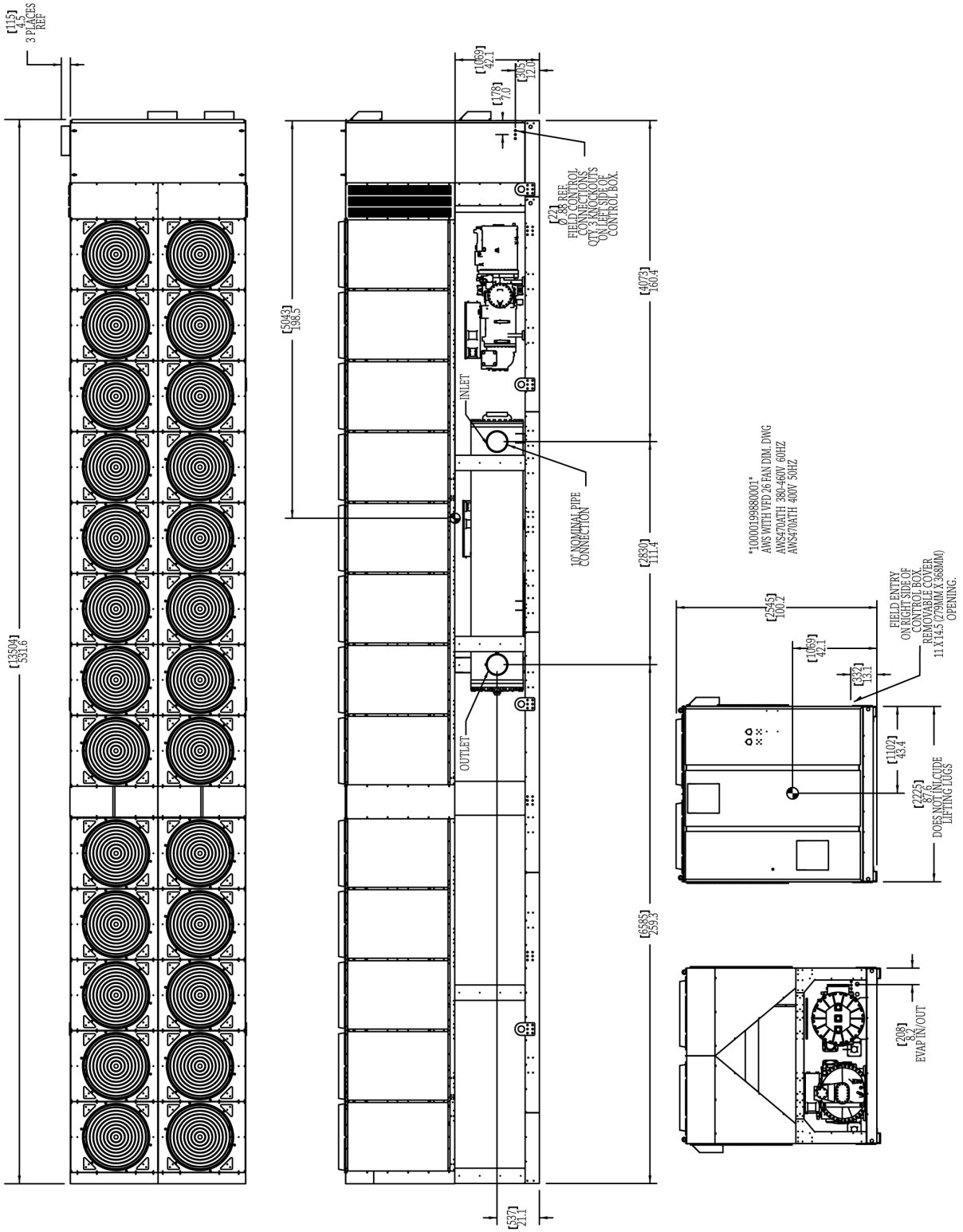
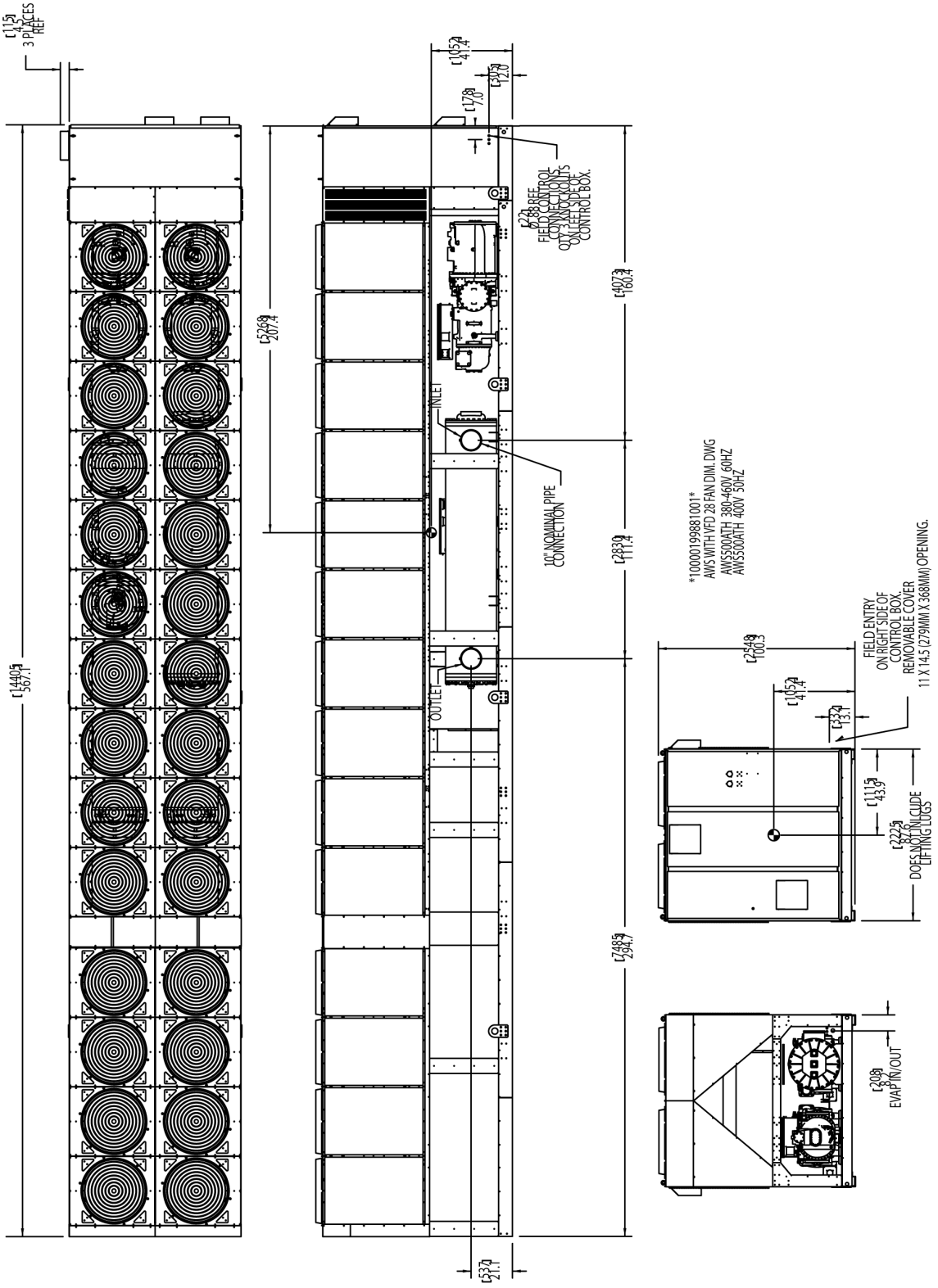


Figure 87: Dimensions - AWS500 High Efficiency, 60Hz (460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - High Efficiency, 60 Hz (VFD)

Figure 88: Dimensions - AWS530 High Efficiency, 60Hz (460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

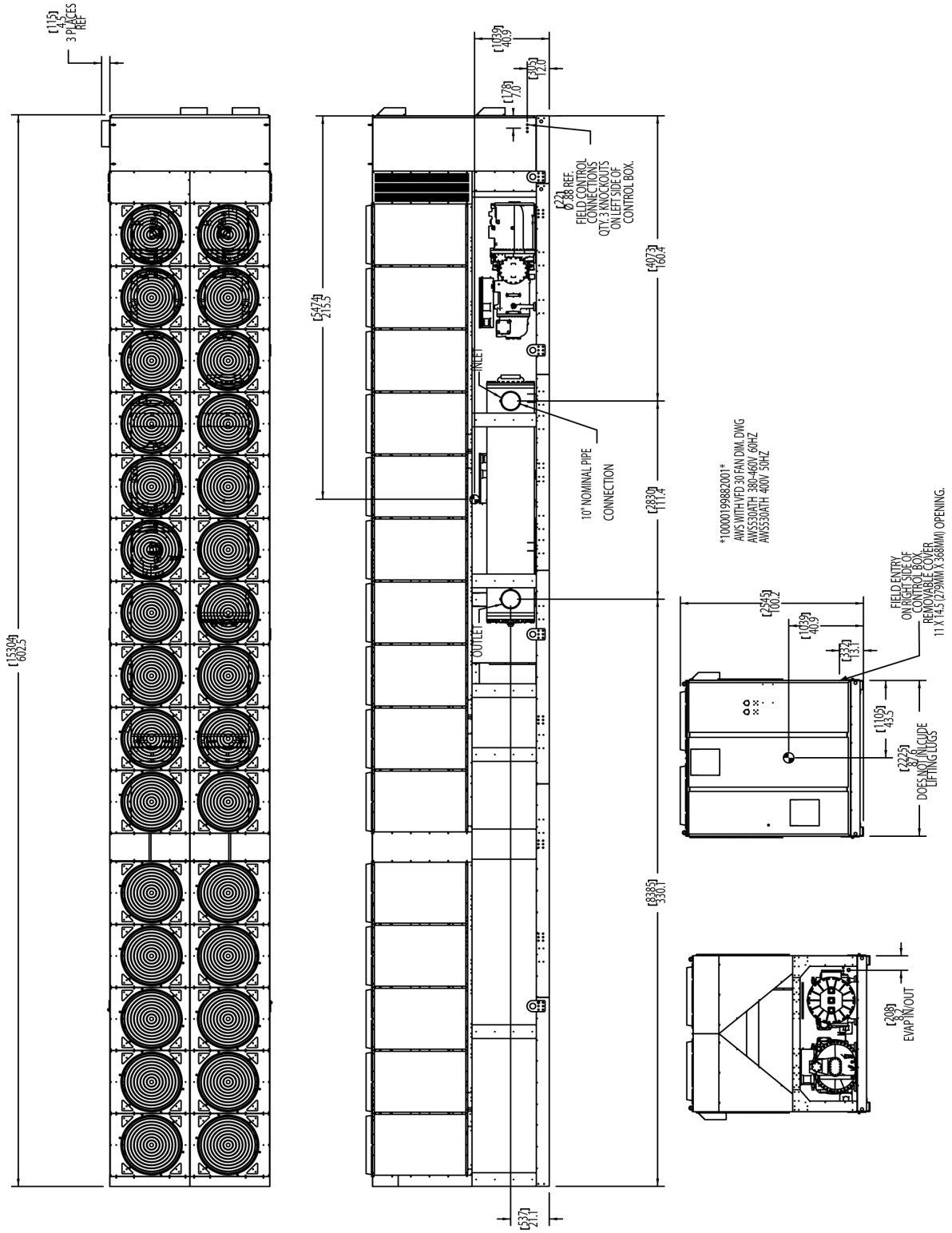
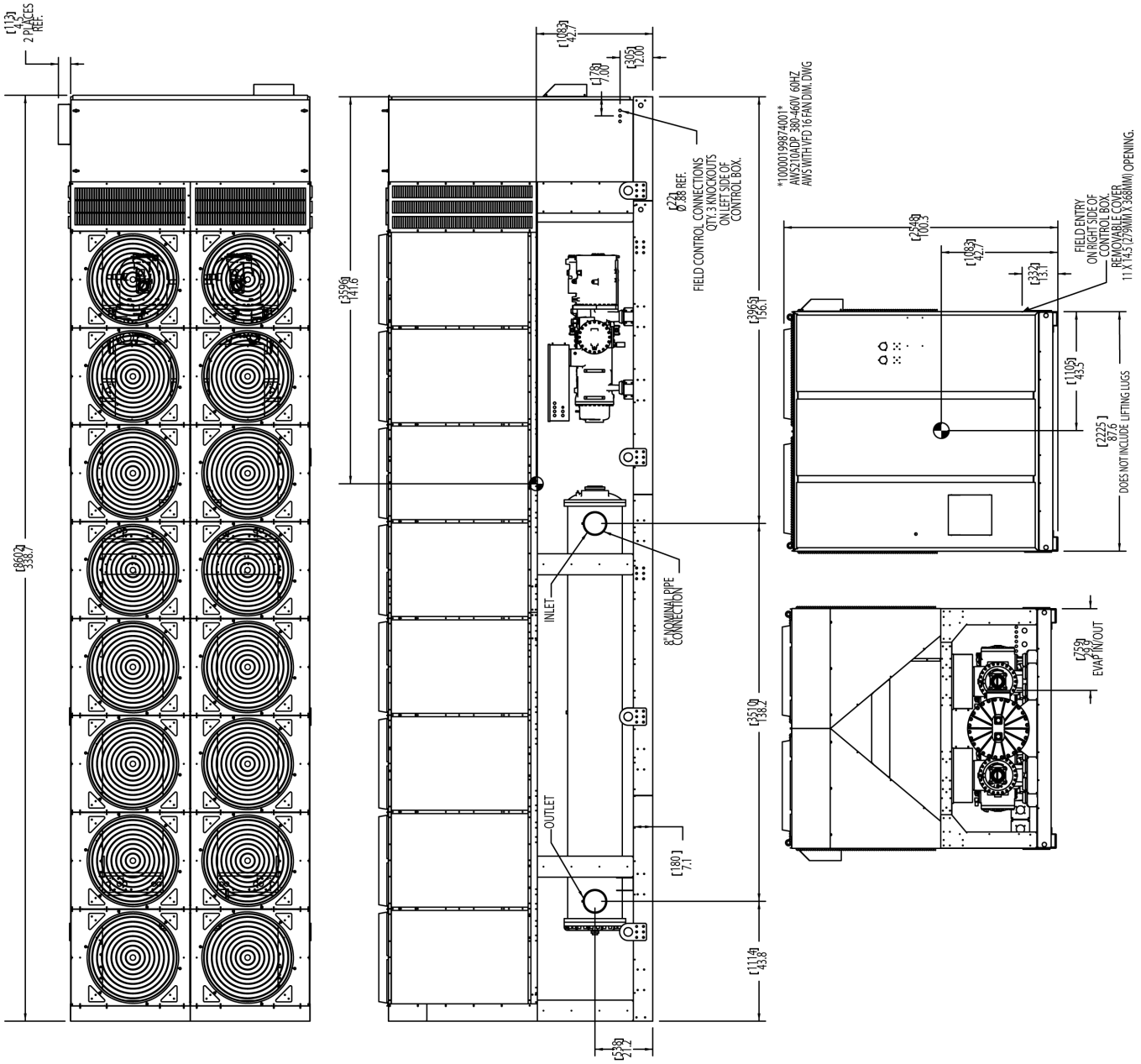


Figure 89: Dimensions - AWS210 Premium Efficiency, 60Hz (380-460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Premium Efficiency, 60 Hz (VFD)

Figure 90: Dimensions - AWS230 Premium Efficiency, 60Hz (380-460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

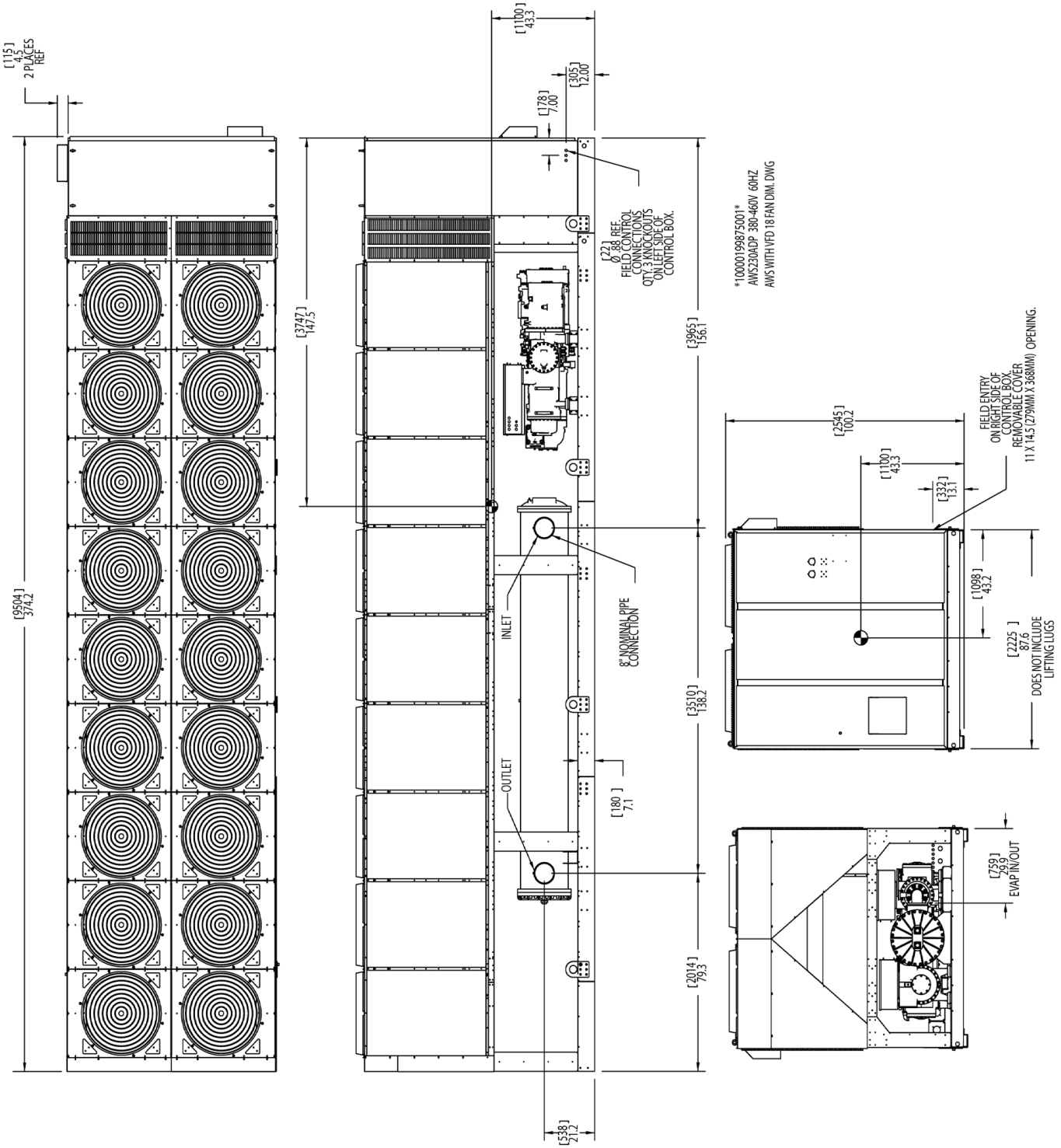
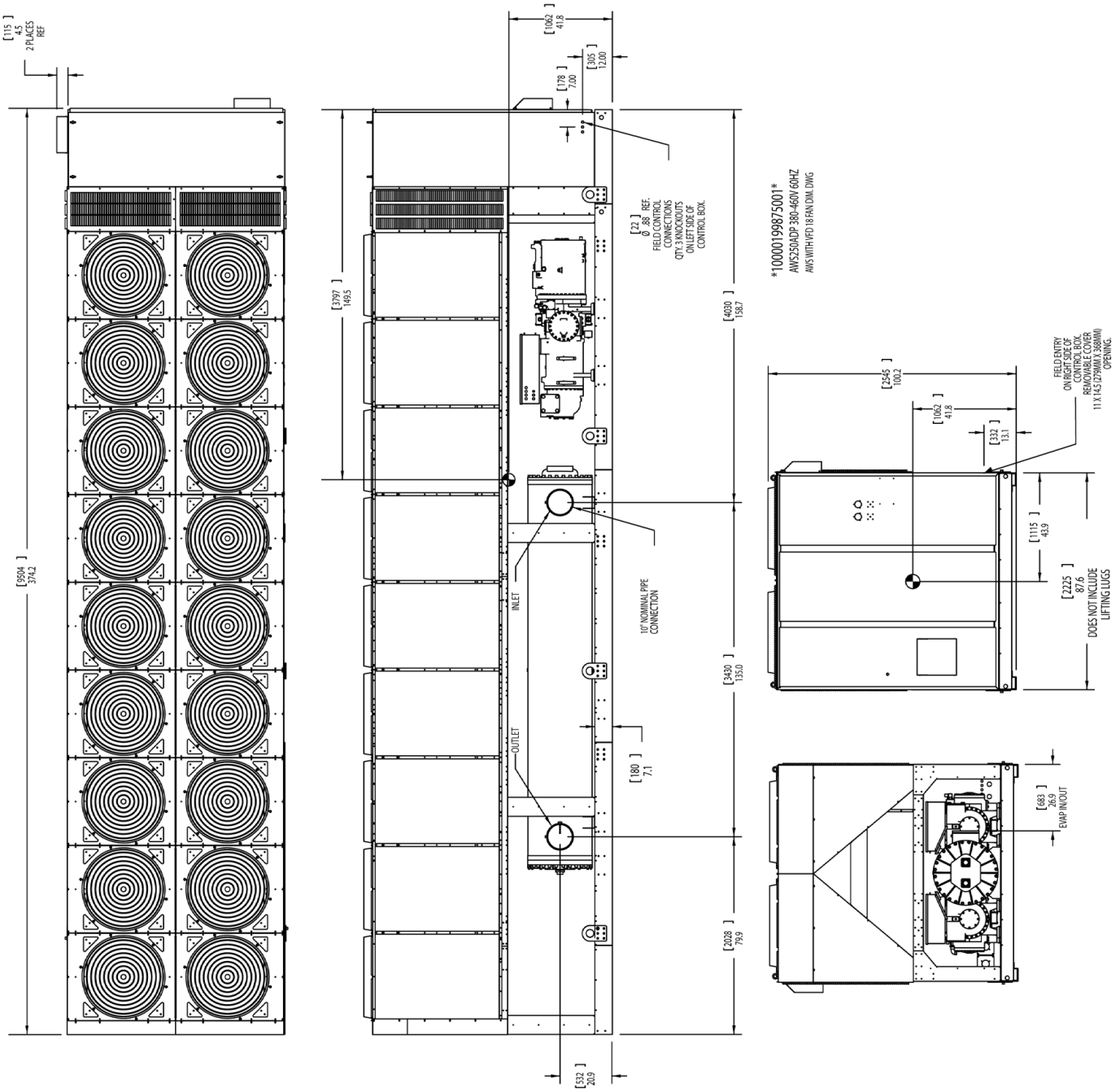


Figure 91: Dimensions - AWS250 Premium Efficiency, 60Hz (380-460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Premium Efficiency, 60 Hz (VFD)

Figure 92: Dimensions - AWS280 & AWS300 Premium Efficiency, 60Hz (380-460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.

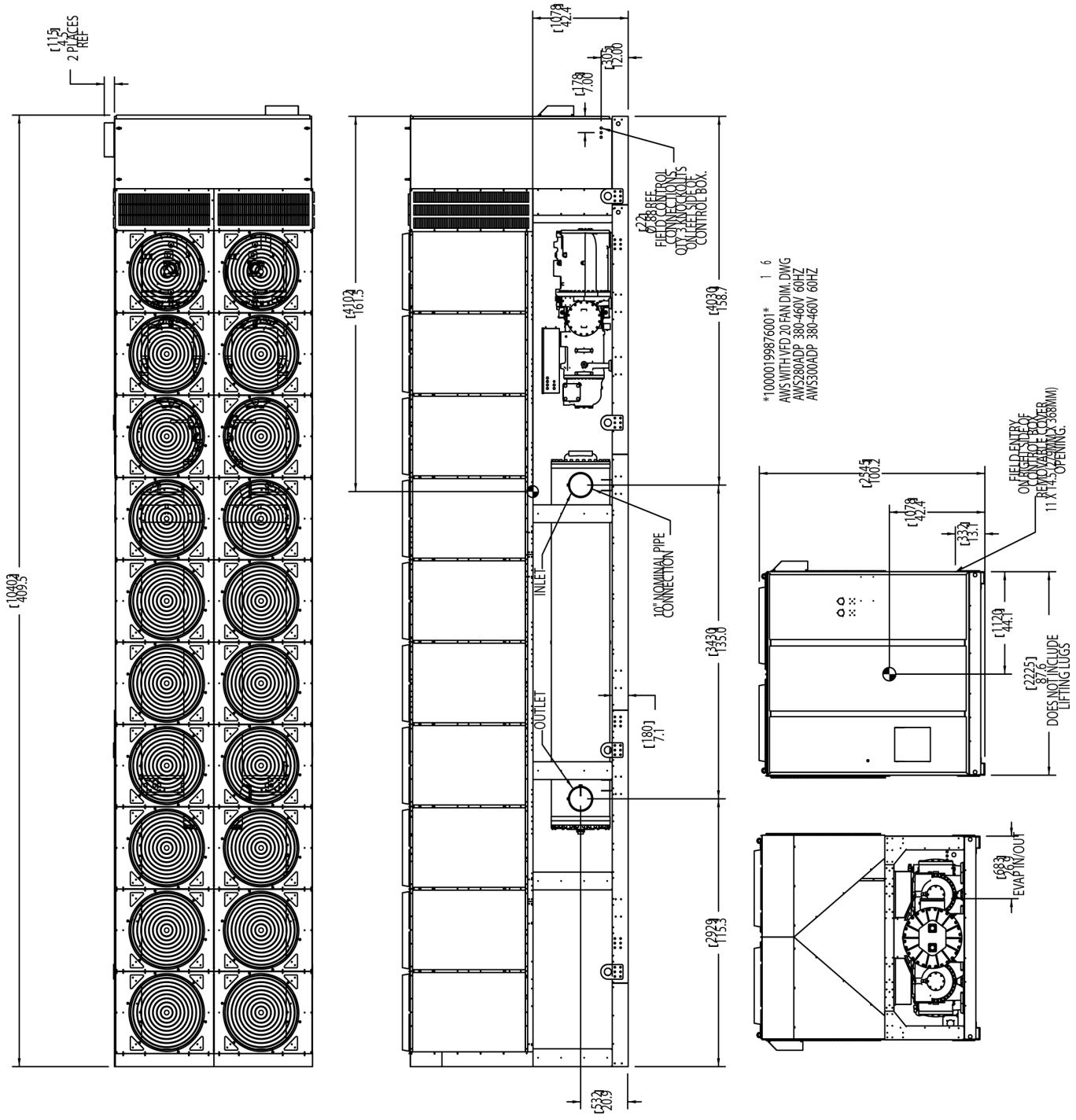
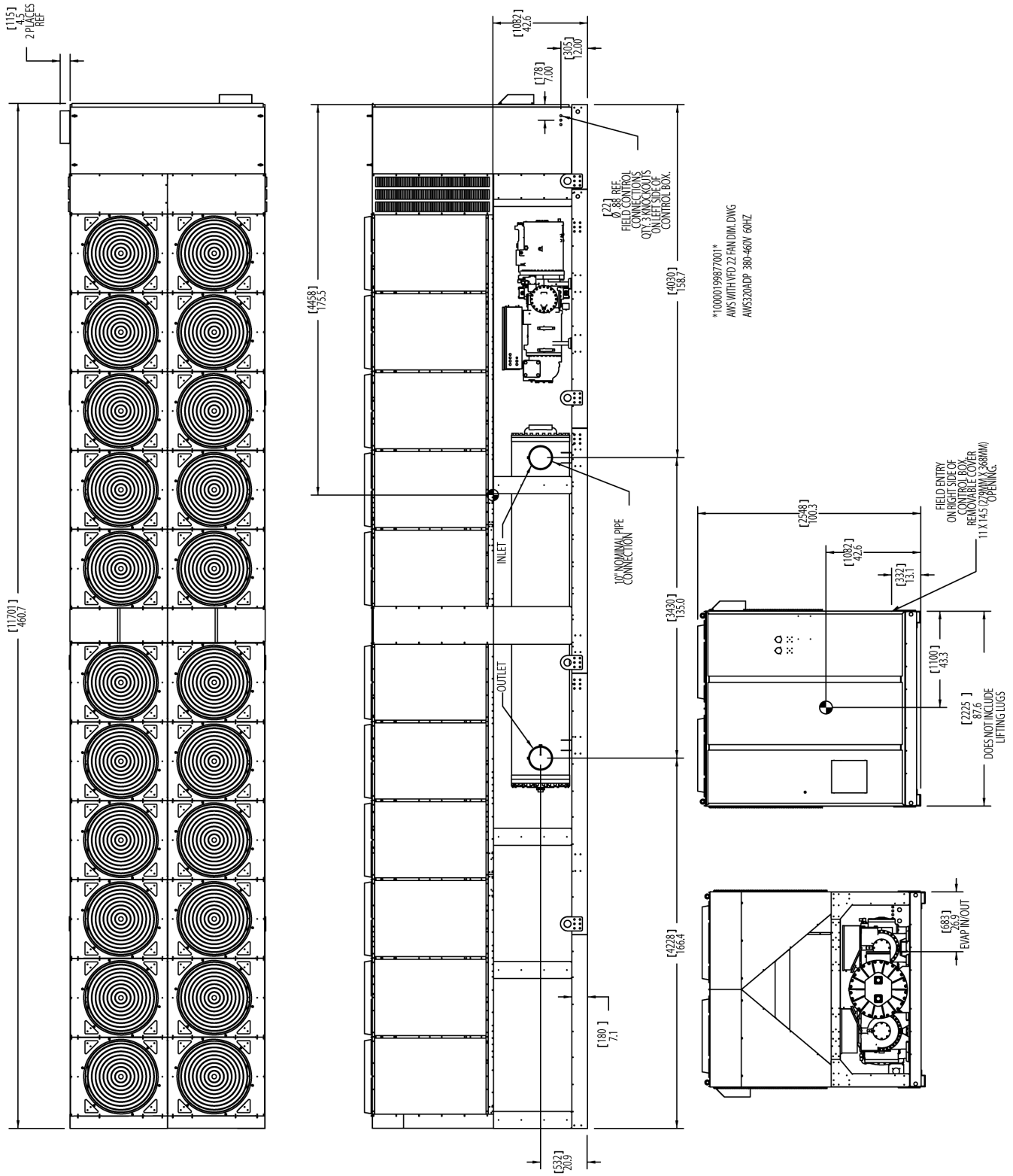


Figure 93: Dimensions - AWS320 Premium Efficiency, 60Hz (380-460V) - VFD model

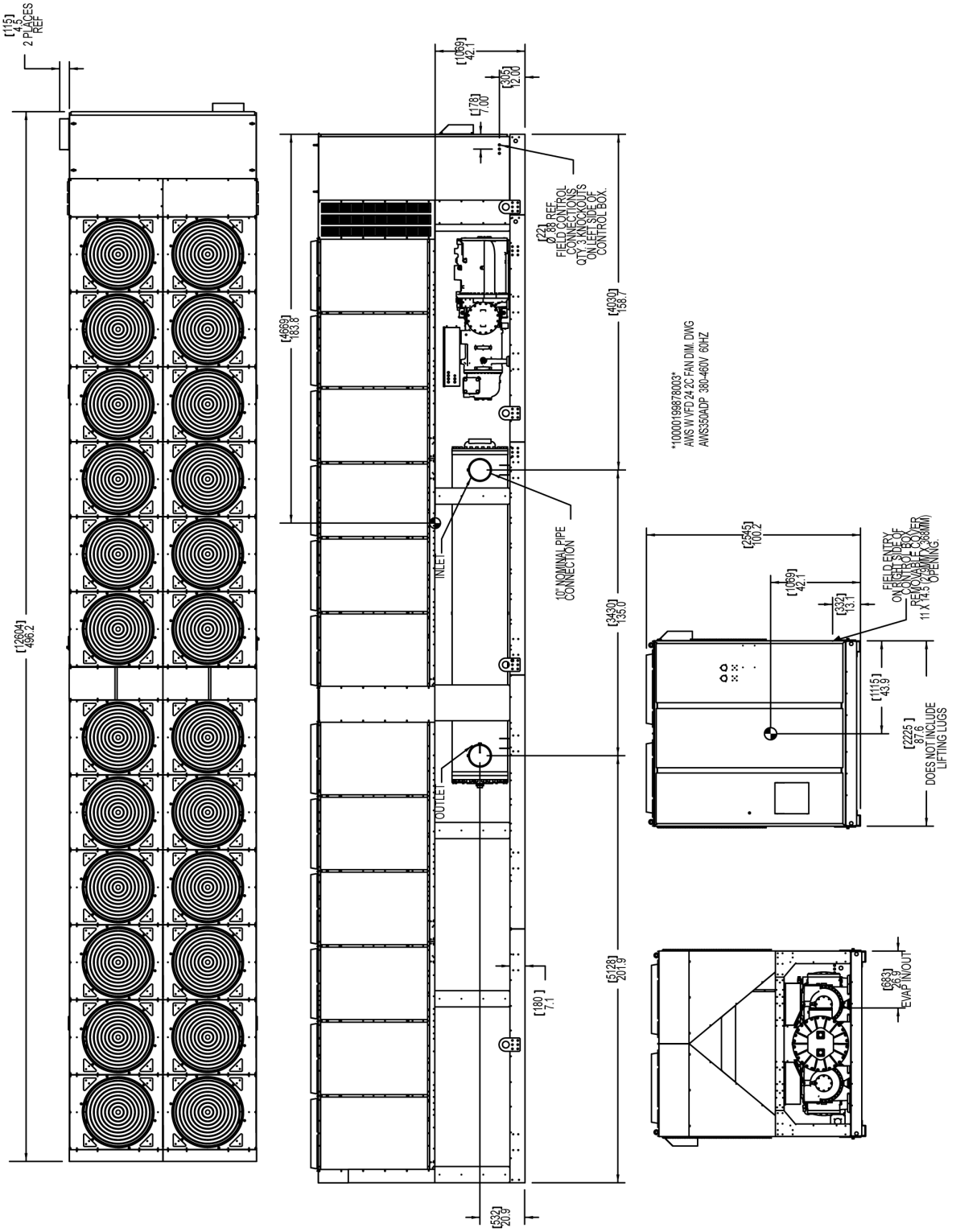
Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Dimensions - Premium Efficiency, 60 Hz (VFD)

Figure 94: Dimensions - AWS350 Premium Efficiency, 60Hz (380-460V) - VFD model

Note: All dimensions in decimal inches [mm]. Allow 1-inch manufacturing tolerance on all dimensions. The water connection shown is for the default configuration; your unit may be configured differently. Consult the Item Summary sheet for exact configuration.



Note: Lifting and Mounting Locations begin on page 141. See Physical Data tables, beginning on page 45 for Shipping and Operating weights, and weight adjustments for accessories and options.

Table 59: Lifting & Mounting Weights (IP units)

UNIT SIZE	Hz	# OF FANS	LIFTING WEIGHT FOR EACH POINT (LBS)								MOUNTING LOADS FOR EACH POINT (LBS)											
			L1	L2	L3	L4	L5	L6	L7	L8	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
AWS175ADS	60	10	3622	3503	2685	2597	-	-	-	-	2527	2445	2269	2195	1786	1728	-	-	-	-	-	-
AWS190ADS	60	12	3942	3644	2881	2663	-	-	-	-	2750	2542	2454	2269	1901	1757	-	-	-	-	-	-
AWS210ADS	60	12	3916	3839	2984	2926	-	-	-	-	2712	2659	2464	2416	1999	1960	-	-	-	-	-	-
AWS230ADS	60	14	3903	3782	3780	3662	-	-	-	-	3013	2920	2480	2403	1481	1435	984	953	-	-	-	-
AWS250ADS	60	14	3903	3782	3780	3662	-	-	-	-	3013	2920	2480	2403	1481	1435	984	953	-	-	-	-
AWS280ADS	60	16	3140	2865	2506	2287	1723	1572	1073	979	3286	2998	2773	2530	1812	1653	1026	936	-	-	-	-
AWS300ADS	60	16	3154	3003	2541	2420	1784	1699	1156	1101	3300	3143	2802	2669	1870	1781	1107	1054	-	-	-	-
AWS320ADS	60	20	3379	3284	2875	2795	1950	1895	1324	1287	3269	3177	2941	2859	2327	2262	1431	1391	-	-	-	-
AWS350ADS	60	20	3379	3284	2875	2795	1950	1895	1324	1287	3269	3177	2941	2859	2327	2262	1431	1391	-	-	-	-
AWS375ATS	60	22	3615	3574	3256	3219	2510	2482	1926	1904	3568	3528	3347	3309	2770	2738	2326	2300	-	-	-	-
AWS400ATS	60	22	3776	3642	3399	3279	2617	2524	2003	1932	3722	3590	3488	3365	2882	2780	2415	2330	-	-	-	-
AWS425ATS	60	24	3896	3707	3612	3436	3019	2873	2505	2383	4001	3807	3615	3493	2611	2484	2071	1970	1451	1381	-	-
AWS445ATS	60	24	4054	3778	3752	3498	3126	2913	2581	2406	4156	3874	3752	3497	2702	2518	2137	1992	1490	1389	-	-
AWS470ATS	60	26	4100	3899	3837	3649	3289	3128	2732	2598	4091	3890	3734	3551	2807	2669	2308	2195	1736	1651	-	-
AWS500ATS	60	28	3971	3792	3811	3639	3477	3320	3120	2980	4190	4001	3861	3687	3006	2870	2348	2242	1690	1613	-	-
AWS530ATS	60	30	4036	3856	3900	3726	3619	3457	3250	3105	4290	4098	3985	3807	3193	3051	2443	2334	1609	1537	-	-
AWS210ADH	60	12	3494	3384	3043	2947	-	-	-	-	2377	2302	2295	2223	2141	2074	-	-	-	-	-	-
AWS230ADH	60	14	3725	3469	3817	3554	-	-	-	-	2894	2695	2405	2240	1490	1388	1034	963	-	-	-	-
AWS250ADH	60	14	3903	3782	3780	3662	-	-	-	-	3013	2920	2480	2403	1481	1435	984	953	-	-	-	-
AWS280ADH	60	16	2927	2765	2403	2269	1754	1657	1216	1149	3083	2912	2650	2503	1839	1737	1175	1109	-	-	-	-
AWS300ADH	60	16	2927	2765	2403	2269	1754	1657	1216	1149	3083	2912	2650	2503	1839	1737	1175	1109	-	-	-	-
AWS320ADH	60	20	3315	3138	2848	2696	1991	1885	1411	1336	3214	3043	2914	2758	2351	2226	1531	1449	-	-	-	-
AWS350ADH	60	20	3379	3284	2875	2795	1950	1895	1324	1287	3269	3177	2941	2859	2327	2262	1431	1391	-	-	-	-
AWS380ADH	60	22	3158	3080	2847	2777	2365	2307	1889	1843	3482	3396	3168	3089	2350	2292	1699	1657	-	-	-	-
AWS405ADH	60	24	3229	3149	2961	2888	2546	2483	1920	1873	3478	3392	3089	3013	2092	2040	1523	1485	-	-	-	-
AWS445ATH	60	24	3603	3419	3380	3207	2916	2767	2514	2385	3719	3529	3382	3209	2505	2377	2033	1929	1493	1416	-	-
AWS470ATH	60	26	3760	3556	3564	3371	3156	2985	2742	2593	3759	3556	3460	3272	2680	2535	2261	2139	1780	1684	-	-
AWS500ATH	60	28	3866	3772	3712	3622	3392	3309	3050	2976	4084	3984	3764	3672	2933	2861	2294	2238	1654	1614	-	-
AWS530ATH	60	30	4036	3856	3900	3726	3619	3457	3250	3105	4290	4098	3985	3807	3193	3051	2443	2334	1609	1537	-	-

Lifting & Mounting Weights (I-P Units)

Table 60: Lifting & Mounting Weights (IP units) continued

UNIT SIZE	Hz	# OF FANS	LIFTING WEIGHT FOR EACH POINT (LBS)								MOUNTING LOADS FOR EACH POINT (LBS)											
			L1	L2	L3	L4	L5	L6	L7	L8	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
AWS210ADP	60	16	2519	2382	2199	2079	1804	1705	1476	1395	2762	2611	2472	2336	1927	1822	1482	1401	-	-	-	-
AWS230ADP	60	18	2698	2546	2405	2270	2043	1928	1639	1547	2965	2798	2691	2540	2179	2056	1595	1505	-	-	-	-
AWS250ADP	60	18	2869	2799	2564	2502	2188	2135	1767	1724	3202	3124	2911	2840	2366	2308	1746	1703	-	-	-	-
AWS280ADP	60	20	3154	3081	2801	2736	2152	2103	1714	1674	3190	3116	2968	2900	2553	2494	1946	1902	-	-	-	-
AWS300ADP	60	20	3154	3081	2801	2736	2152	2103	1714	1674	3190	3116	2968	2900	2553	2494	1946	1902			-	-
AWS320ADP	60	22	3070	2912	2886	2737	2600	2466	2318	2198	3562	3378	3316	3145	2677	2539	2168	2056	-	-	-	-
AWS350ADP	60	24	3213	3144	3037	2971	2764	2704	2352	2301	3602	3523	3243	3173	2324	2273	1798	1759	-	-	-	-
AWS150ADS VFD	60	10	3197	3266	2321	2372	1471	1503	-	-	1822	1861	1818	1858	1813	1853	1805	1844	-	-	-	-
AWS175ADS VFD	60	12	3526	3458	2589	2539	1678	1646	-	-	1998	1960	2008	1969	2020	1980	2042	2002	-	-	-	-
AWS190ADS VFD	60	12	3513	3576	2529	2574	1570	1598	-	-	2000	2036	1985	2021	1966	2001	1930	1964	-	-	-	-
AWS210ADH VFD	60	12	3096	3047	2448	2409	1816	1787	-	-	1727	1700	1818	1789	1935	1904	2154	2120	-	-	-	-
AWS230ADH VFD	60	14	2993	3051	2627	2678	2271	2315	-	-	2057	2097	1905	1942	1707	1740	1338	1363	1153	1175	-	-
AWS250ADH VFD	60	14	3211	3171	2759	2726	2320	2291	-	-	2191	2164	2020	1995	1797	1775	1381	1364	1174	1159	-	-
AWS280ADH VFD	60	16	3477	3508	2595	2618	1736	1751	1023	1032	2213	2232	2091	2109	1932	1949	1635	1649	1392	1404	-	-
AWS300ADH VFD	60	16	3477	3508	2595	2618	1736	1751	1023	1032	2213	2232	2091	2109	1932	1949	1635	1649	1392	1404	-	-
AWS320ADH VFD	60	20	3815	3762	3063	3020	1974	1946	1237	1220	2329	2296	2260	2228	2171	2141	2005	1976	1761	1737	-	-
AWS350ADH VFD	60	20	3916	3967	3136	3176	2006	2031	1241	1257	2388	2419	2314	2344	2217	2246	2037	2063	1773	1796	-	-
AWS380ADH VFD	60	22	3589	3598	3084	3093	2469	2475	1860	1865	2418	2424	2380	2387	2331	2337	2204	2210	2102	2108	-	-
AWS405ADH VFD	60	24	3619	3631	3197	3207	2682	2690	1903	1909	2509	2517	2385	2393	2225	2232	1813	1818	1577	1582	1325	1329
AWS445ATH VFD	60	24	4013	4022	3599	3607	2920	2927	2331	2336	2645	2651	2556	2562	2441	2447	2142	2147	1980	1985	1796	1800
AWS470ATH VFD	60	26	4148	4079	3767	3704	3142	3090	2507	2465	2658	2613	2593	2550	2510	2467	2292	2254	2176	2139	2042	2007
AWS500ATH VFD	60	28	4180	4197	3882	3898	3394	3408	2874	2885	2869	2880	2791	2802	2690	2701	2428	2438	2226	2235	2025	2033
AWS530ATH VFD	60	30	4380	4323	4096	4042	3629	3581	3018	2979	3084	3043	2995	2956	2880	2843	2582	2548	2300	2270	1986	1960
AWS210ADP VFD	60	16	3131	3090	2458	2425	1802	1778	1258	1241	2031	2004	1972	1946	1894	1870	1750	1727	1632	1610	-	-
AWS230ADP VFD	60	18	3274	3192	2647	2580	2036	1985	1354	1320	2174	2119	2114	2061	2037	1986	1893	1845	1728	1685	-	-
AWS250ADP VFD	60	18	3428	3435	2799	2806	2187	2192	1504	1507	2308	2313	2257	2262	2190	2195	2066	2070	1924	1928	-	-
AWS280ADP VFD	60	20	3651	3698	3032	3071	2136	2164	1531	1550	2290	2320	2273	2302	2251	2280	2209	2237	2148	2176	-	-
AWS300ADP VFD	60	20	3651	3698	3032	3071	2136	2164	1531	1550	2290	2320	2273	2302	2251	2280	2209	2237	2148	2176	-	-
AWS320ADP VFD	60	22	3496	3422	3125	3058	2672	2615	2224	2177	2441	2389	2449	2397	2460	2408	2489	2436	2512	2459	-	-
AWS350ADP VFD	60	24	3712	3723	3335	3344	2874	2881	2177	2183	2653	2660	2538	2545	2388	2395	2005	2011	1787	1792	1552	1557

Table 61: Lifting & Mounting Weights (SI units)

Unit Size	Hz	# OF FANS	LIFTING WEIGHT FOR EACH POINT (KG)								MOUNTING LOADS FOR EACH POINT (KG)									
			L1	L2	L3	L4	L5	L6	L7	L8	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
AWS175ADS	60	10	1643	1589	1218	1178	-	-	-	-	1146	1109	1029	996	810	784	-	-	-	-
AWS190ADS	60	12	1788	1653	1307	1208	-	-	-	-	1247	1153	1113	1029	862	797	-	-	-	-
AWS210ADS	60	12	1776	1741	1354	1327	-	-	-	-	1230	1206	1118	1096	907	889	-	-	-	-
AWS230ADS	60	14	1770	1716	1715	1661	-	-	-	-	1367	1325	1125	1090	672	651	446	432	-	-
AWS250ADS	60	14	1770	1716	1715	1661	-	-	-	-	1367	1325	1125	1090	672	651	446	432	-	-
AWS280ADS	60	16	1424	1300	1137	1037	782	713	487	444	1491	1360	1258	1148	822	750	465	425	-	-
AWS300ADS	60	16	1431	1362	1153	1098	809	771	524	499	1497	1426	1271	1211	848	808	502	478	-	-
AWS320ADS	60	20	1533	1490	1304	1268	885	860	601	584	1483	1441	1334	1297	1056	1026	649	631	-	-
AWS350ADS	60	20	1533	1490	1304	1268	885	860	601	584	1483	1441	1334	1297	1056	1026	649	631	-	-
AWS375ATS	60	22	1640	1621	1477	1460	1139	1126	874	864	1618	1600	1518	1501	1256	1242	1055	1043	-	-
AWS400ATS	60	22	1713	1652	1542	1487	1187	1145	909	876	1688	1628	1582	1526	1307	1261	1095	1057	-	-
AWS425ATS	60	24	1767	1681	1638	1559	1369	1303	1136	1081	1815	1727	1640	1584	1184	1127	939	894	658	626
AWS445ATS	60	24	1839	1714	1702	1587	1418	1321	1171	1091	1885	1757	1702	1586	1226	1142	969	904	676	630
AWS470ATS	60	26	1860	1769	1740	1655	1492	1419	1239	1178	1856	1764	1694	1611	1273	1211	1047	996	787	749
AWS500ATS	60	28	1801	1720	1729	1651	1577	1506	1415	1352	1901	1815	1751	1672	1364	1302	1065	1017	767	732
AWS530ATS	60	30	1831	1749	1769	1690	1642	1568	1474	1408	1946	1859	1808	1727	1448	1384	1108	1059	730	697
AWS210ADH	60	12	1585	1535	1380	1337	-	-	-	-	1078	1044	1041	1008	971	941	-	-	-	-
AWS230ADH	60	14	1690	1574	1731	1612	-	-	-	-	1313	1222	1091	1016	676	630	469	437	-	-
AWS250ADH	60	14	1770	1716	1715	1661	-	-	-	-	1367	1325	1125	1090	672	651	446	432	-	-
AWS280ADH	60	16	1328	1254	1090	1029	796	752	552	521	1398	1321	1202	1135	834	788	533	503	-	-
AWS300ADH	60	16	1328	1254	1090	1029	796	752	552	521	1398	1321	1202	1135	834	788	533	503	-	-
AWS320ADH	60	20	1504	1423	1292	1223	903	855	640	606	1458	1380	1322	1251	1066	1010	694	657	-	-
AWS350ADH	60	20	1533	1490	1304	1268	885	860	601	584	1483	1441	1334	1297	1056	1026	649	631	-	-
AWS380ADH	60	22	1432	1397	1291	1260	1073	1046	857	836	1579	1540	1437	1401	1066	1040	771	752	-	-
AWS405ADH	60	24	1465	1428	1343	1310	1155	1126	871	850	1578	1539	1401	1367	949	925	691	674	-	-
AWS445ATH	60	24	1634	1551	1533	1455	1323	1255	1140	1082	1687	1601	1534	1456	1136	1078	922	875	677	642
AWS470ATH	60	26	1706	1613	1617	1529	1432	1354	1244	1176	1705	1613	1569	1484	1216	1150	1026	970	807	764
AWS500ATH	60	28	1754	1711	1684	1643	1539	1501	1383	1350	1852	1807	1707	1666	1330	1298	1041	1015	750	732
AWS530ATH	60	30	1831	1749	1769	1690	1642	1568	1474	1408	1946	1859	1808	1727	1448	1384	1108	1059	730	697

Lifting & Mounting Weights (SI Units)

Table 62: Lifting & Mounting Weights - (SI units) continued

Unit Size	Hz	# OF FANS	LIFTING WEIGHT FOR EACH POINT (KG)								MOUNTING LOADS FOR EACH POINT (KG)											
			L1	L2	L3	L4	L5	L6	L7	L8	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
AWS210ADP	60	16	1143	1080	997	943	818	773	670	633	1253	1184	1121	1060	874	826	672	635	-	-	-	-
AWS230ADP	60	18	1224	1155	1091	1030	927	875	743	702	1345	1269	1221	1152	988	933	723	683	-	-	-	-
AWS250ADP	60	18	1301	1270	1163	1135	992	968	802	782	1452	1417	1320	1288	1073	1047	792	772	-	-	-	-
AWS280ADP	60	20	1431	1398	1271	1241	976	954	777	759	1447	1413	1346	1315	1158	1131	883	863	-	-	-	-
AWS300ADP	60	20	1431	1398	1271	1241	976	954	777	759	1447	1413	1346	1315	1158	1131	883	863	-	-	-	-
AWS320ADP	60	22	1393	1321	1309	1241	1179	1119	1051	997	1616	1532	1504	1427	1214	1152	983	933	-	-	-	-
AWS350ADP	60	24	1457	1426	1378	1348	1254	1227	1067	1044	1634	1598	1471	1439	1054	1031	816	798	-	-	-	-
AWS150 ADS VFD	60	10	1450	1481	1053	1076	667	682	-	-	826	844	825	843	822	841	819	836	-	-	-	-
AWS175 ADS VFD	60	12	1599	1569	1174	1152	761	747	-	-	906	889	911	893	916	898	926	908	-	-	-	-
AWS190 ADS VFD	60	12	1593	1622	1147	1168	712	725	-	-	907	924	900	917	892	908	875	891	-	-	-	-
AWS210ADHVFD	60	12	1404	1382	1110	1093	824	811	-	-	784	771	825	811	878	864	977	961	-	-	-	-
AWS230ADHVFD	60	14	1358	1384	1192	1215	1030	1050	-	-	933	951	864	881	774	789	607	618	523	533	-	-
AWS250ADHVFD	60	14	1456	1439	1252	1236	1052	1039	-	-	994	982	916	905	815	805	627	619	532	526	-	-
AWS280ADHVFD	60	16	1577	1591	1177	1187	787	794	464	468	1004	1013	948	957	876	884	742	748	631	637	-	-
AWS300ADHVFD	60	16	1577	1591	1177	1187	787	794	464	468	1004	1013	948	957	876	884	742	748	631	637	-	-
AWS320ADHVFD	60	20	1731	1706	1389	1370	895	883	561	553	1056	1041	1025	1011	985	971	909	896	799	788	-	-
AWS350ADHVFD	60	20	1776	1799	1422	1441	910	921	563	570	1083	1097	1050	1063	1006	1019	924	936	804	815	-	-
AWS380ADHVFD	60	22	1628	1632	1399	1403	1120	1123	844	846	1097	1100	1080	1083	1057	1060	1000	1002	953	956	-	-
AWS405ADHVFD	60	24	1642	1647	1450	1455	1216	1220	863	866	1138	1142	1082	1085	1009	1012	822	825	715	718	601	603
AWS445ATHVFD	60	24	1820	1824	1632	1636	1325	1328	1057	1060	1200	1203	1160	1162	1107	1110	971	974	898	900	814	816
AWS470ATHVFD	60	26	1882	1850	1709	1680	1425	1401	1137	1118	1205	1185	1176	1156	1138	1119	1040	1022	987	970	926	911
AWS500ATHVFD	60	28	1896	1904	1761	1768	1540	1546	1303	1309	1301	1306	1266	1271	1220	1225	1101	1106	1010	1014	918	922
AWS530ATHVFD	60	30	1987	1961	1858	1833	1646	1624	1369	1351	1399	1380	1359	1341	1307	1289	1171	1156	1043	1029	901	889
AWS210ADP VFD	60	16	1420	1401	1115	1100	817	807	571	563	921	909	894	883	859	848	794	783	740	730	-	-
AWS230ADP VFD	60	18	1485	1448	1201	1170	924	900	614	599	986	961	959	935	924	901	859	837	784	764	-	-
AWS250ADP VFD	60	18	1555	1558	1270	1273	992	994	682	684	1047	1049	1024	1026	993	996	937	939	873	875	-	-
AWS280ADP VFD	60	20	1656	1677	1375	1393	969	982	694	703	1039	1052	1031	1044	1021	1034	1002	1015	974	987	-	-
AWS300ADP VFD	60	20	1656	1677	1375	1393	969	982	694	703	1039	1052	1031	1044	1021	1034	1002	1015	974	987	-	-
AWS320ADP VFD	60	22	1586	1552	1417	1387	1212	1186	1009	987	1107	1084	1111	1087	1116	1092	1129	1105	1140	1115	-	-
AWS350ADP VFD	60	24	1684	1689	1513	1517	1303	1307	987	990	1203	1207	1151	1154	1083	1086	910	912	810	813	-	-

Figure 95: AWS175/190/210 Standard Efficiency, 60Hz, (non-VFD models)

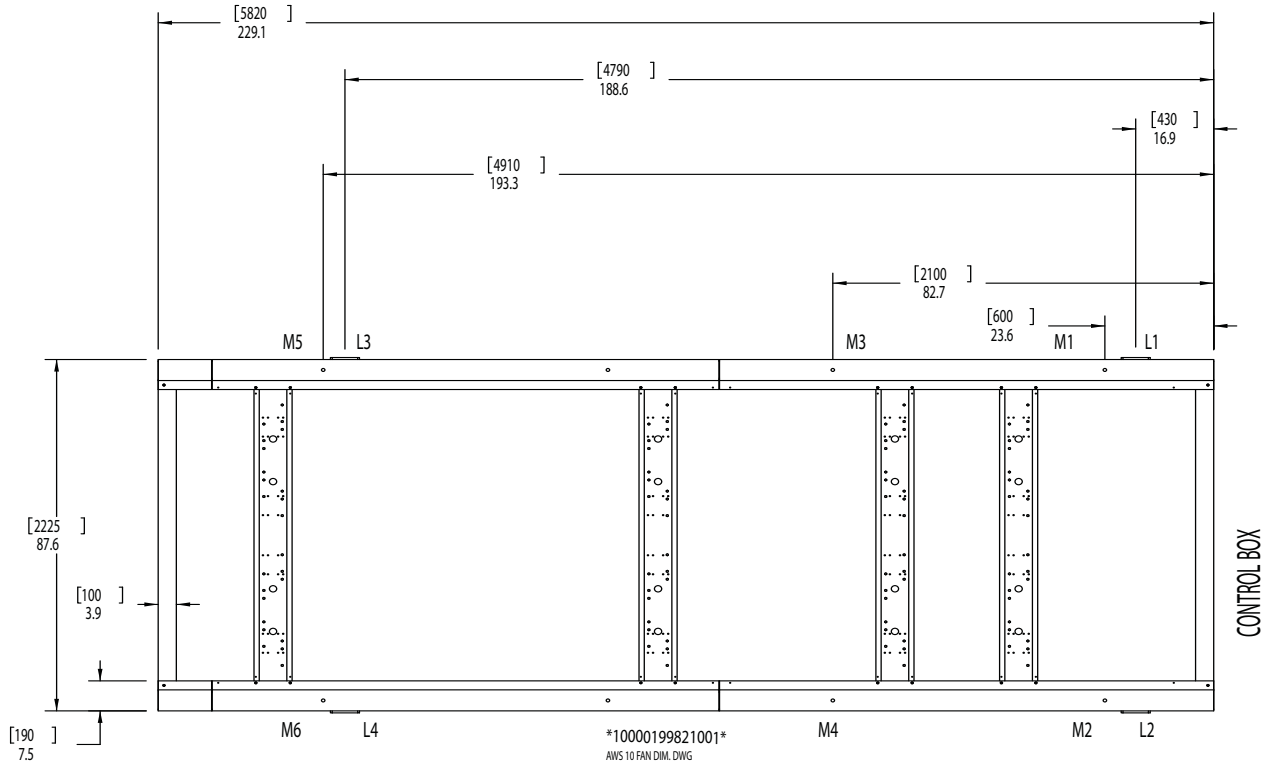
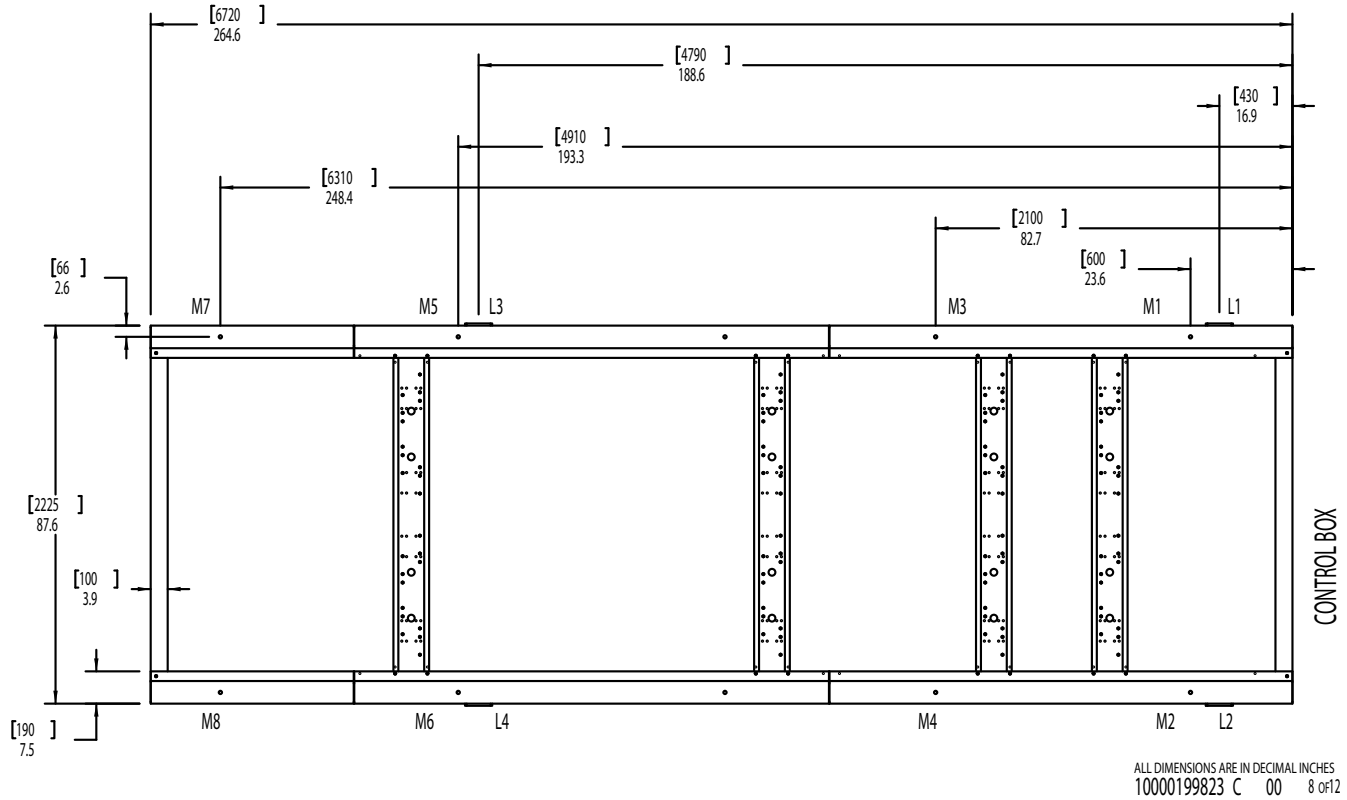


Figure 96: AWS230 & AWS250 Standard Efficiency, 60Hz, (non-VFD models)



Lifting & Mounting Locations - 60 Hz Standard

Figure 97: AWS280/300 Standard Efficiency, 60Hz, (non-VFD models)

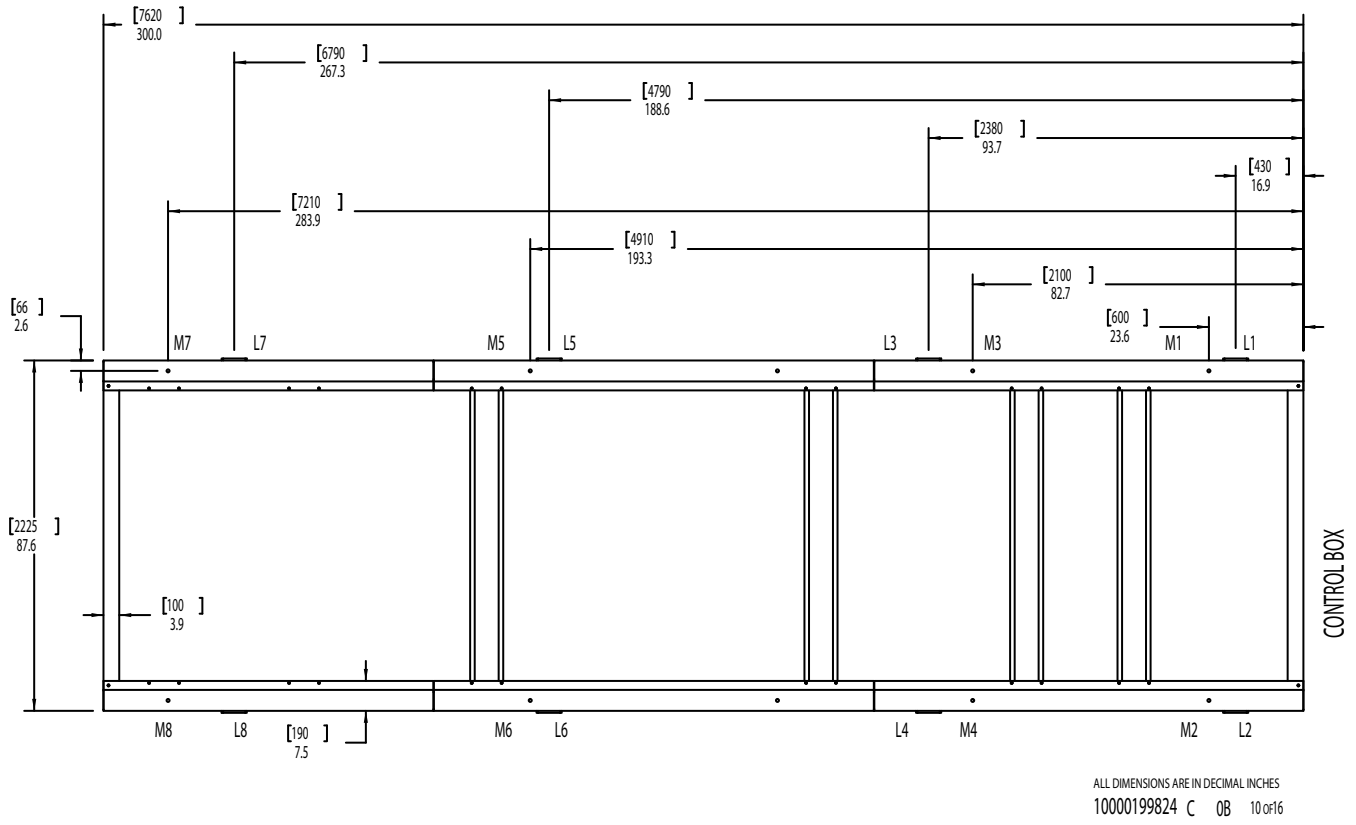


Figure 98: AWS320 &AWS350 Standard Efficiency, 60Hz (380-575V) non-VFD model

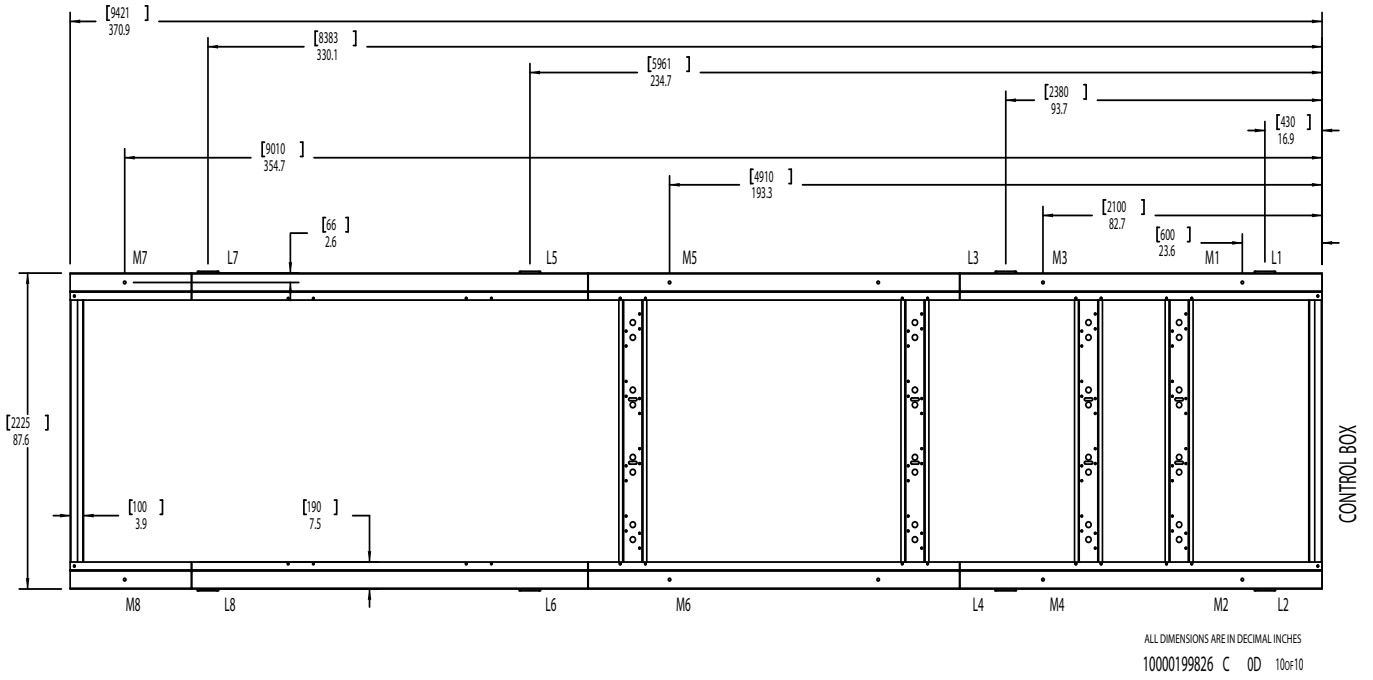


Figure 99: AWS375/400 Standard Efficiency, 60Hz, (non-VFD models)

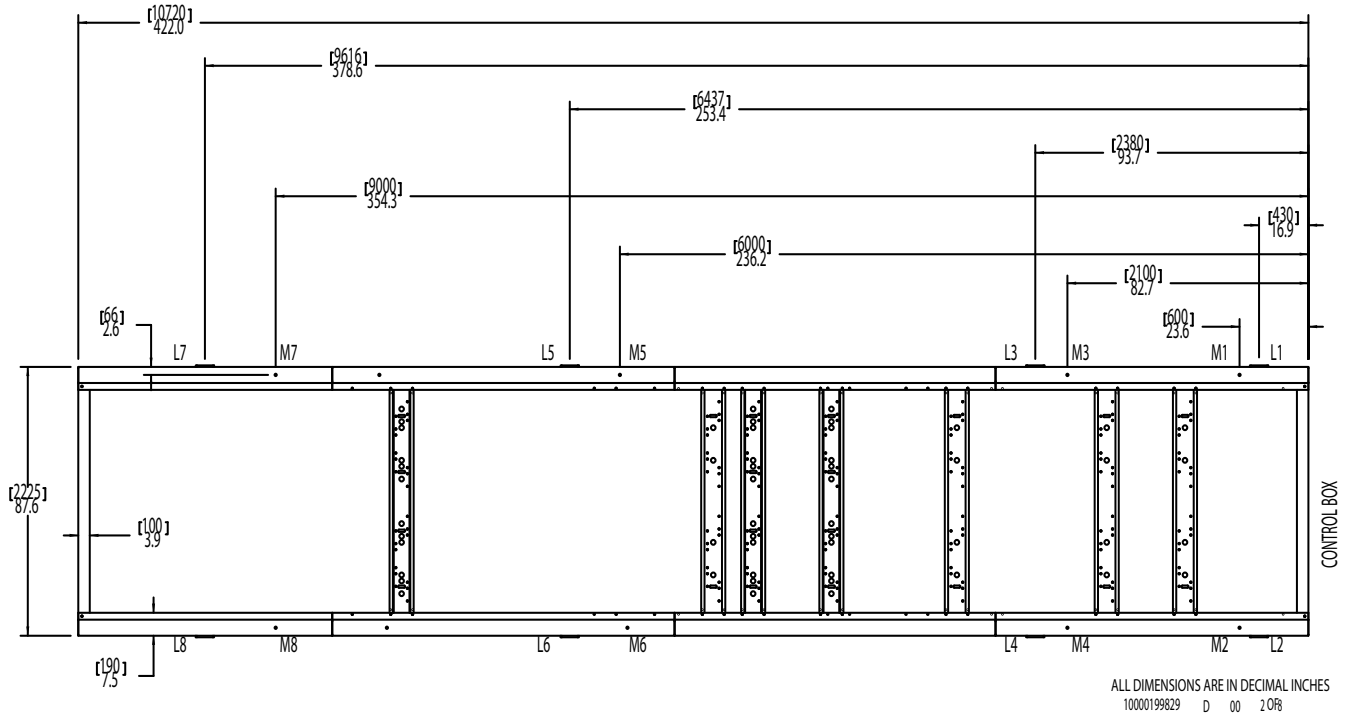
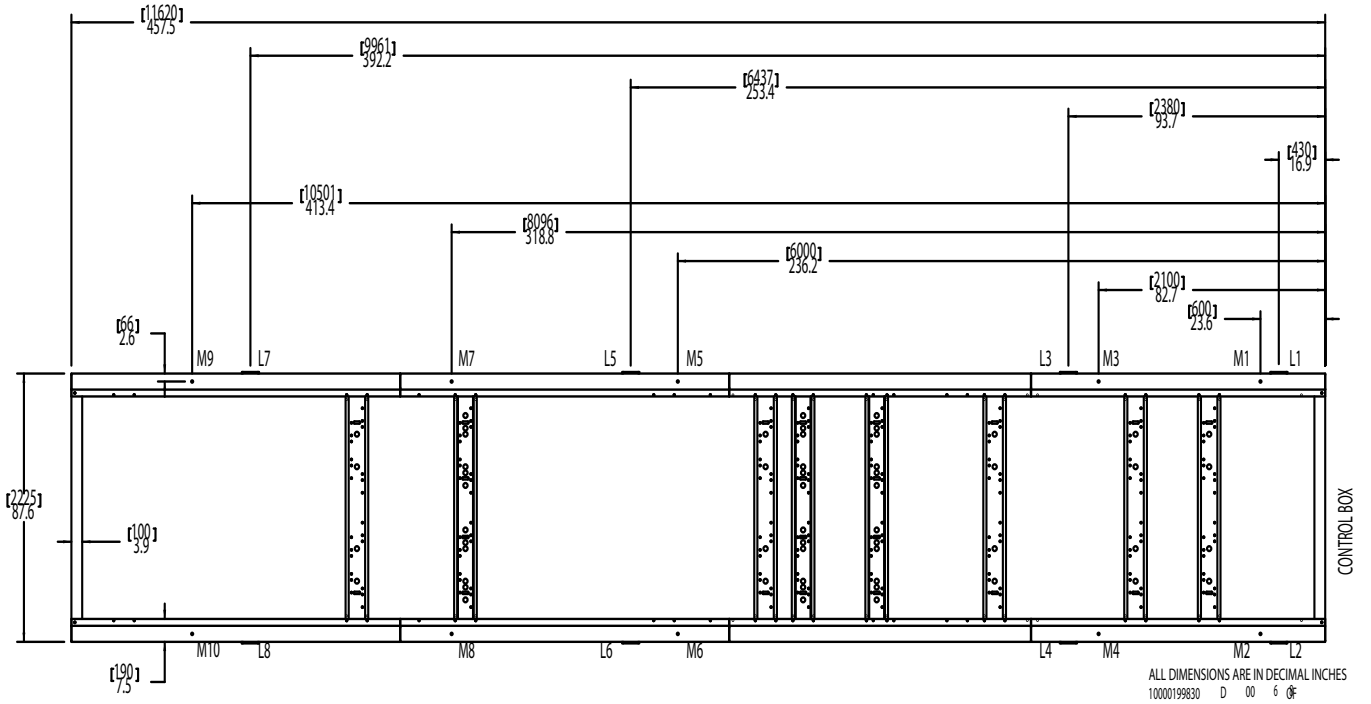


Figure 100: AWS425/445 Standard Efficiency, 60Hz, (non-VFD models)



Lifting & Mounting Locations - 60 Hz Standard

Figure 101: AWS470 Standard Efficiency, 60Hz, (non-VFD models)

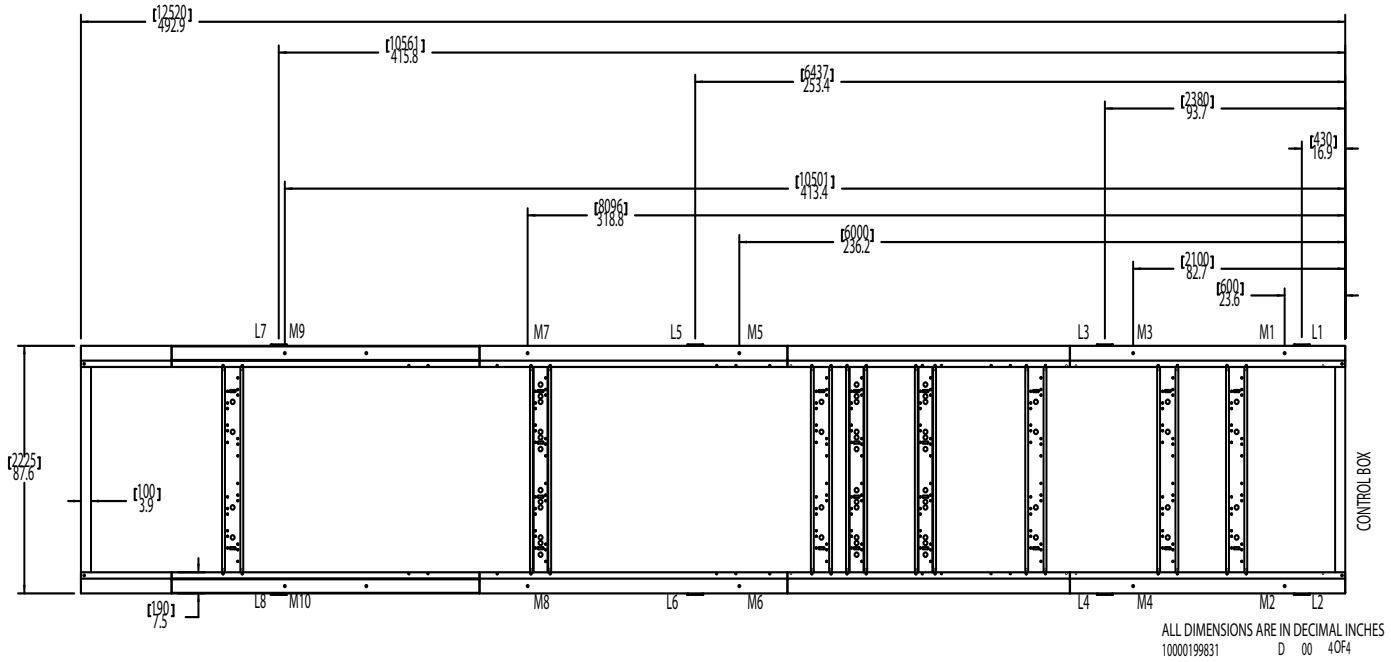


Figure 102: AWS500 Standard Efficiency, 60Hz, (non-VFD models)

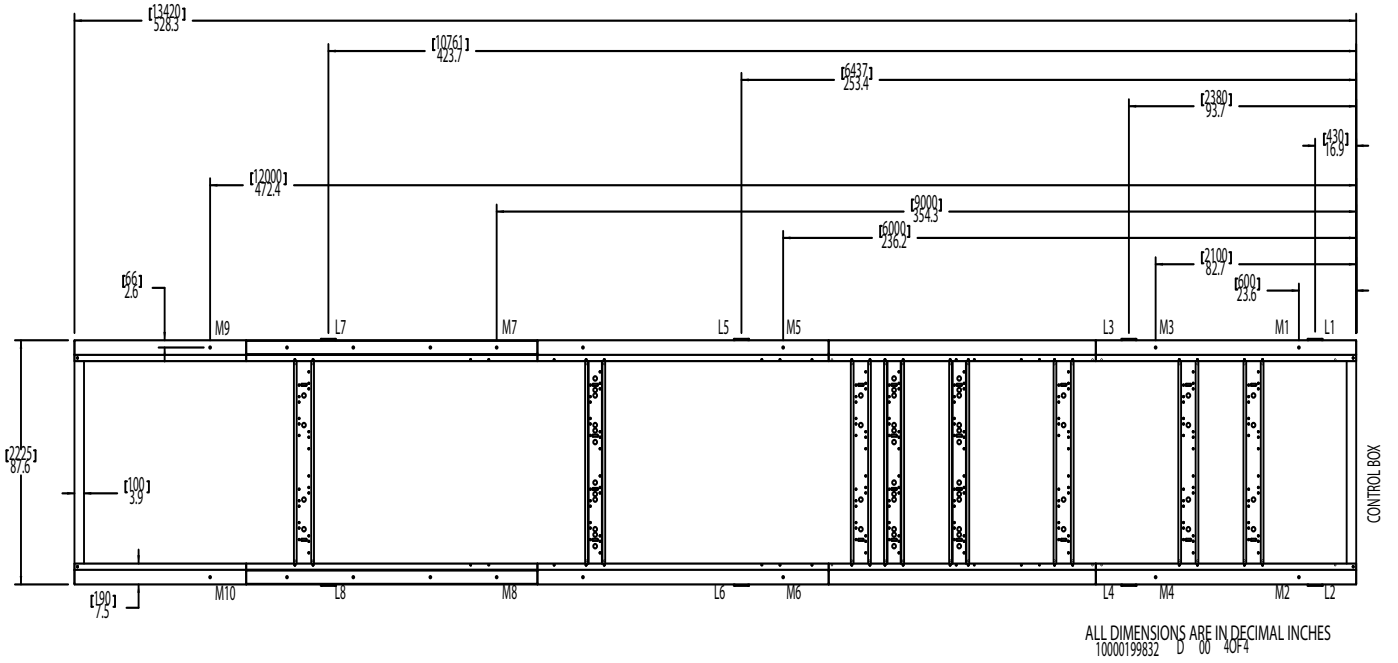
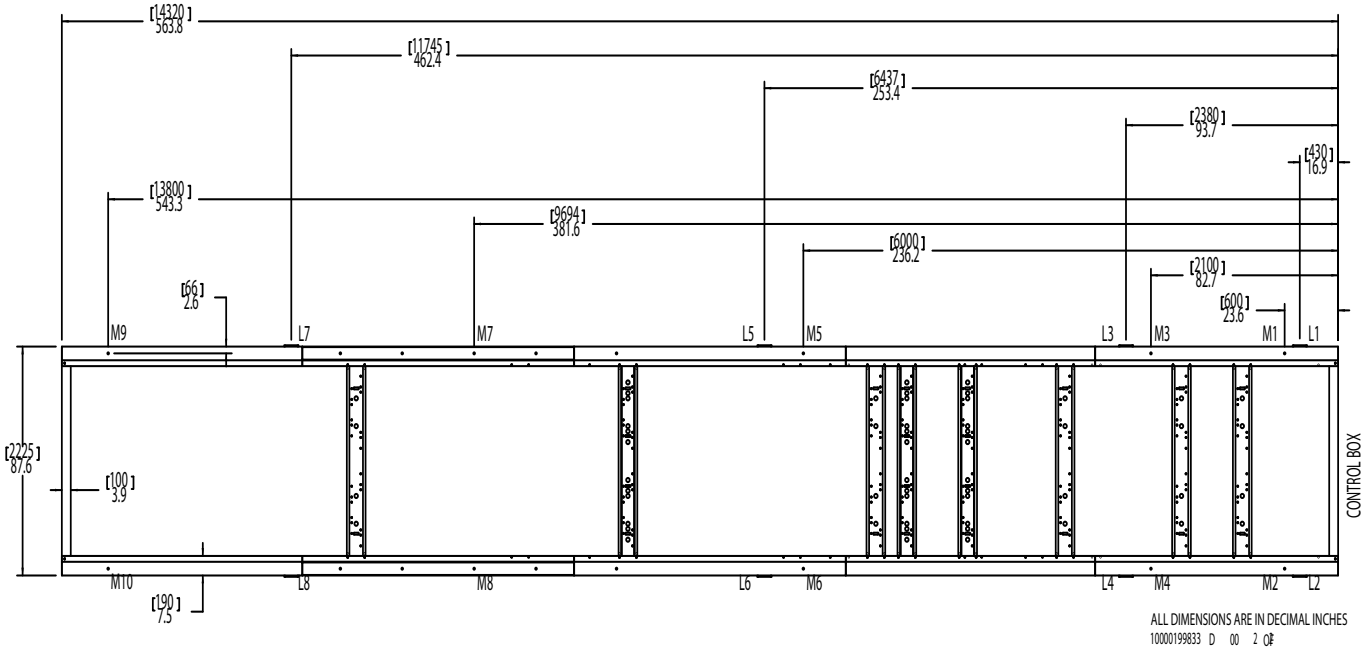


Figure 103: AWS530 Standard Efficiency, 60Hz, (non-VFD models)



Lifting & Mounting Locations - 60 Hz High

Figure 104: AWS210 High Efficiency, 60Hz, (non-VFD models)

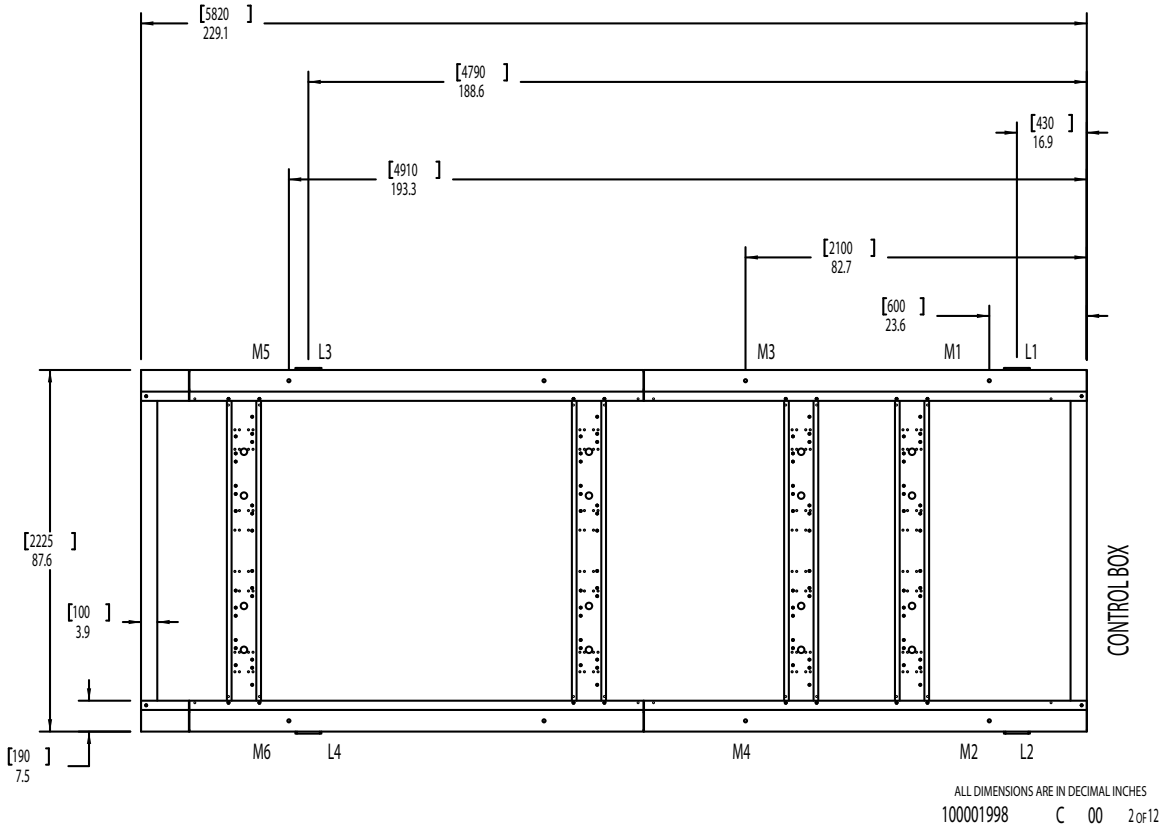


Figure 105: AWS230/250 High Efficiency, 60Hz, (non-VFD models)

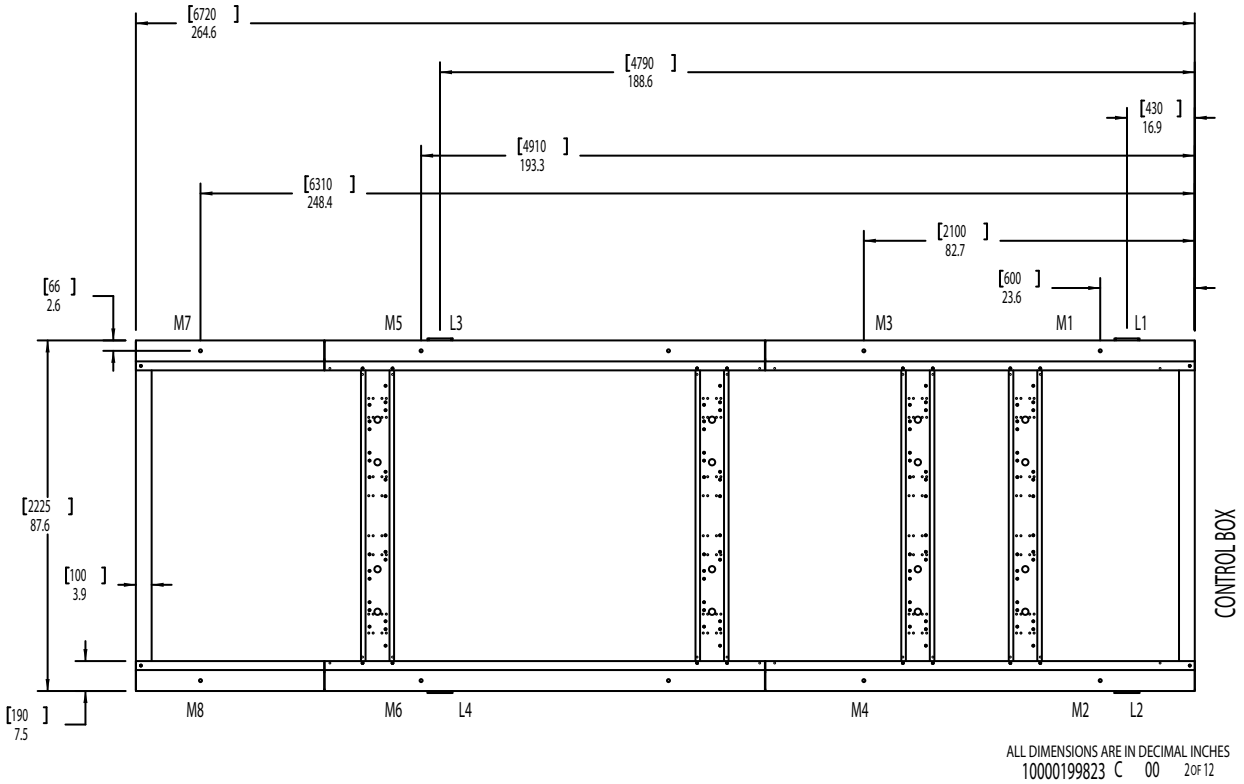


Figure 106: AWS280 & AWS300 High Efficiency, 60Hz, (non-VFD models)

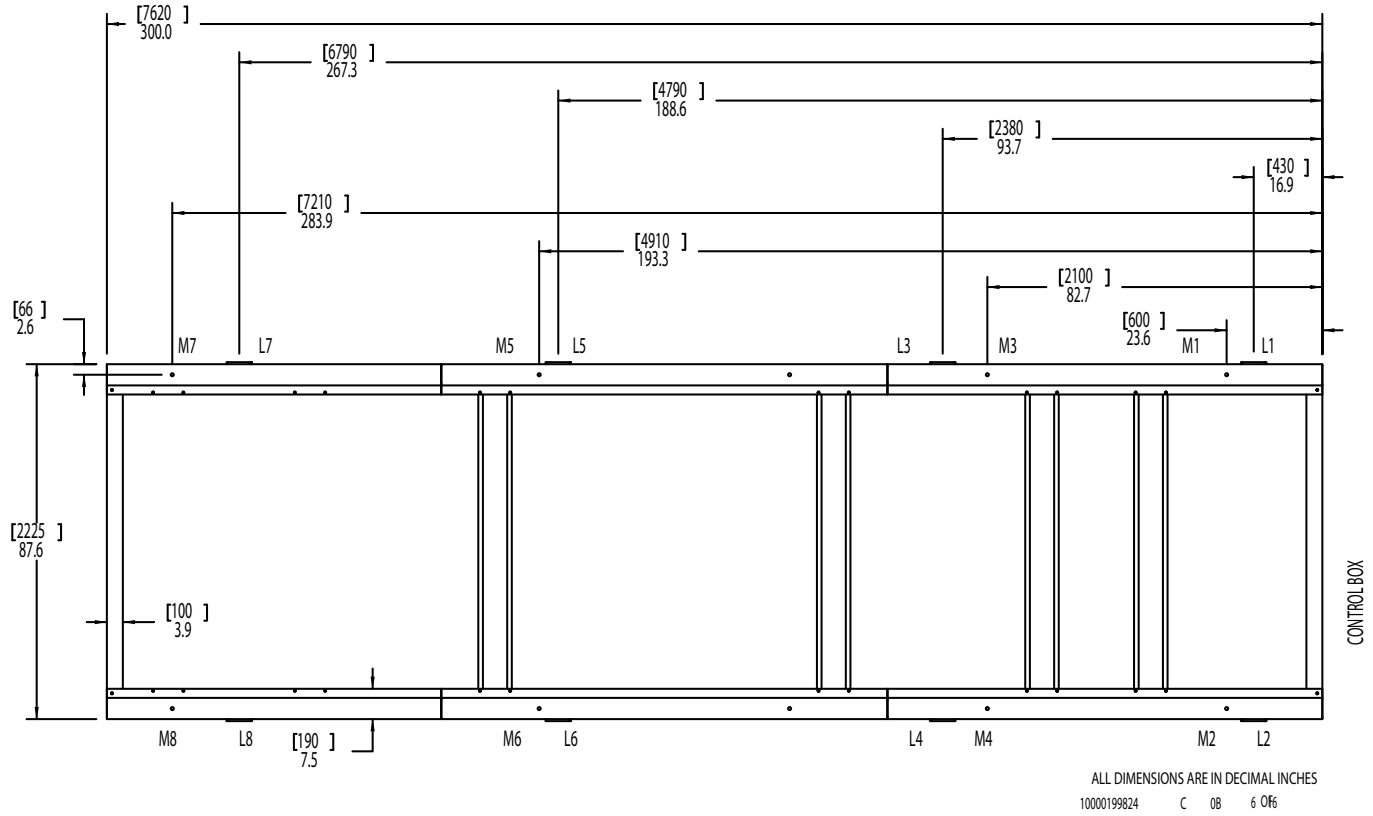
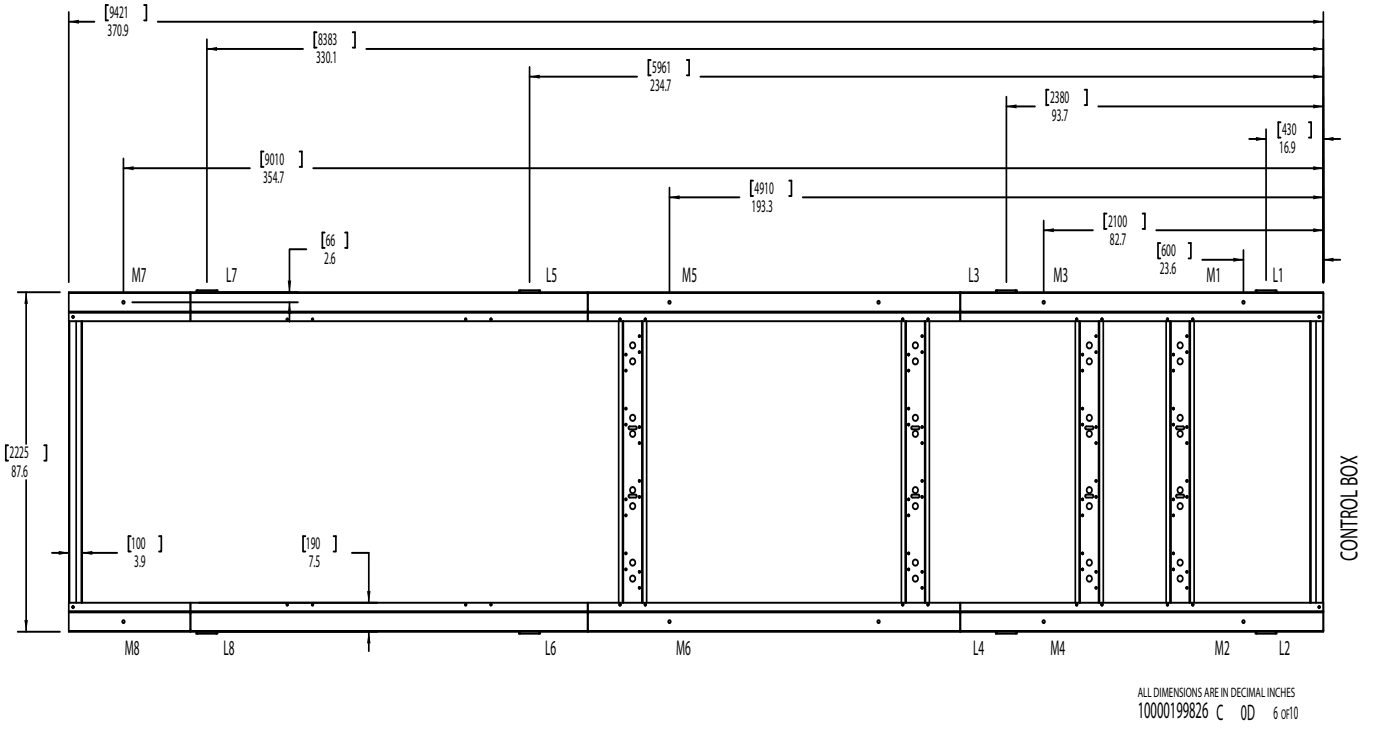


Figure 107: AWS320/350 High Efficiency, 60Hz, (non-VFD models)



Lifting & Mounting Locations - 60 Hz High

Figure 108: AWS380 High Efficiency, 60Hz, (non-VFD models))

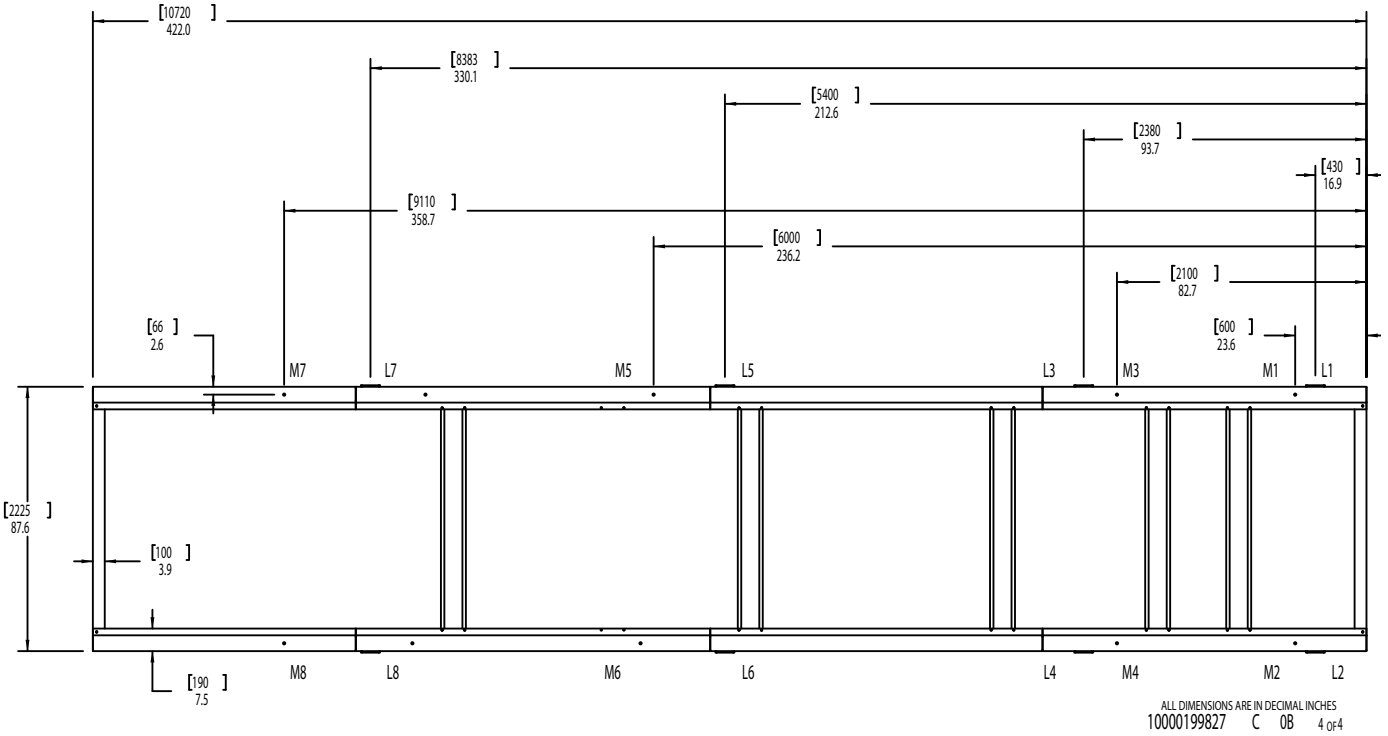


Figure 109: AWS405 High Efficiency, 60Hz, (non-VFD models)

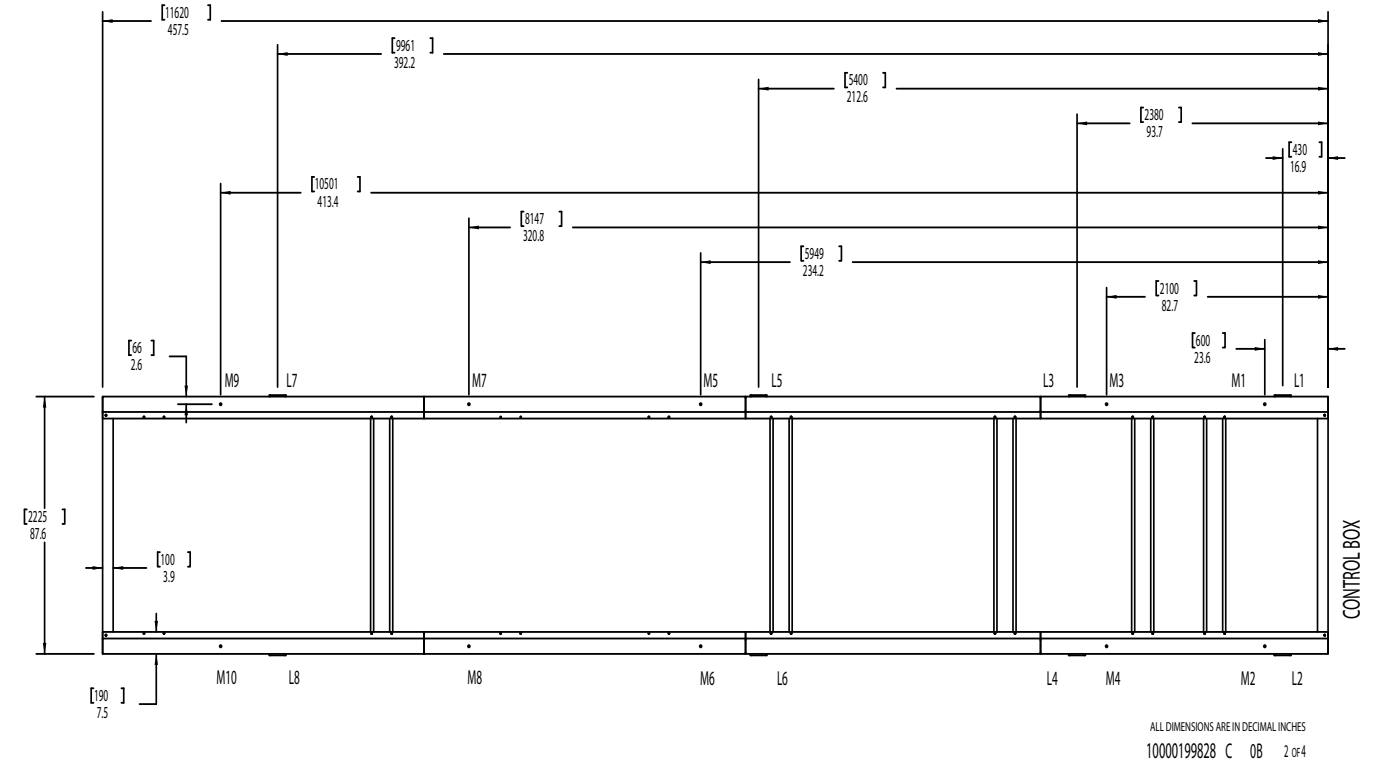


Figure 110: AWS445 High Efficiency, 60Hz, (non-VFD models)

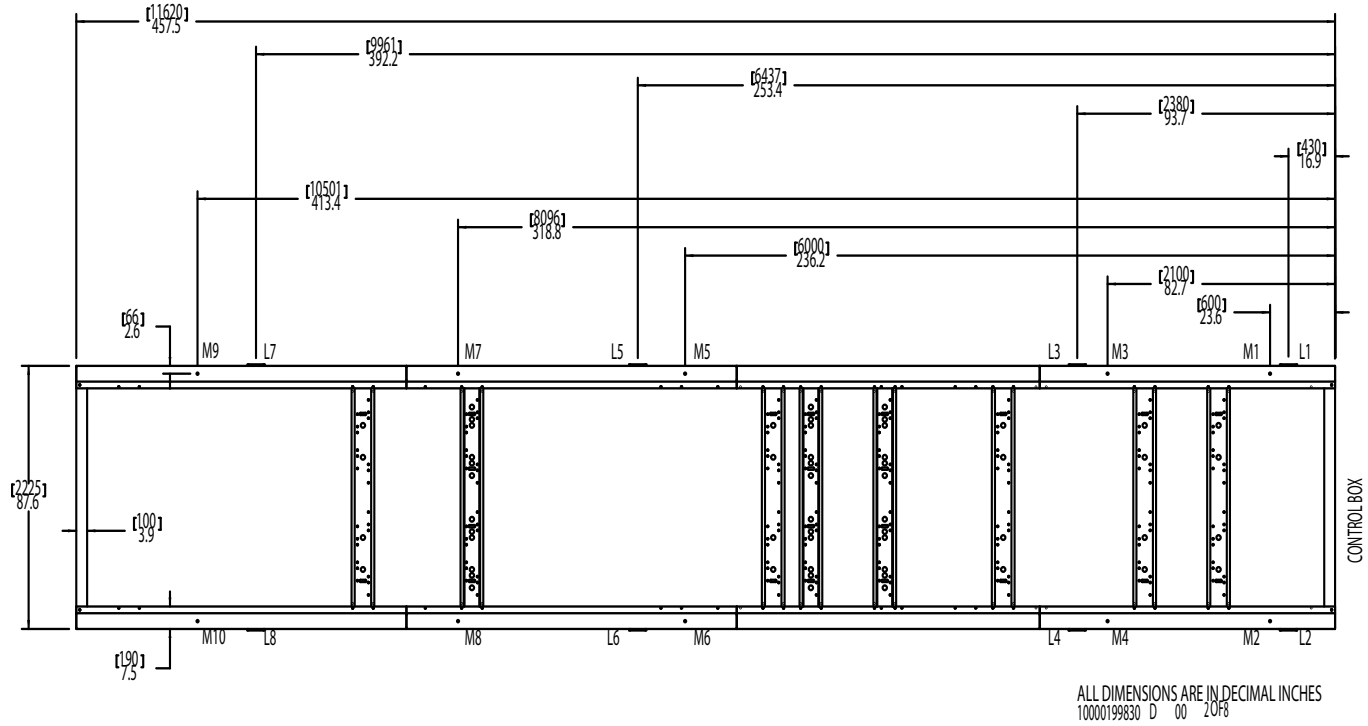
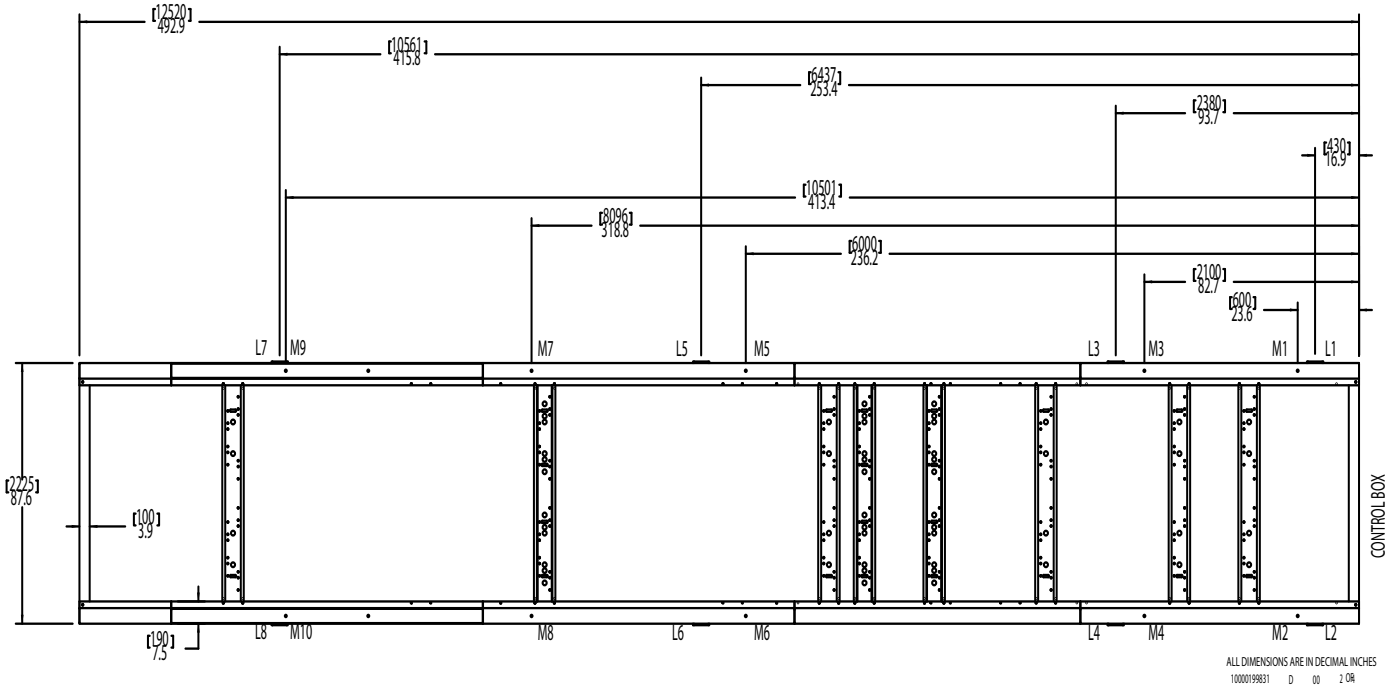


Figure 111: AWS470 High Efficiency, 60Hz, (non-VFD models)



Lifting & Mounting Locations - 60 Hz High

Figure 112: AWS500 High Efficiency, 60Hz, (non-VFD models)

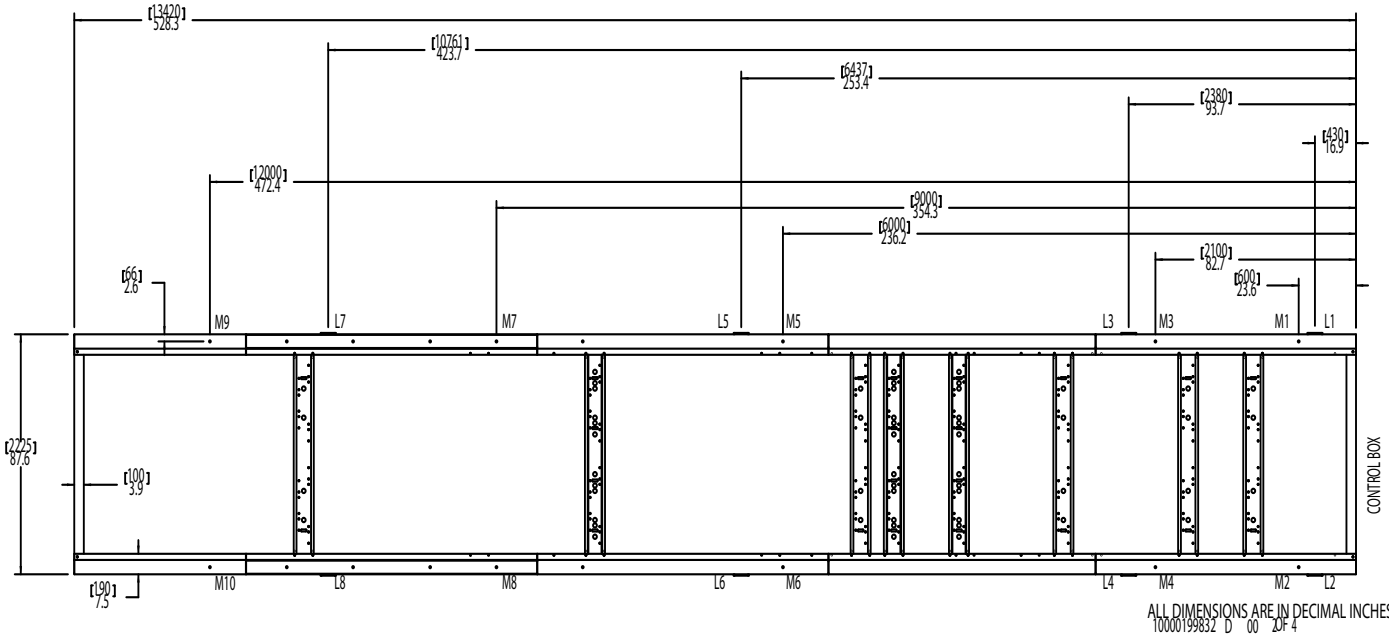


Figure 113: AWS530 High Efficiency, 60Hz, (non-VFD models)

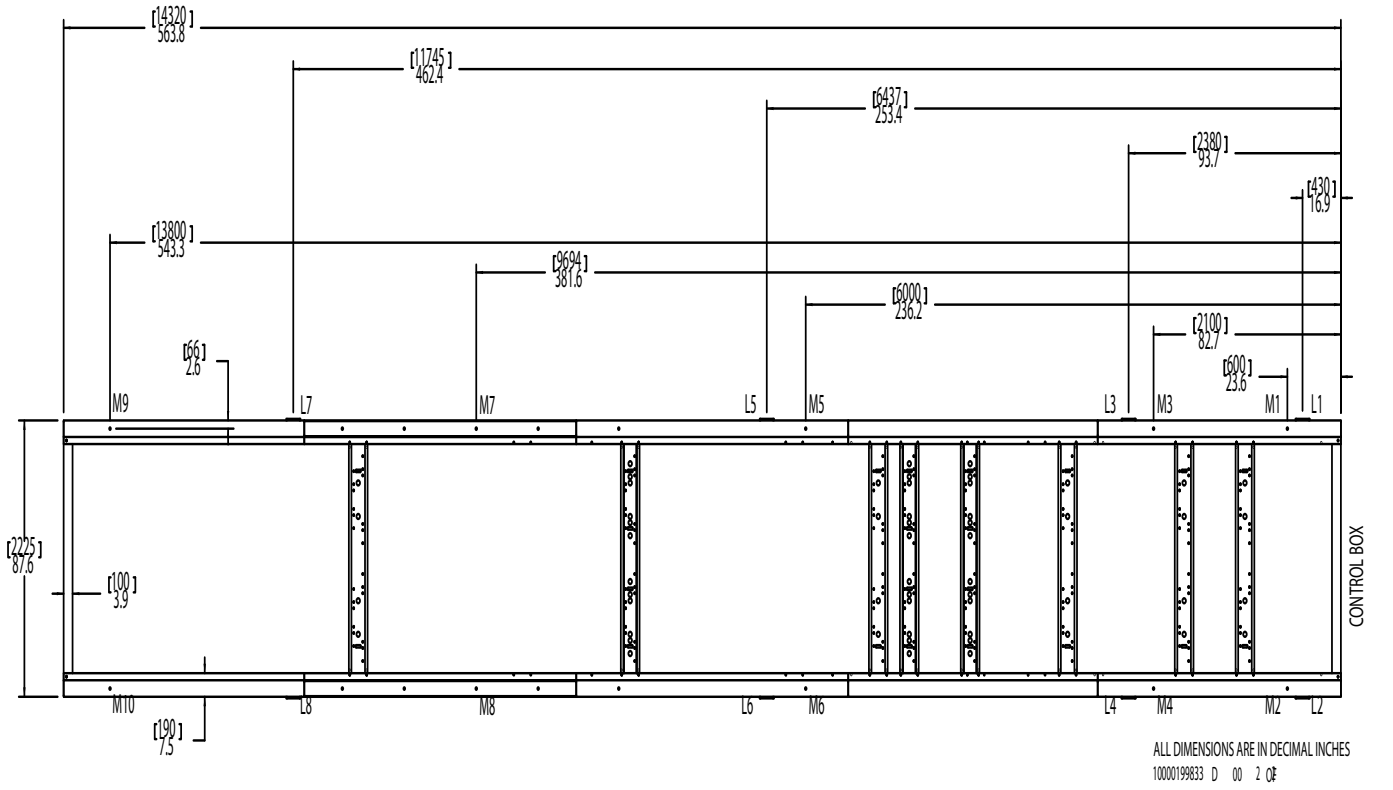


Figure 114: AWS210 Premium Efficiency, 60Hz, (non-VFD models)

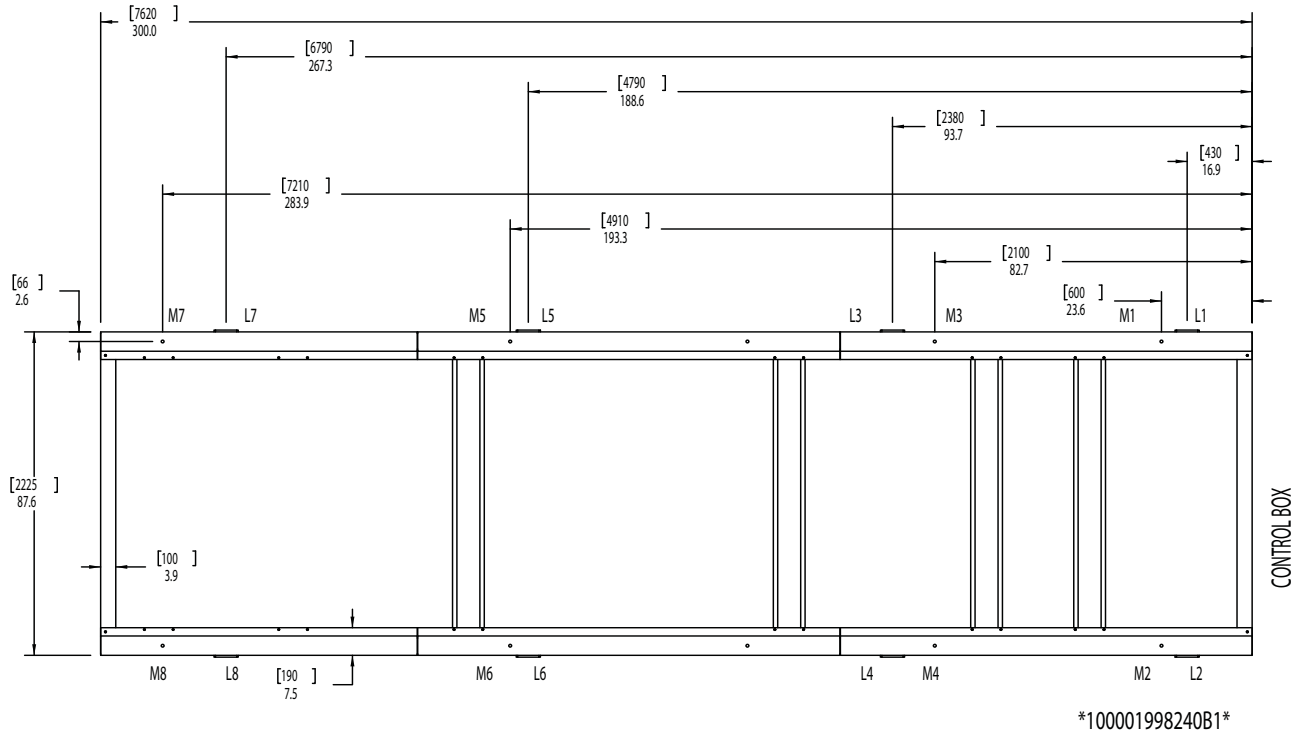
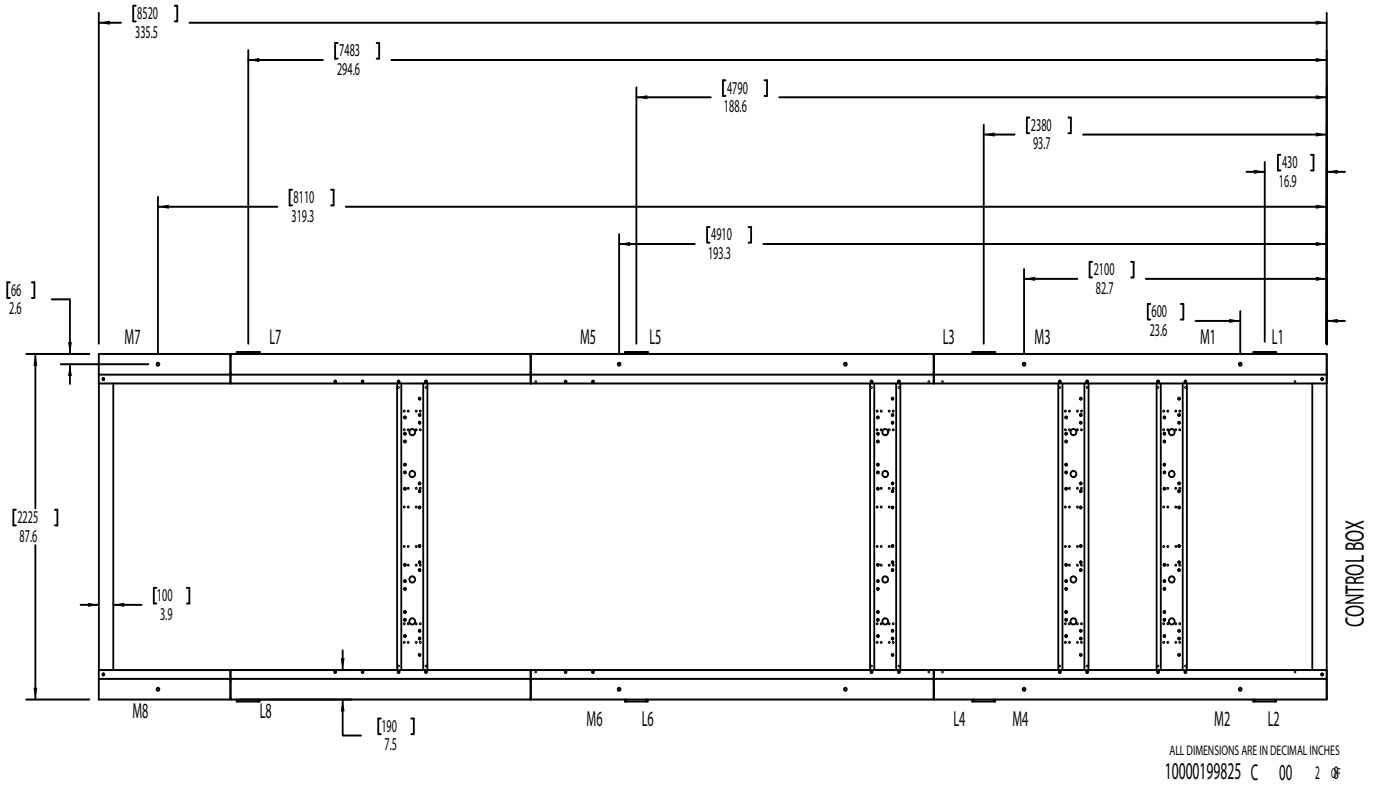


Figure 115: AWS230 (all voltages) and AWS250 Premium (208-230V only) 60Hz, (non-VFD)



Lifting & Mounting Locations - 60 Hz Premium

Figure 116: AWS250 Premium Efficiency, 60Hz, (non-VFD models) (380-575V only)

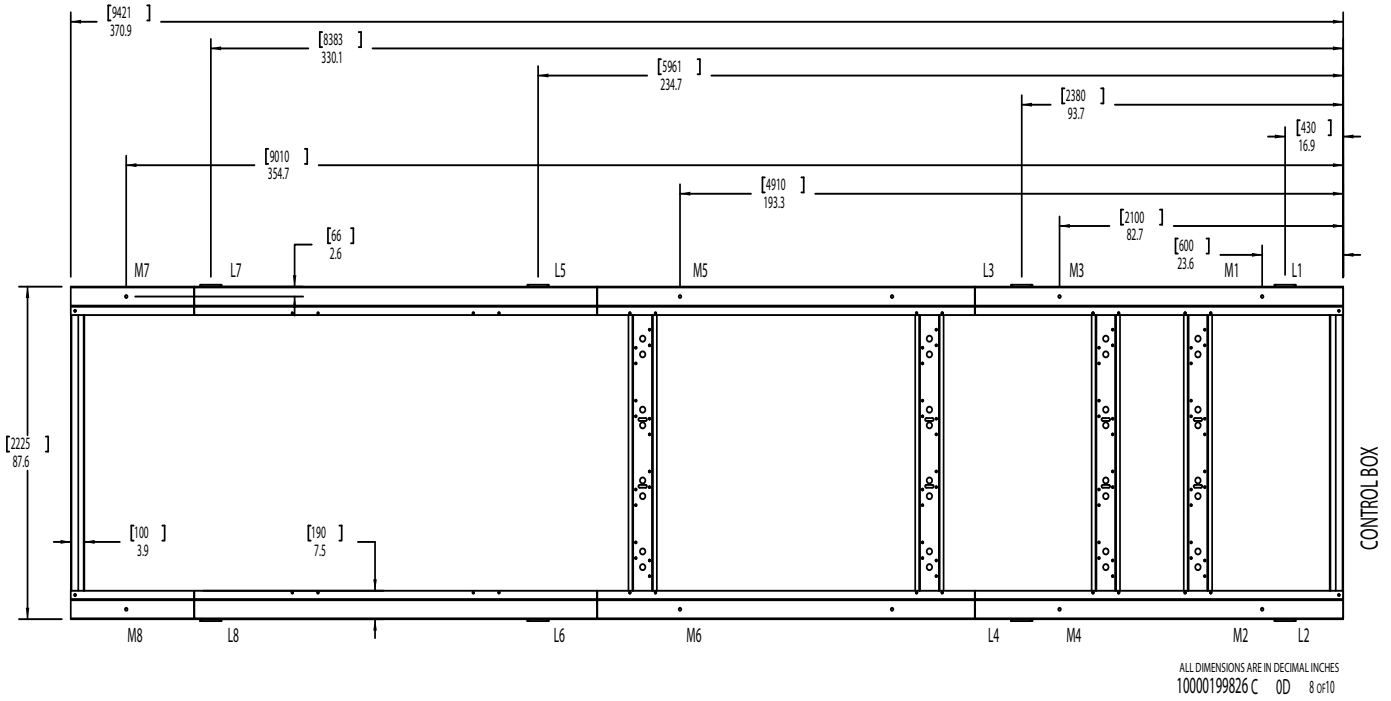


Figure 117: AWS280 & AWS300 Premium Efficiency, 60Hz (208-230V) non-VFD model

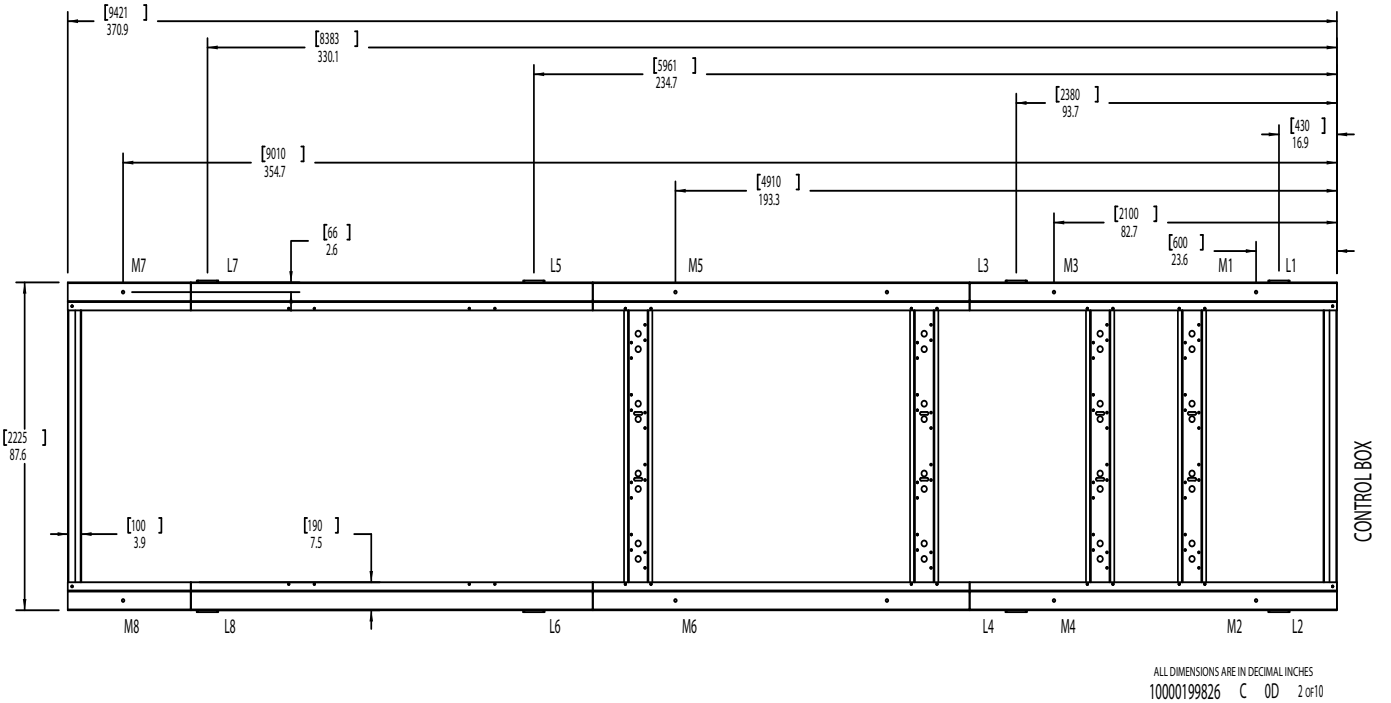


Figure 118: AWS 320 Premium Efficiency, 60Hz (380-575V) non-VFD model

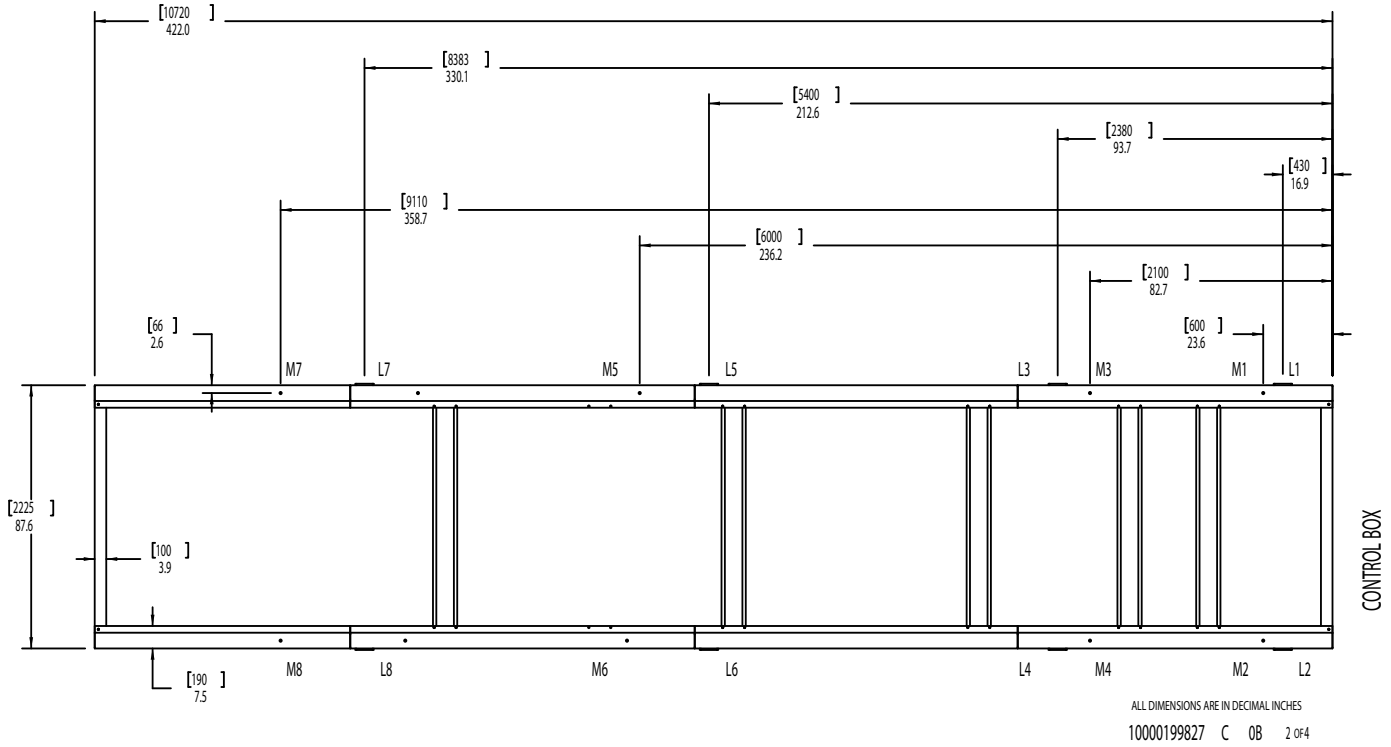


Figure 119: AWS350 Premium Efficiency, 60Hz (380-575V) non-VFD model

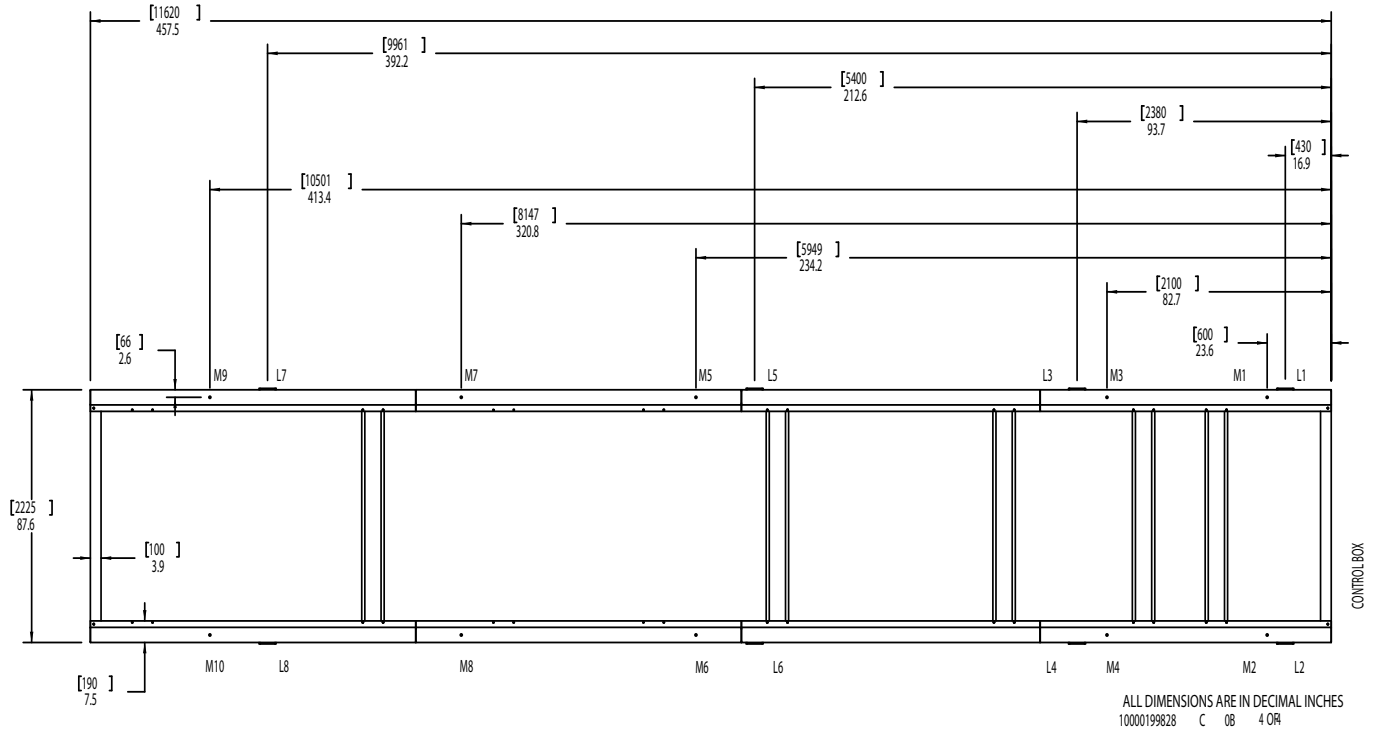


Figure 120: AWS150 Standard Efficiency, 60Hz, (with optional VFD)

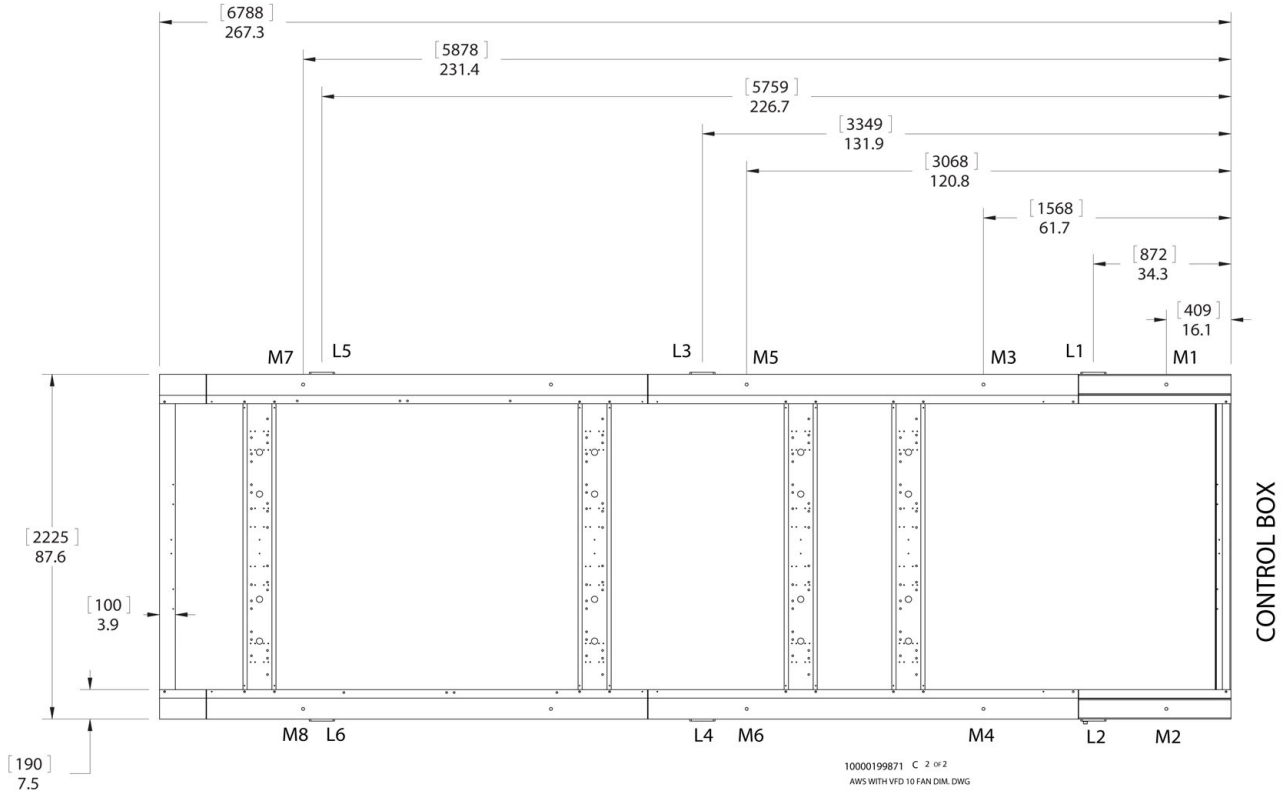


Figure 121: AWS175 Standard Efficiency, 60Hz, (with optional VFD)

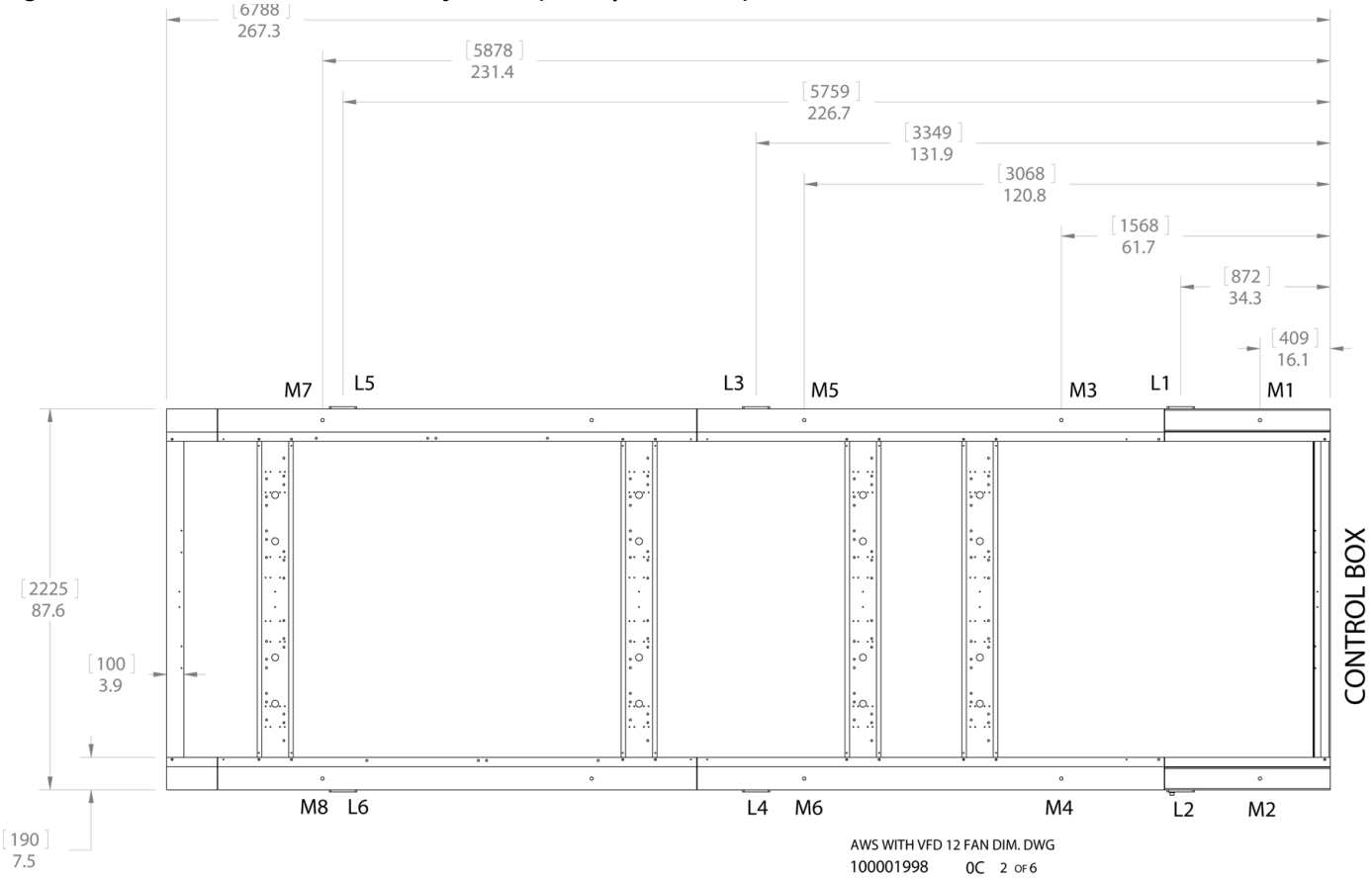


Figure 122: AWS190 Standard Efficiency, 60Hz, (with optional VFD)

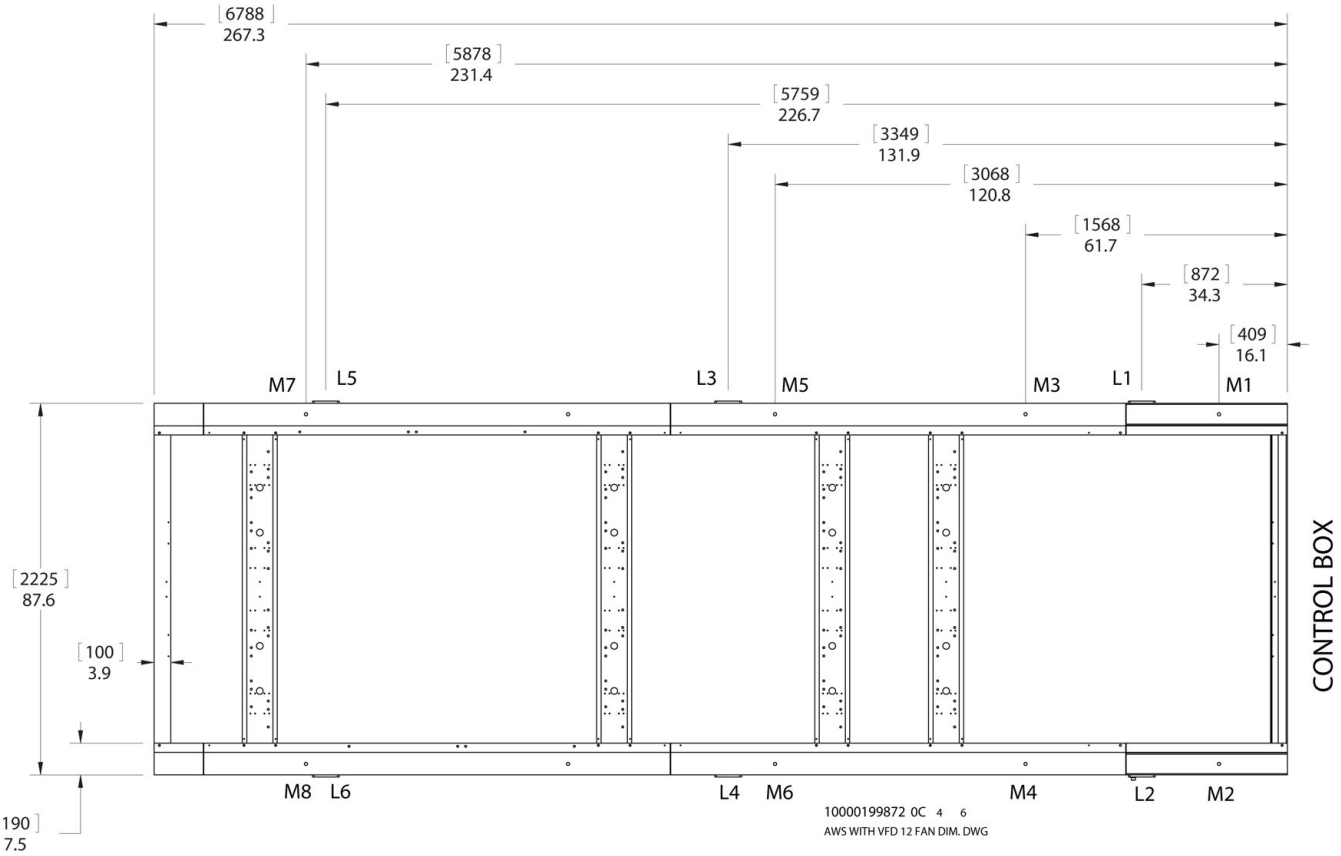


Figure 123: AWS210 High Efficiency, 60Hz, (with optional VFD)

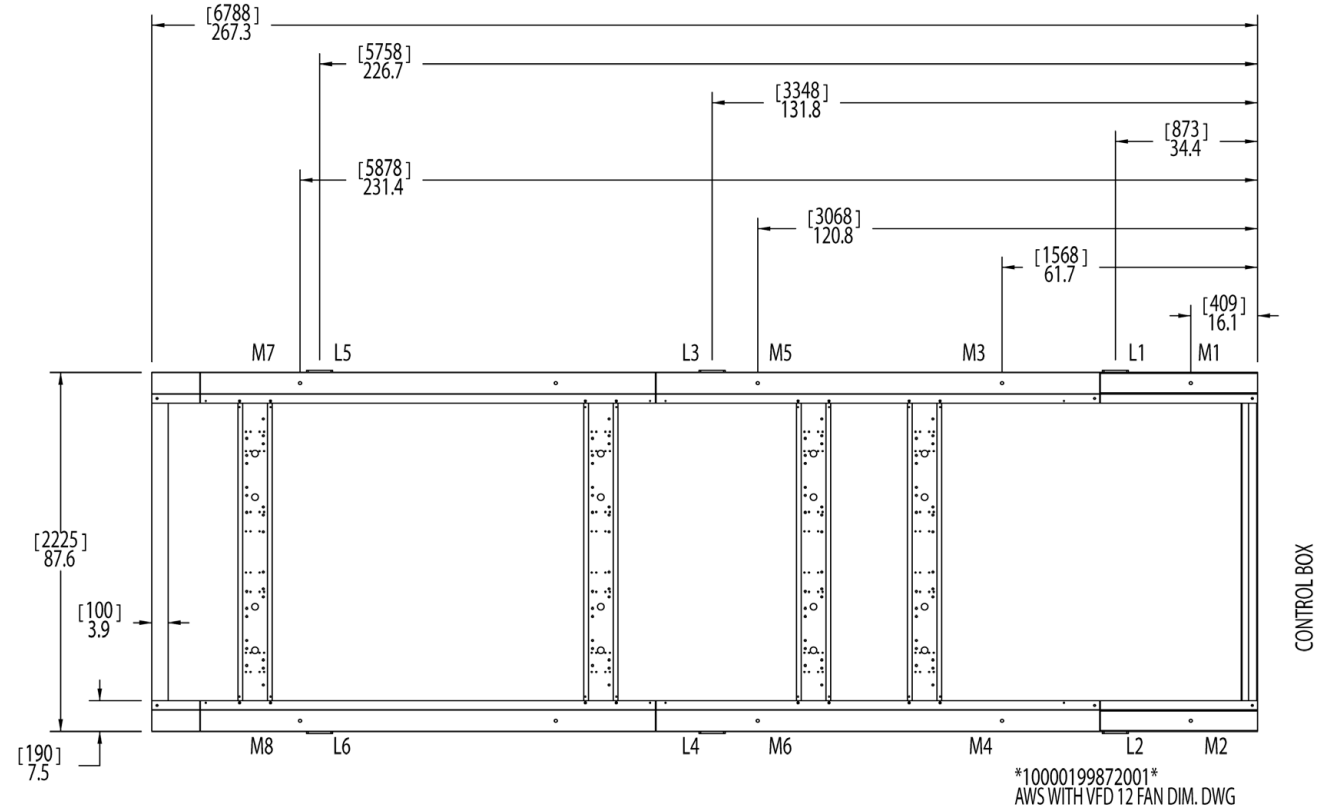


Figure 124: AWS230 High Efficiency, 60Hz, (with optional VFD)

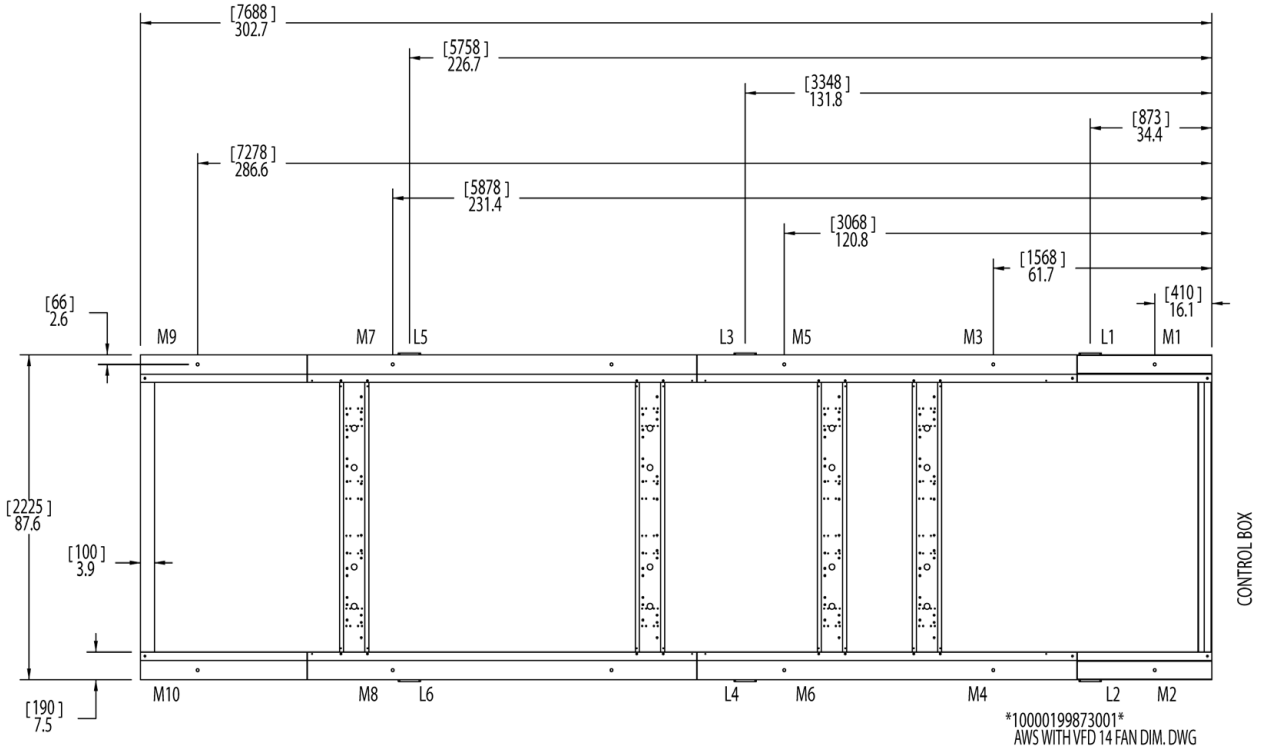


Figure 125: AWS250 High Efficiency, 60Hz, (with optional VFD)

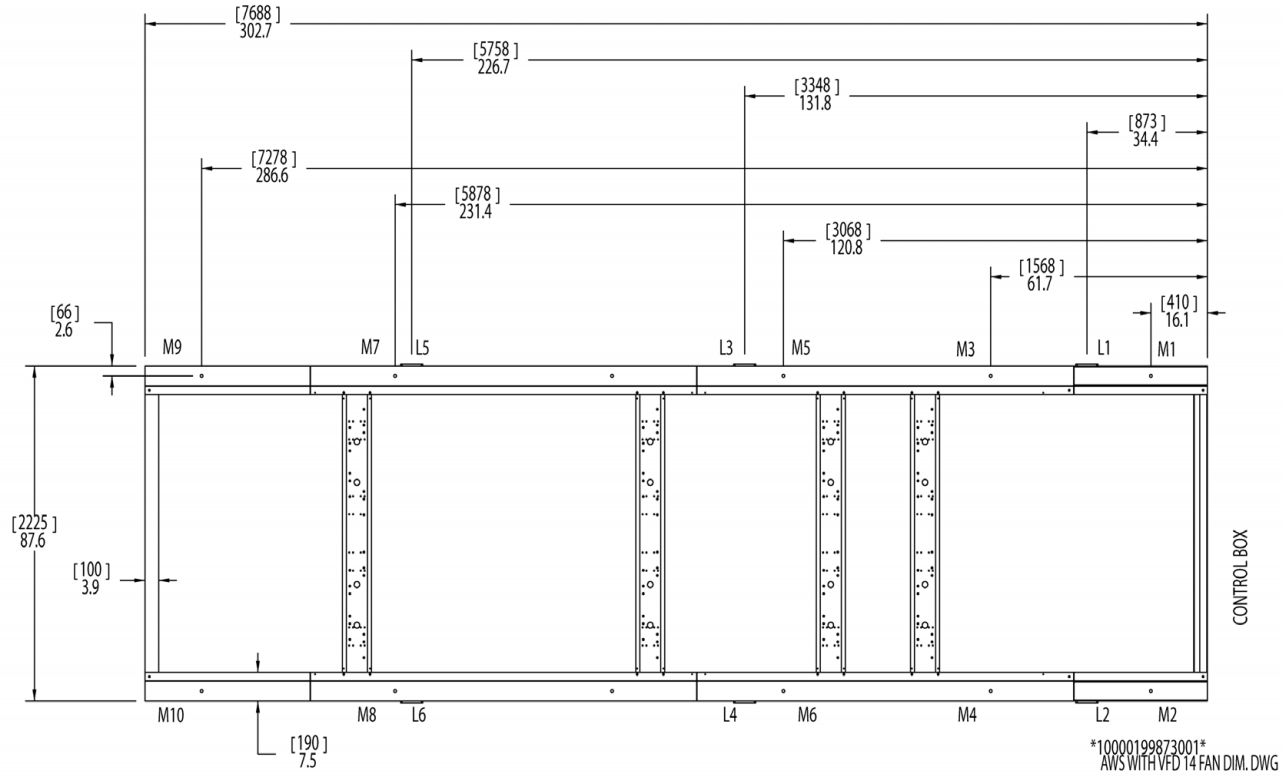


Figure 126: AWS280 & AWS300 High Efficiency, 60Hz, (with optional VFD)

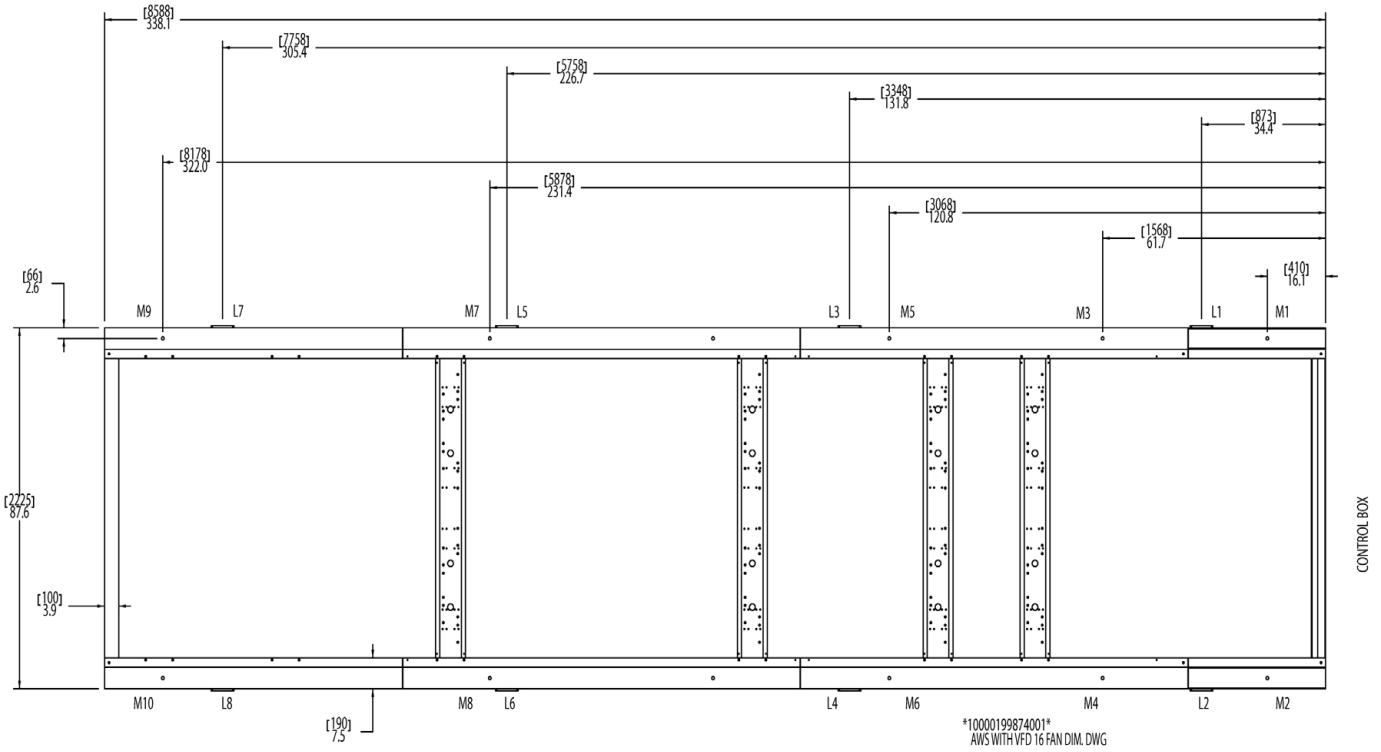


Figure 127: AWS320 High Efficiency, 60Hz, (with optional VFD)

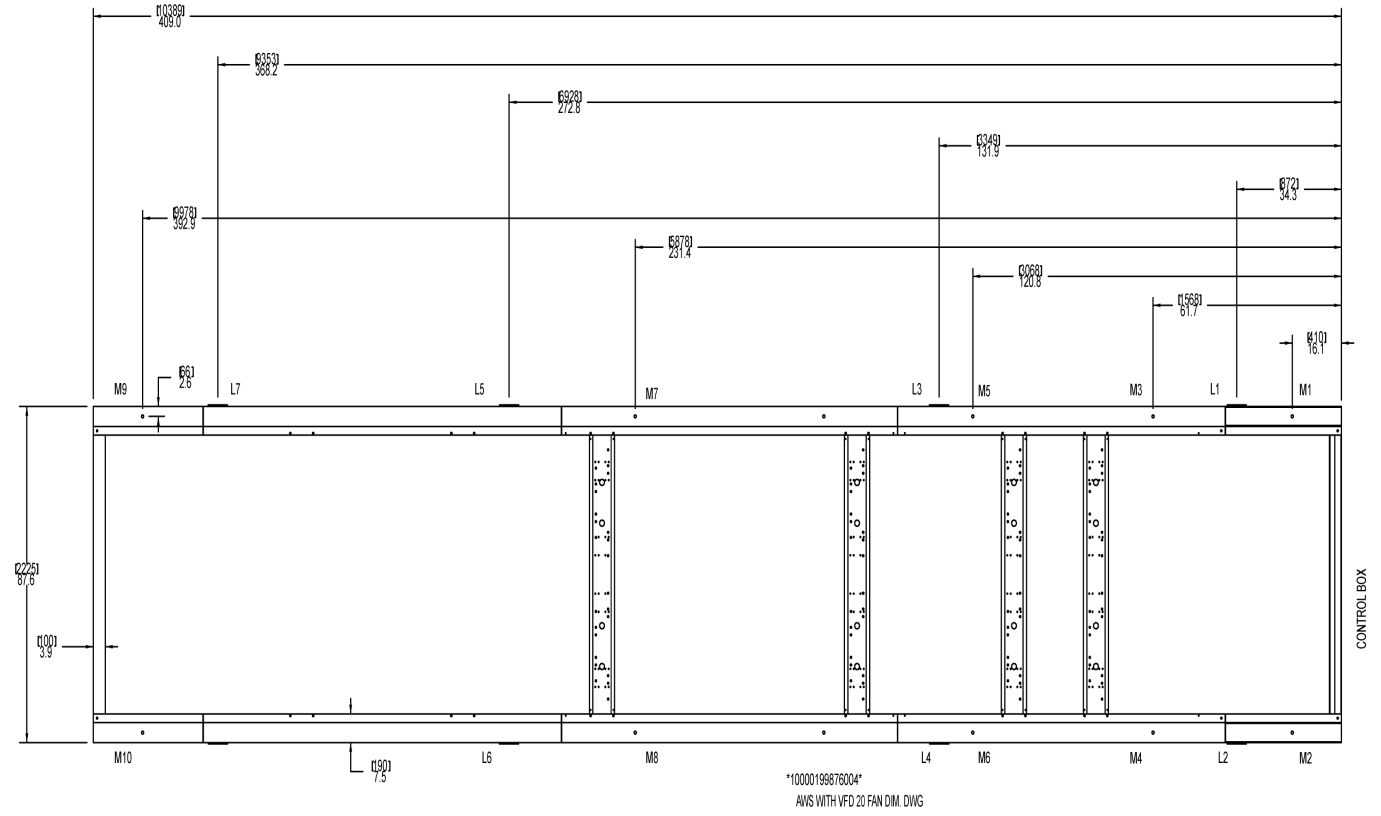


Figure 128: AWS350 High Efficiency, 60Hz, (with optional VFD)

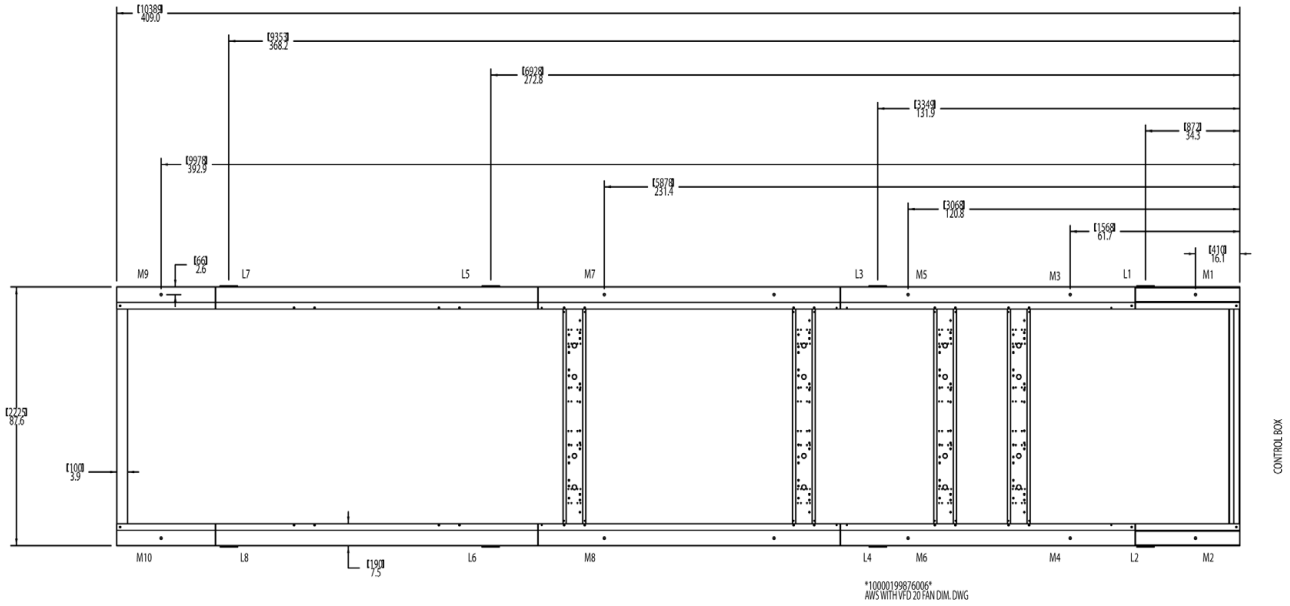


Figure 129: AWS380 High Efficiency, 60Hz, (with optional VFD))

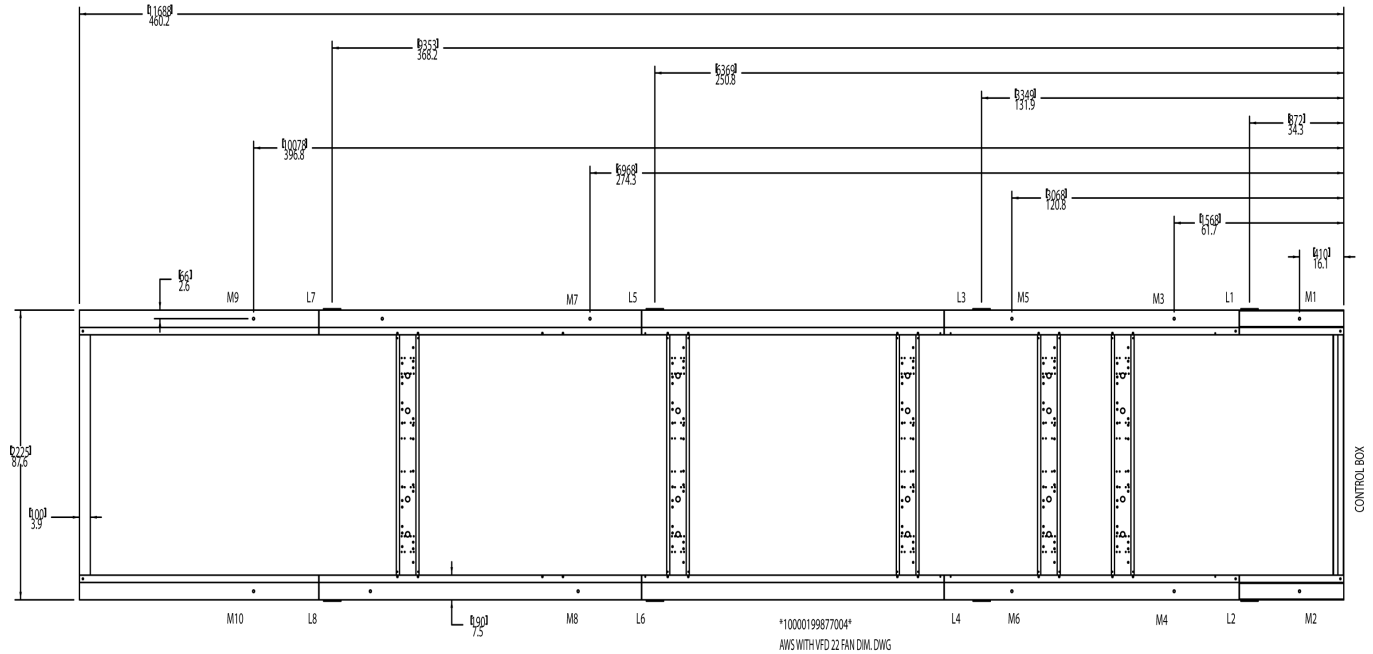


Figure 130: AWS405 High Efficiency, 60Hz, (with optional VFD)

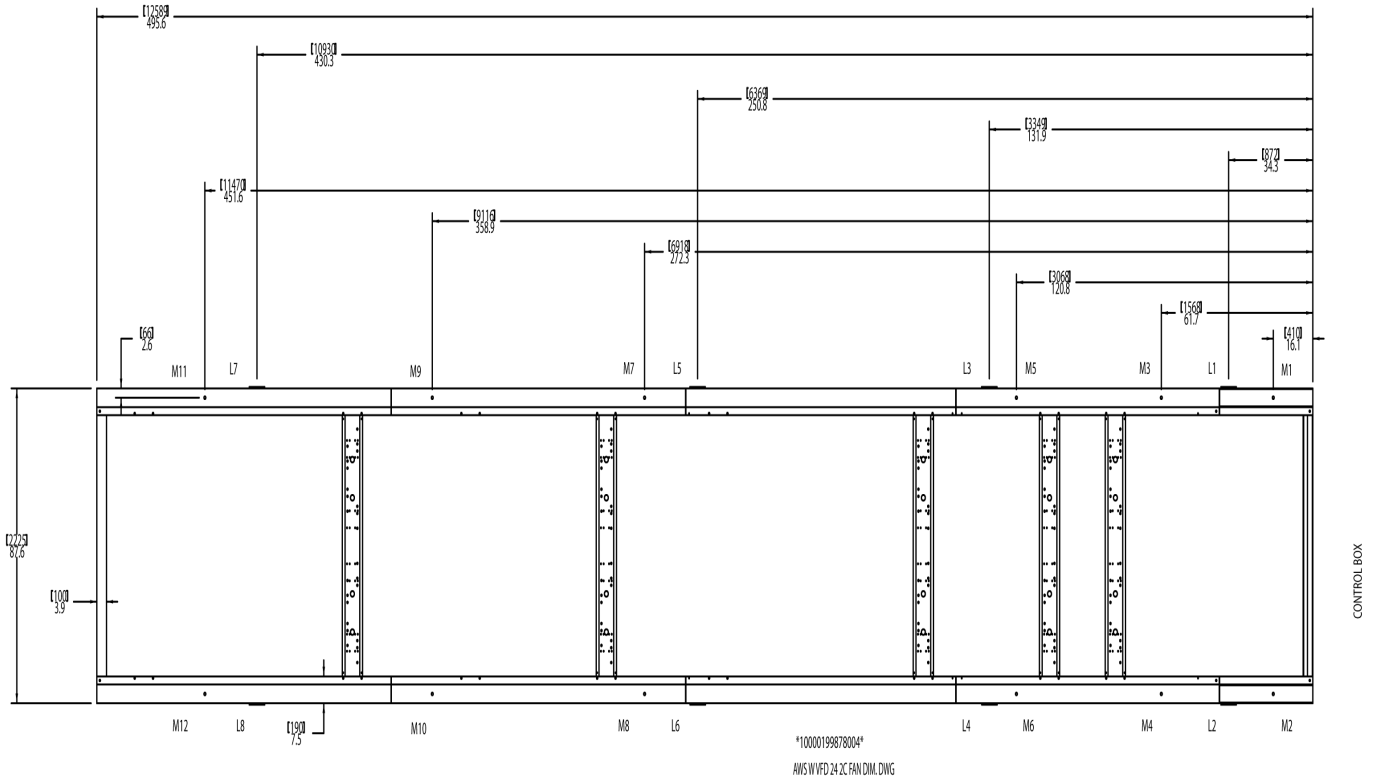


Figure 131: AWS445 High Efficiency, 60Hz, (with optional VFD)

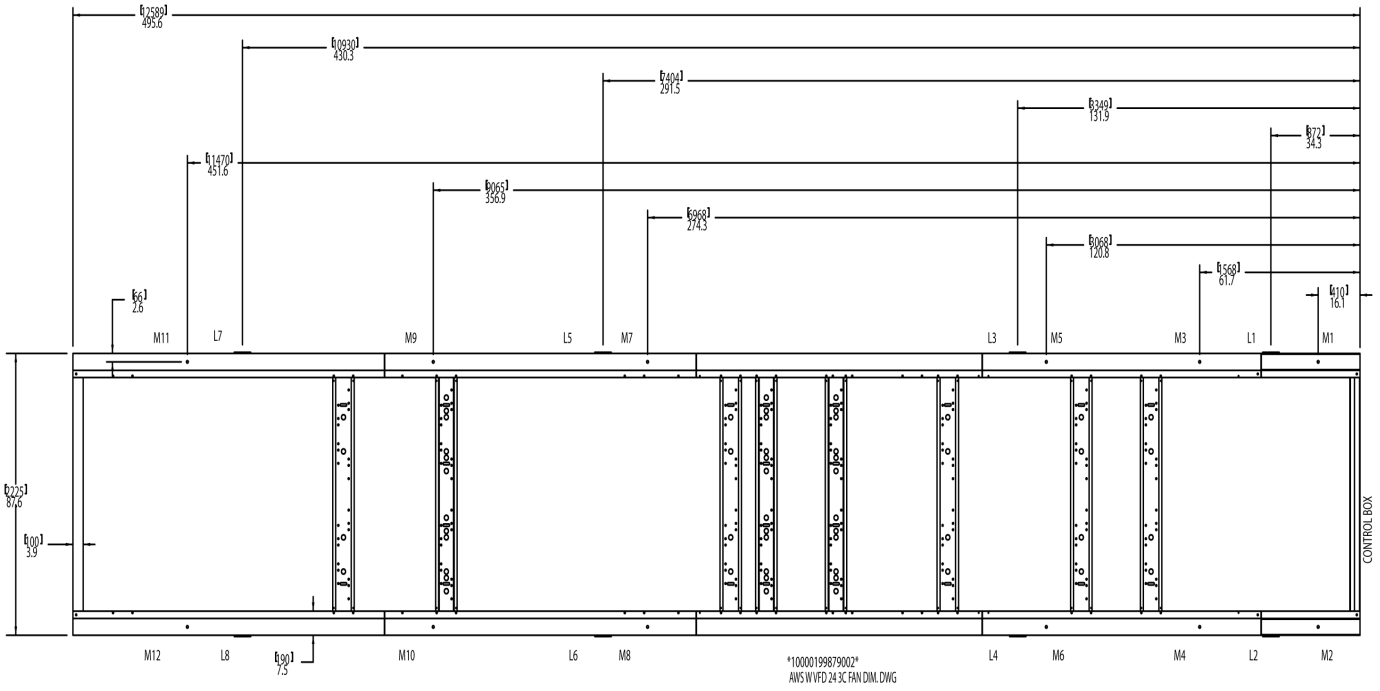


Figure 132: AWS470 High Efficiency, 60Hz, (with optional VFD)

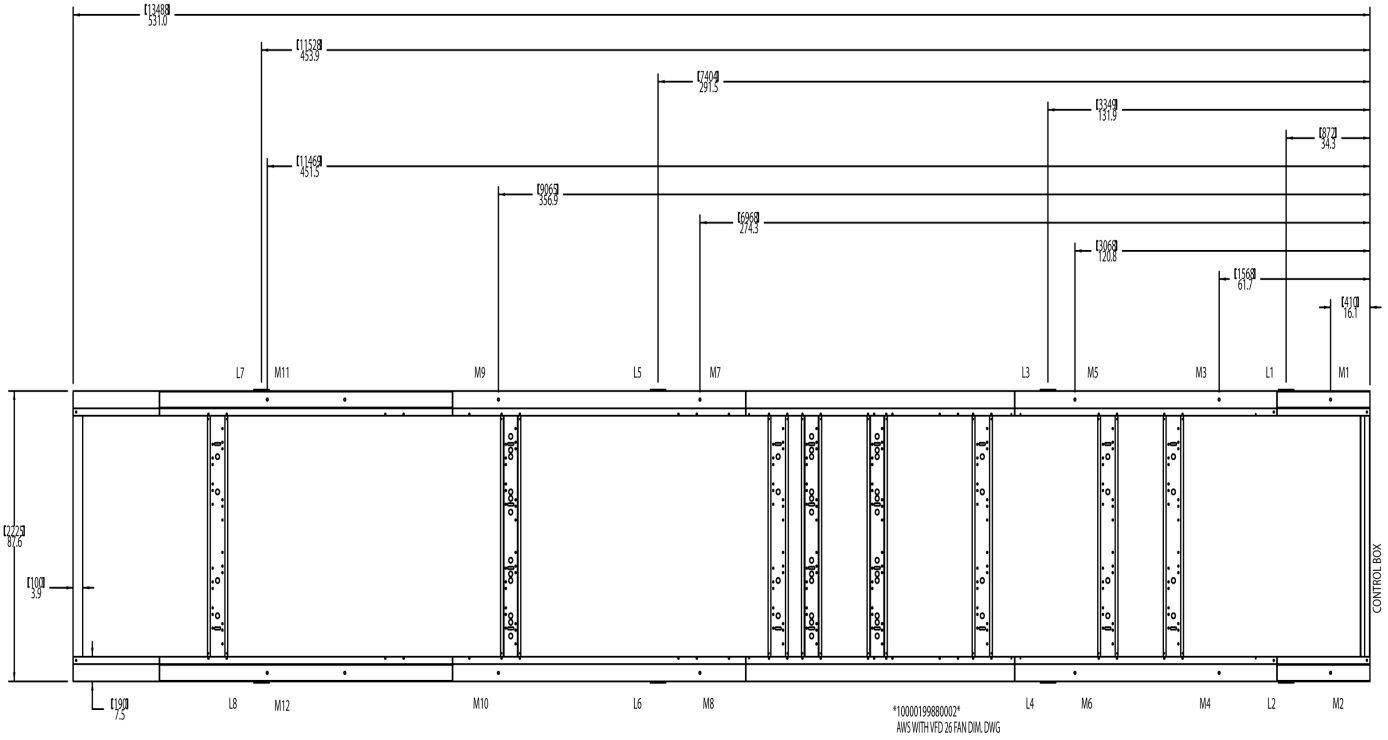


Figure 133: AWS500 High Efficiency, 60Hz, (with optional VFD)

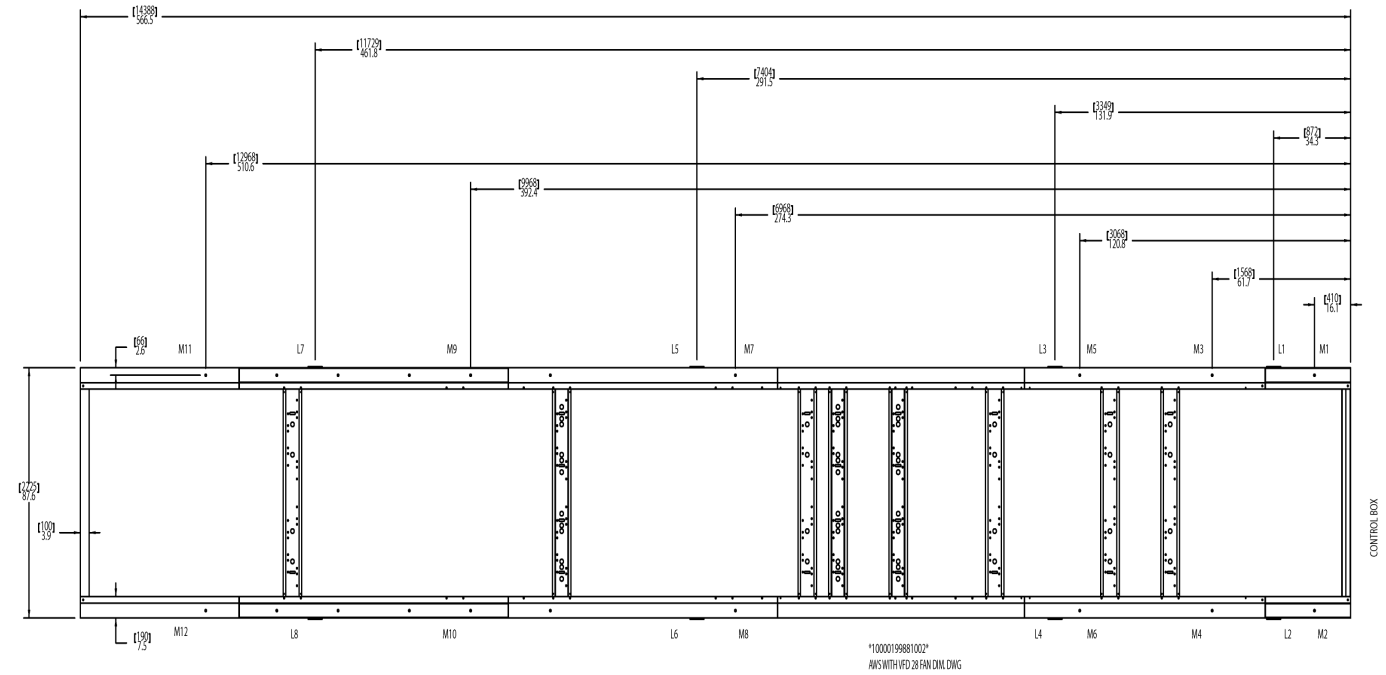


Figure 134: AWS530 High Efficiency, 60Hz, (with optional VFD)

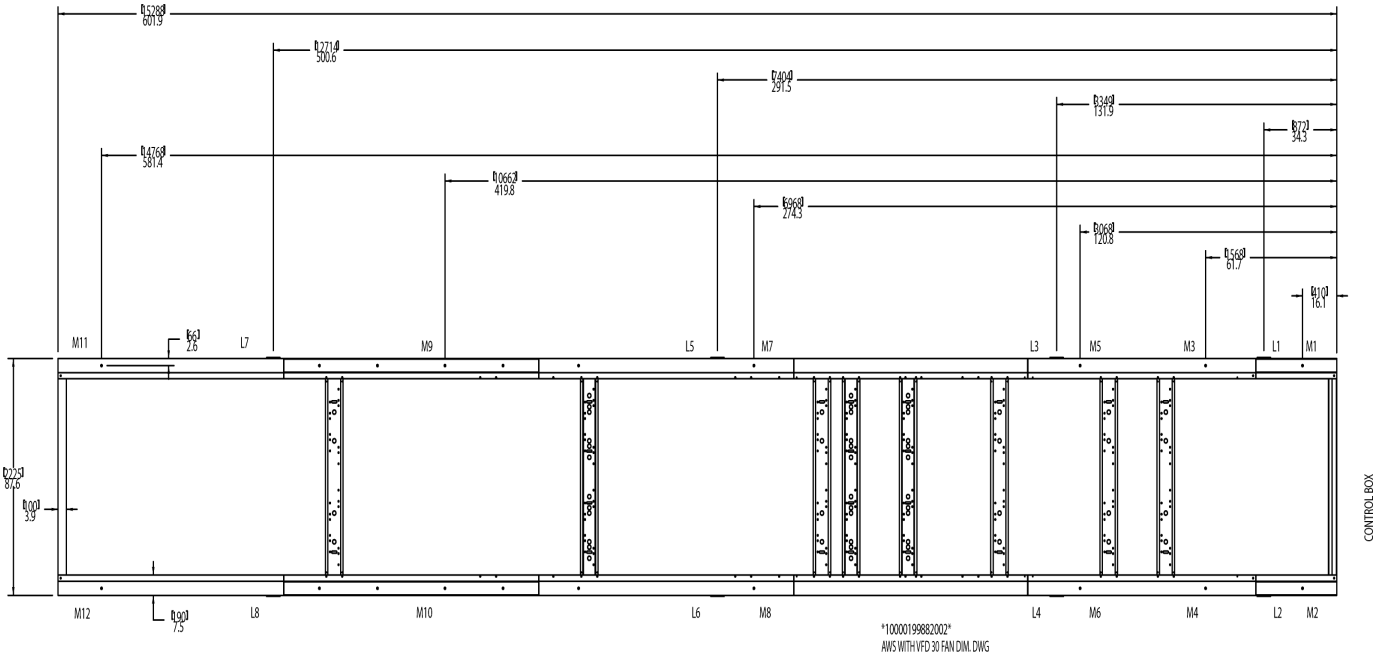


Figure 135: AWS210 Premium Efficiency, 60Hz, (with optional VFD)

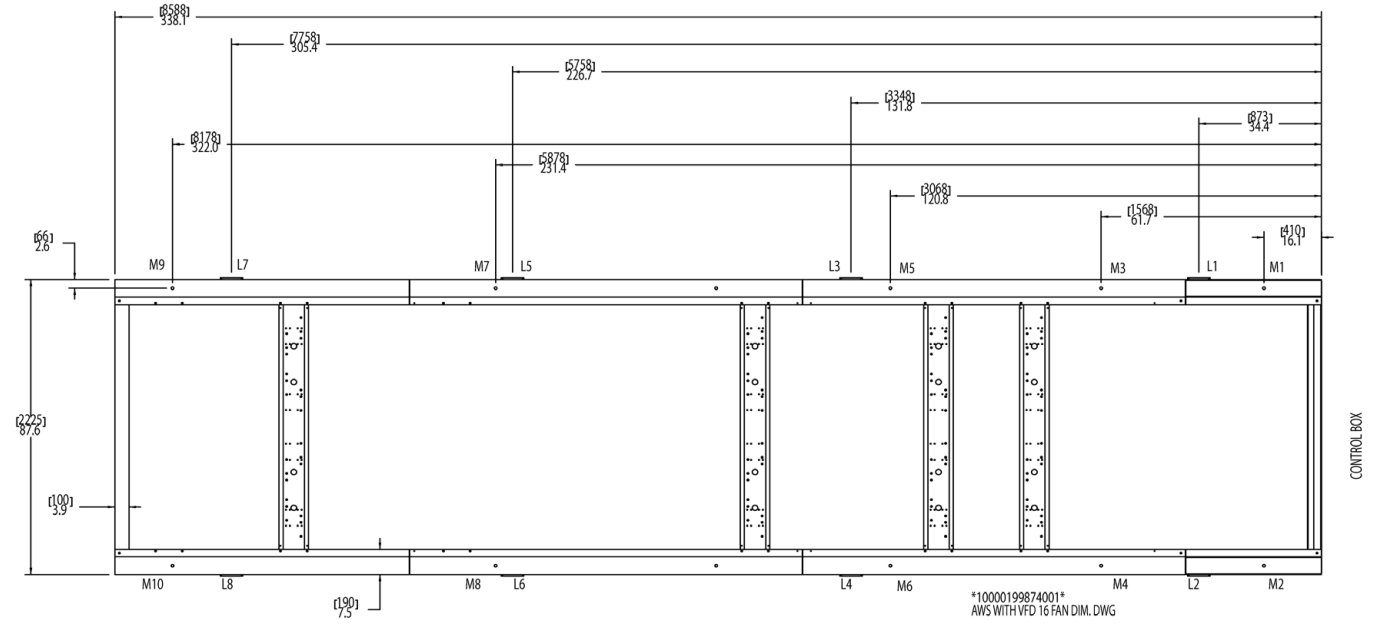


Figure 136: AWS230 Premium Efficiency, 60Hz, (with optional VFD)

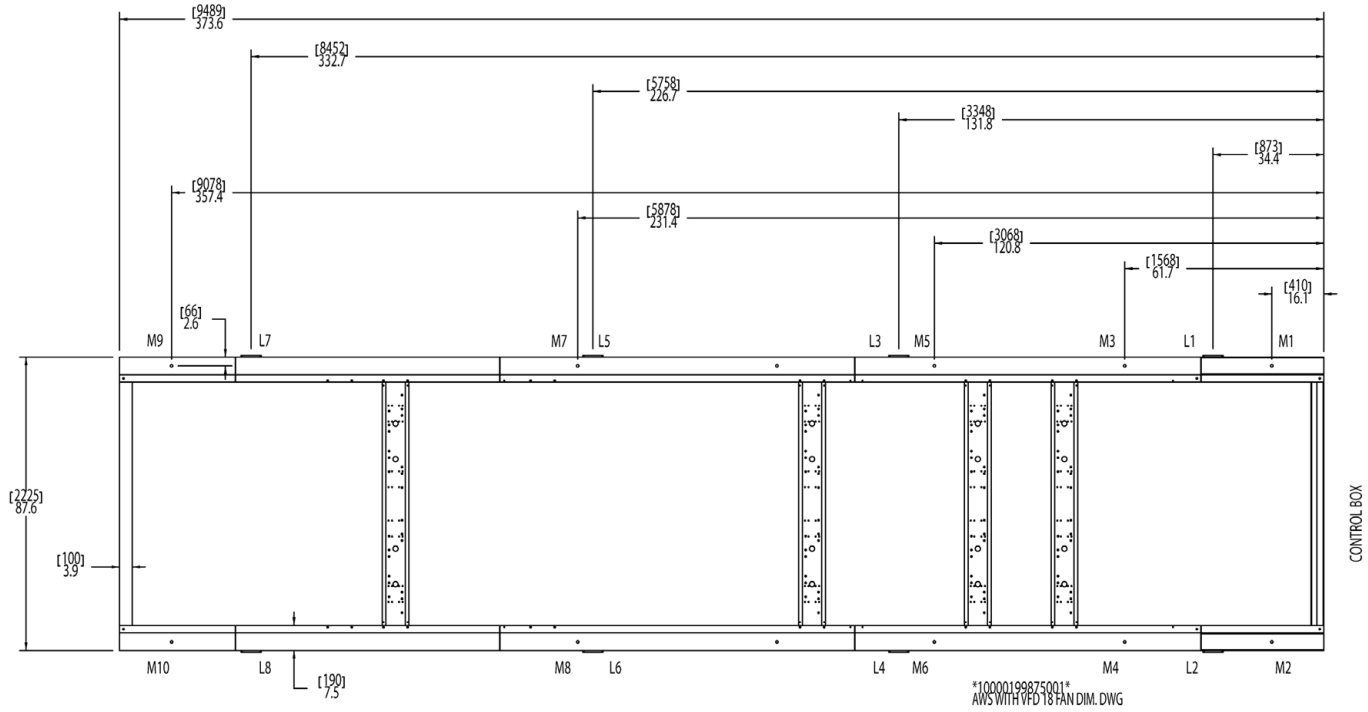


Figure 137: AWS250 Premium Efficiency, 60Hz, (with optional VFD)

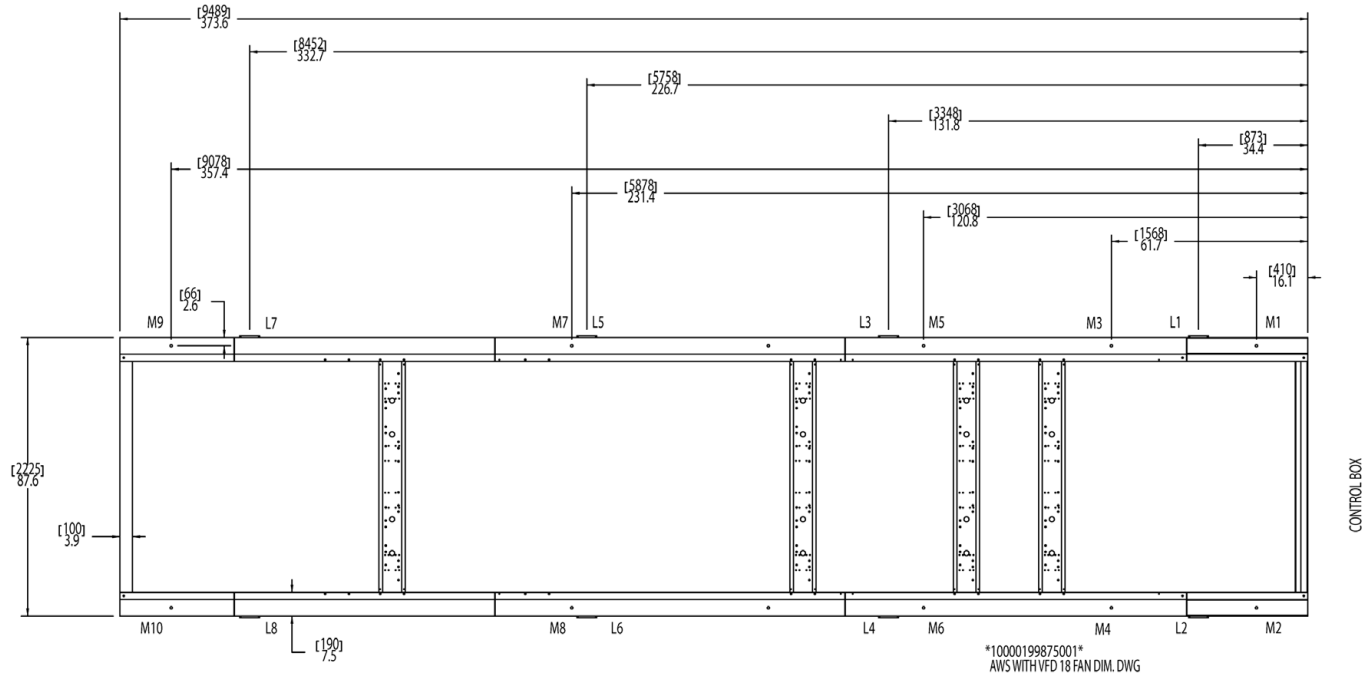


Figure 138: AWS280 & AWS300 Premium Efficiency, 60Hz (with optional VFD)

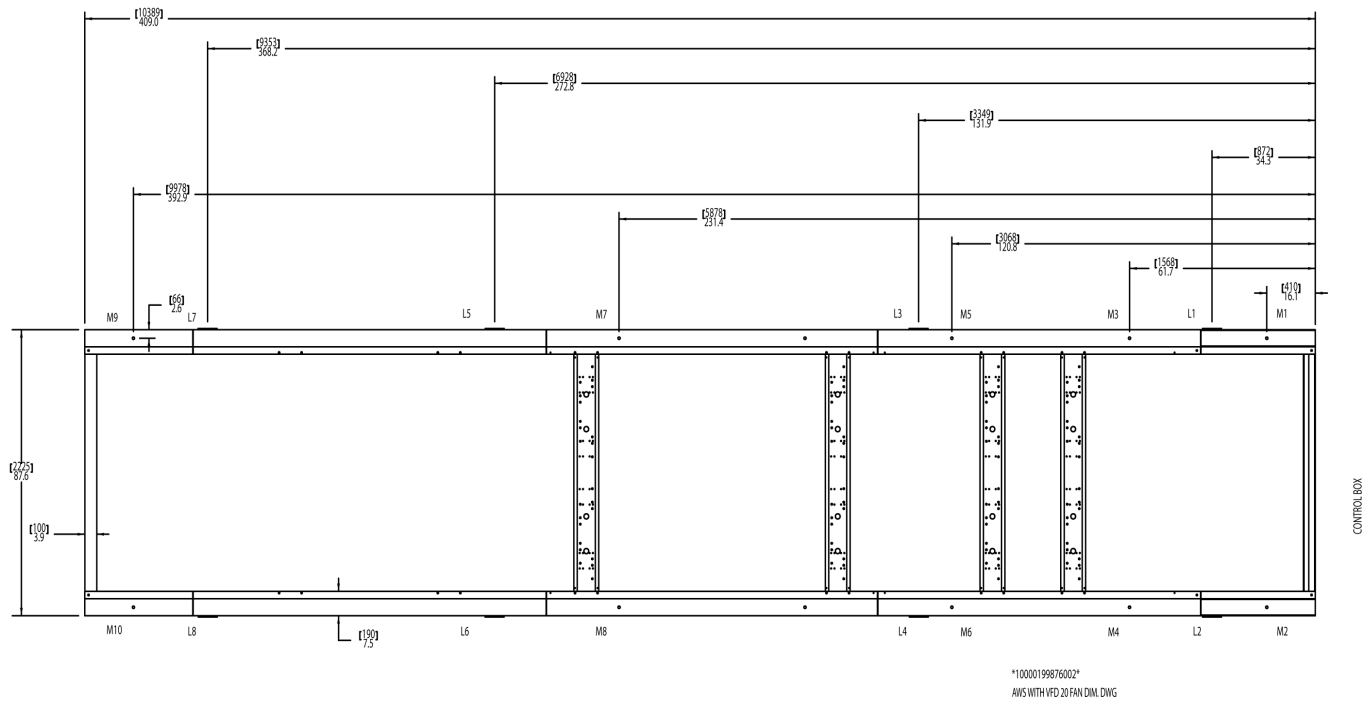
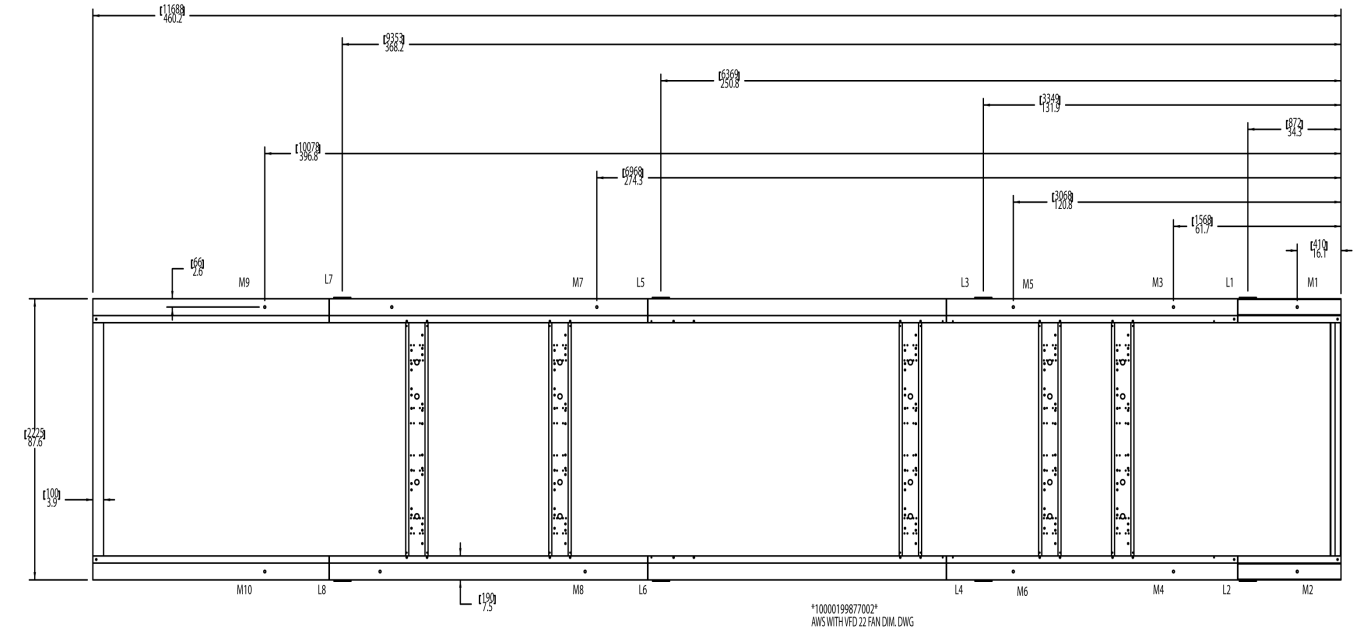
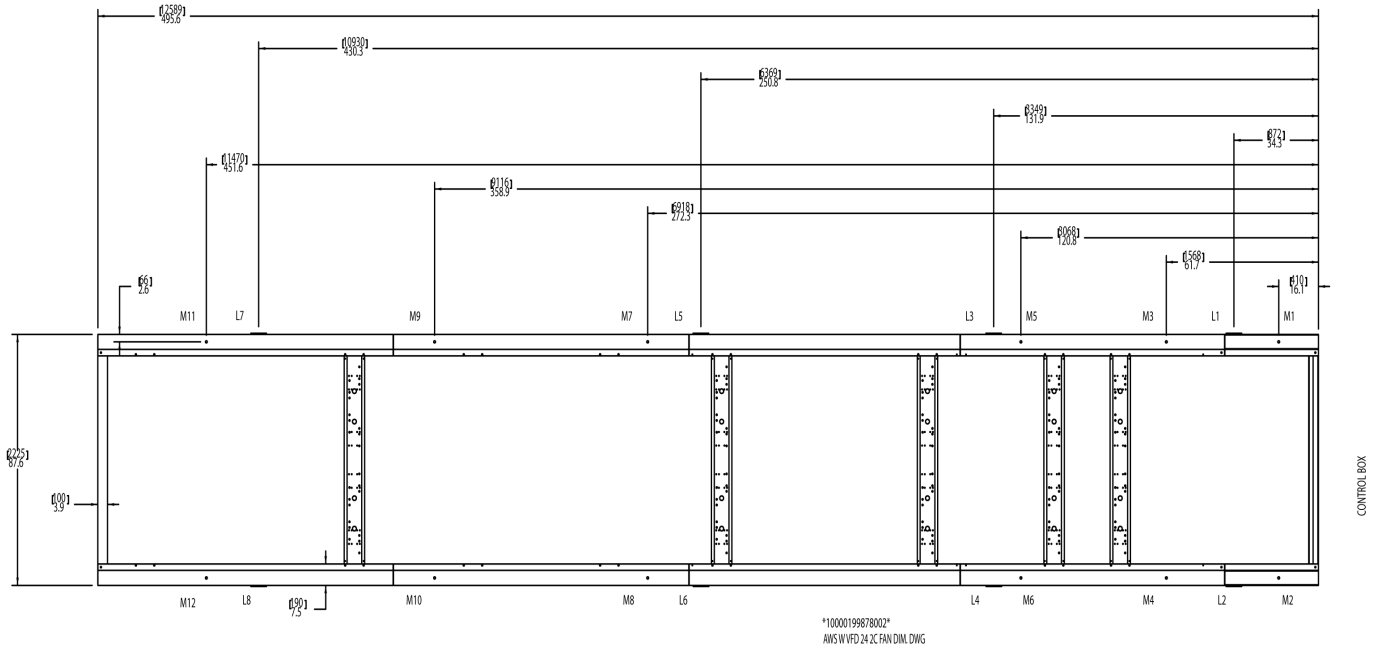


Figure 139: AWS 320 Premium Efficiency, 60Hz (with optional VFD)



Lifting & Mounting Locations (VFD)

Figure 140: AWS350 Premium Efficiency, 60Hz (with optional VFD)



Transfer the unit as indicated under Handling on page 4. In all cases, set the unit in place and level with a spirit level. When spring-type isolators are required, install springs running under the main unit supports.

The unit should be set initially on shims or blocks at the listed spring free height. When all piping, wiring, flushing, charging, etc., is completed, the springs are adjusted upward to loosen the blocks or shims that are then removed.

A rubber anti-skid pad should be used under isolators if hold-down bolts are not used.

Installation of spring isolators requires flexible piping connections and at least three feet of flexible electrical conduit to avoid straining the piping and transmitting vibration and noise.

Figure 141: Spring Isolators - CP-4

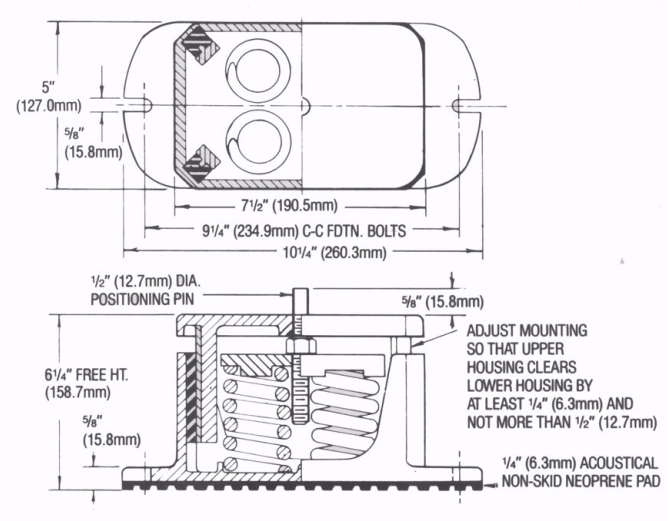
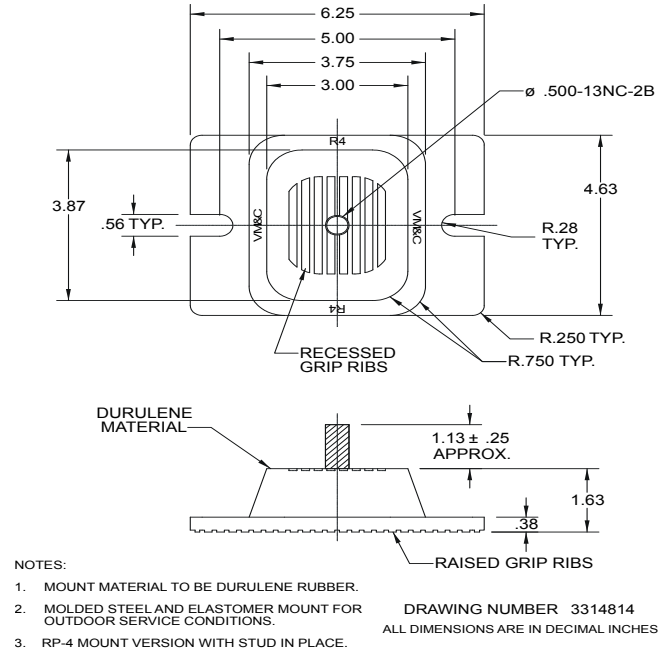


Figure 142: Neoprene-in-Shear Isolators - RP-4



Isolator Locations and Kit Numbers

Table 63: Spring Isolators (for 60Hz non-VFD Units with Aluminum Fin Condensers)

UNIT SIZE	Hz	# OF FANS	Kit P/N	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
AWS175 STD EFF	60 Hz	10	**332320807**	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple	N/A	N/A	N/A	N/A
AWS190 STD EFF	60 Hz	12	**332320808**	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A	N/A	N/A
AWS210 STD EFF	60 Hz	12	**332320808**	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A	N/A	N/A
AWS230 STD EFF	60 Hz	14	**332320809**	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple	332620400 Red	332620400 Red	N/A	N/A
AWS250 STD EFF	60 Hz	14	**332320809**	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple	332620400 Red	332620400 Red	N/A	N/A
AWS280 STD EFF	60 Hz	16	**332320819**	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black	N/A	N/A
AWS300 STD EFF	60 Hz	16	**332320819**	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black	N/A	N/A
AWS320 STD EFF	60 Hz	20	**332320805**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS350 STD EFF	60 Hz	20	**332320805**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS375 STD EFF	60 Hz	22	**332320810**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS400 STD EFF	60 Hz	22	**332320810**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS425 STD EFF	60 Hz	24	**332320811**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black
AWS445 STD EFF	60 Hz	24	**332320811**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black
AWS470 STD EFF	60 Hz	26	**332320812**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green
AWS500 STD EFF	60 Hz	28	**332320813**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple
AWS530 STD EFF	60 Hz	30	**332320813**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple
AWS210 High EFF	60 Hz	12	**332320808**	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A	N/A	N/A
AWS230 High EFF	60 Hz	14	**332320809**	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple	332620400 Red	332620400 Red	N/A	N/A
AWS250 High EFF	60 Hz	14	**332320809**	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple	332620400 Red	332620400 Red	N/A	N/A
AWS280 High EFF	60 Hz	16	**332320819**	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black	N/A	N/A
AWS300 High EFF	60 Hz	16	**332320819**	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black	N/A	N/A
AWS320 High EFF	60 Hz	20	**332320805**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS350 High EFF	60 Hz	20	**332320805**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS380 High EFF	60 Hz	22	**332320810**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS405 High EFF	60 Hz	24	**332320811**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black
AWS445 High EFF	60 Hz	24	**332320811**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black
AWS470 High EFF	60 Hz	26	**332320812**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green
AWS500 High EFF	60 Hz	28	**332320813**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple
AWS530 High EFF	60 Hz	30	**332320813**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple
AWS210 Prem EFF	60 Hz	16	**332320819**	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black	N/A	N/A
AWS230 Prem EFF	60 Hz	18	**332320803**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple	N/A	N/A
AWS250 Prem EFF	60 Hz	20	**332320805**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS280 Prem EFF	60 Hz	20	**332320805**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS300 Prem EFF	60 Hz	22	**332320810**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS320 Prem EFF	60 Hz	22	**332320810**	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS350 Prem EFF	60 Hz	24	**332320811**	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black

Table 64: Spring Isolators (for 60Hz non-VFD Units with Copper Fin Condensers)

UNIT SIZE	Hz	# OF FANS	Kit P/N	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
AWS175 STD EFF	60 Hz	10	332320814	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A	N/A	N/A
AWS190 STD EFF	60 Hz	12	332320814	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A	N/A	N/A
AWS210 STD EFF	60 Hz	12	332320814	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A	N/A	N/A
AWS230 STD EFF	60 Hz	14	332320815	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple	332620500 Black	332620500 Black	N/A	N/A
AWS250 STD EFF	60 Hz	14	332320815	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple	332620500 Black	332620500 Black	N/A	N/A
AWS280 STD EFF	60 Hz	16	332320802	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black	N/A	N/A
AWS300 STD EFF	60 Hz	16	332320802	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black	N/A	N/A
AWS320 STD EFF	60 Hz	20	332320805	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS350 STD EFF	60 Hz	20	332320805	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS375 STD EFF	60 Hz	22	332320816	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	N/A	N/A
AWS400 STD EFF	60 Hz	22	332320816	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	N/A	N/A
AWS425 STD EFF	60 Hz	24	332320817	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple
AWS445 STD EFF	60 Hz	24	332320817	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple
AWS470 STD EFF	60 Hz	26	332320818	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green
AWS500 STD EFF	60 Hz	28	332320818	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green
AWS530 STD EFF	60 Hz	30	332320818	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green
AWS210 High EFF	60 Hz	12	332320814	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A	N/A	N/A
AWS230 High EFF	60 Hz	14	332320815	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple	332620500 Black	332620500 Black	N/A	N/A
AWS250 High EFF	60 Hz	14	332320815	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple	332620500 Black	332620500 Black	N/A	N/A
AWS280 High EFF	60 Hz	16	332320802	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black	N/A	N/A
AWS300 High EFF	60 Hz	16	332320802	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black	N/A	N/A
AWS320 High EFF	60 Hz	20	332320805	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS350 High EFF	60 Hz	20	332320805	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS380 High EFF	60 Hz	22	332320816	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	N/A	N/A
AWS405 High EFF	60 Hz	24	332320817	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple
AWS445 High EFF	60 Hz	24	332320817	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple
AWS470 High EFF	60 Hz	26	332320818	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green
AWS500 High EFF	60 Hz	28	332320818	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green
AWS530 High EFF	60 Hz	30	332320818	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green
AWS210 Prem	60 Hz	16	332320802	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620500 Black	332620500 Black	N/A	N/A
AWS230 Prem	60 Hz	18	332320805	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS250 Prem	60 Hz	20	332320805	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS280 Prem	60 Hz	20	332320805	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	332620800 Dark Green	N/A	N/A
AWS300 Prem	60 Hz	22	332320816	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	N/A	N/A
AWS320 Prem	60 Hz	22	332320816	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620900 Gray	332620900 Gray	N/A	N/A
AWS350 Prem	60 Hz	24	332320817	332621000 White	332621000 White	332621000 White	332621000 White	332620900 Gray	332620900 Gray	332620800 Dark Green	332620800 Dark Green	332620600 Dark Purple	332620600 Dark Purple

Isolator Locations and Kit Numbers

Table 65: RIS Isolators (for 60Hz non-VFD Units with Aluminum Fin Condensers)

UNIT SIZE	Hz	# OF FANS	Kit P/N	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
AWS175 STD Eff	60 Hz	10	332325806	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A	N/A	N/A
				Green	Green	Green	Green	Red	Red				
AWS190 STD Eff	60 Hz	12	332325806	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A	N/A	N/A
				Green	Green	Green	Green	Red	Red				
AWS210 STD Eff	60 Hz	12	332325806	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A	N/A	N/A
				Green	Green	Green	Green	Red	Red				
AWS230 STD Eff	60 Hz	14	332325807	331481404	331481404	331481403	331481403	331481401	331481401	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Brown	Brown	Brown	Brown		
AWS250 STD Eff	60 Hz	14	332325807	331481404	331481404	331481403	331481403	331481401	331481401	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Brown	Brown	Brown	Brown		
AWS280 STD Eff	60 Hz	16	332325801	331481404	331481404	331481403	331481403	331481403	331481403	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Brown	Brown		
AWS300 STD Eff	60 Hz	16	332325801	331481404	331481404	331481403	331481403	331481403	331481403	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Brown	Brown		
AWS320 STD Eff	60 Hz	20	332325808	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Red	Red		
AWS350 STD Eff	60 Hz	20	332325808	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Red	Red		
AWS375 STD Eff	60 Hz	22	332325809	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Purple	Purple	Gray	Gray	Green	Green	Green	Green		
AWS400 STD Eff	60 Hz	22	332325809	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Purple	Purple	Gray	Gray	Green	Green	Green	Green		
AWS425 STD Eff	60 Hz	24	332325810	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Green	Green	Green	Green	Red	Red
AWS445 STD Eff	60 Hz	24	332325810	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Green	Green	Green	Green	Red	Red
AWS470 STD Eff	60 Hz	26	332325810	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Green	Green	Green	Green	Red	Red
AWS500 STD Eff	60 Hz	28	332325811	331481405	331481405	331481404	331481404	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Gray	Gray	Green	Green	Red	Red
AWS530 STD Eff	60 Hz	30	332325811	331481405	331481405	331481404	331481404	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Gray	Gray	Green	Green	Red	Red
AWS210 High Eff	60 Hz	12	332325806	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A	N/A	N/A
				Green	Green	Green	Green	Red	Red				
AWS230 High Eff	60 Hz	14	332325807	331481404	331481404	331481403	331481403	331481401	331481401	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Brown	Brown	Brown	Brown		
AWS250 High Eff	60 Hz	14	332325807	331481404	331481404	331481403	331481403	331481401	331481401	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Brown	Brown	Brown	Brown		
AWS280 High Eff	60 Hz	16	332325801	331481404	331481404	331481403	331481403	331481403	331481403	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Brown	Brown		
AWS300 High Eff	60 Hz	16	332325801	331481404	331481404	331481403	331481403	331481403	331481403	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Brown	Brown		
AWS320 High Eff	60 Hz	20	332325808	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Red	Red		
AWS350 High Eff	60 Hz	20	332325808	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Red	Red		
AWS380 High Eff	60 Hz	22	332325809	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Purple	Purple	Gray	Gray	Green	Green	Green	Green		
AWS405 High Eff	60 Hz	24	332325810	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Green	Green	Green	Green	Red	Red
AWS445 High Eff	60 Hz	24	332325810	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Green	Green	Green	Green	Red	Red
AWS470 High Eff	60 Hz	26	332325810	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Green	Green	Green	Green	Red	Red
AWS500 High Eff	60 Hz	28	332325811	331481405	331481405	331481404	331481404	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Gray	Gray	Green	Green	Red	Red
AWS530 High Eff	60 Hz	30	332325811	331481405	331481405	331481404	331481404	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Gray	Gray	Green	Green	Red	Red
AWS210 Prem Eff	60 Hz	16	332325801	331481404	331481404	331481403	331481403	331481403	331481403	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Brown	Brown		
AWS230 Prem Eff	60 Hz	18	332325808	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Red	Red		
AWS250 Prem Eff	60 Hz	20	332325808	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Red	Red		
AWS280 Prem Eff	60 Hz	20	332325808	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Red	Red		
AWS300 Prem Eff	60 Hz	22	332325809	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Purple	Purple	Gray	Gray	Green	Green	Green	Green		
AWS320 Prem Eff	60 Hz	22	332325809	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Purple	Purple	Gray	Gray	Green	Green	Green	Green		
AWS350 Prem Eff	60 Hz	24	332325810	331481405	331481405	331481404	331481404	331481403	331481403	331481403	331481403	331481402	331481402
				Purple	Purple	Gray	Gray	Green	Green	Green	Green	Red	Red

RIS Isolators (for 60Hz non-VFD Units with Copper Fin Condensers)

UNIT SIZE	Hz	# OF FANS	Kit P/N	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
AWS175 STD EFF	60 Hz	10	**332325812**	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A	N/A	N/A
				Gray	Gray	Green	Green	Green	Green				
AWS190 STD EFF	60 Hz	12	**332325812**	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A	N/A	N/A
				Gray	Gray	Green	Green	Green	Green				
AWS210 STD EFF	60 Hz	12	**332325812**	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A	N/A	N/A
				Gray	Gray	Green	Green	Green	Green				
AWS230 STD EFF	60 Hz	14	**332325801**	331481404	331481404	331481403	331481403	331481403	331481403	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Brown	Brown		
AWS250 STD EFF	60 Hz	14	**332325801**	331481404	331481404	331481403	331481403	331481403	331481403	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Brown	Brown		
AWS280 STD EFF	60 Hz	16	**332325803**	331481404	331481404	331481404	331481404	331481402	331481402	331481402	331481402	N/A	N/A
				Gray	Gray	Gray	Gray	Red	Red	Red	Red		
AWS300 STD EFF	60 Hz	16	**332325803**	331481404	331481404	331481404	331481404	331481402	331481402	331481402	331481402	N/A	N/A
				Gray	Gray	Gray	Gray	Red	Red	Red	Red		
AWS320 STD EFF	60 Hz	20	**332325802**	331481404	331481404	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Gray	Gray	Gray	Gray	Green	Green	Green	Green		
AWS350 STD EFF	60 Hz	20	**332325802**	331481404	331481404	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Gray	Gray	Gray	Gray	Green	Green	Green	Green		
AWS375 STD EFF	60 Hz	22	**332325812**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	N/A	N/A
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green		
AWS400 STD EFF	60 Hz	22	**332325812**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	N/A	N/A
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green		
AWS425 STD EFF	60 Hz	24	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red
AWS445 STD EFF	60 Hz	24	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red
AWS470 STD EFF	60 Hz	26	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red
AWS500 STD EFF	60 Hz	28	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red
AWS530 STD EFF	60 Hz	30	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red
AWS210 High EFF	60 Hz	12	**332325812**	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A	N/A	N/A
				Gray	Gray	Green	Green	Green	Green				
AWS230 High EFF	60 Hz	14	**332325801**	331481404	331481404	331481403	331481403	331481403	331481403	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Brown	Brown		
AWS250 High EFF	60 Hz	14	**332325801**	331481404	331481404	331481403	331481403	331481403	331481403	331481401	331481401	N/A	N/A
				Gray	Gray	Green	Green	Green	Green	Brown	Brown		
AWS280 High EFF	60 Hz	16	**332325803**	331481404	331481404	331481404	331481404	331481402	331481402	331481402	331481402	N/A	N/A
				Gray	Gray	Gray	Gray	Red	Red	Red	Red		
AWS300 High EFF	60 Hz	16	**332325803**	331481404	331481404	331481404	331481404	331481402	331481402	331481402	331481402	N/A	N/A
				Gray	Gray	Gray	Gray	Red	Red	Red	Red		
AWS320 High EFF	60 Hz	20	**332325802**	331481404	331481404	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Gray	Gray	Gray	Gray	Green	Green	Green	Green		
AWS350 High EFF	60 Hz	20	**332325802**	331481404	331481404	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Gray	Gray	Gray	Gray	Green	Green	Green	Green		
AWS380 High EFF	60 Hz	22	**332325812**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	N/A	N/A
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green		
AWS405 High EFF	60 Hz	24	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red
AWS445 High EFF	60 Hz	24	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red
AWS470 High EFF	60 Hz	26	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red
AWS500 High EFF	60 Hz	28	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red
AWS530 High EFF	60 Hz	30	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red
AWS210 Prem EFF	60 Hz	16	**332325803**	331481404	331481404	331481404	331481404	331481402	331481402	331481402	331481402	N/A	N/A
				Gray	Gray	Gray	Gray	Red	Red	Red	Red		
AWS230 Prem EFF	60 Hz	18	**332325802**	331481404	331481404	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Gray	Gray	Gray	Gray	Green	Green	Green	Green		
AWS250 Prem EFF	60 Hz	20	**332325802**	331481404	331481404	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Gray	Gray	Gray	Gray	Green	Green	Green	Green		
AWS280 Prem EFF	60 Hz	20	**332325802**	331481404	331481404	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A
				Gray	Gray	Gray	Gray	Green	Green	Green	Green		
AWS300 Prem EFF	60 Hz	22	**332325812**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	N/A	N/A
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green		
AWS320 Prem EFF	60 Hz	22	**332325812**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	N/A	N/A
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green		
AWS350 Prem EFF	60 Hz	24	**332325815**	331481405	331481405	331481405	331481405	331481404	331481404	331481403	331481403	331481402	331481402
				Purple	Purple	Purple	Purple	Gray	Gray	Green	Green	Red	Red

Isolator Locations and Kit Numbers

Table 66: Spring Isolators (for 60Hz Units with optional VFD and Aluminum Fin Condensers)

UNIT SIZE	# OF FANS	Kit P/N	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
AWS150ADS*/VFD*	10	332320807	33620800	33620800	33620800	33620800	33620600	33620600	N/A	N/A	N/A	N/A	N/A	N/A
			Dark Green	Dark Green	Dark Green	Dark Green	Dark Purple	Dark Purple						
AWS175ADS*/VFD*	12	332320808	33620800	33620800	33620800	33620800	33620800	33620800	N/A	N/A	N/A	N/A	N/A	N/A
			Dark Green	Dark Green	Dark Green	Dark Green	Dark Green	Dark Green						
AWS190ADS*/VFD*	12	332320808	33620800	33620800	33620800	33620800	33620800	33620800	N/A	N/A	N/A	N/A	N/A	N/A
			Dark Green	Dark Green	Dark Green	Dark Green	Dark Green	Dark Green						
AWS210ADH*/VFD*	12	332320821	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	N/A	N/A	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green				
AWS230ADH*/VFD*	14	332320822	33620800	33620800	33620800	33620800	33620800	33620800	33620500	33620500	332620500	332620500	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Black	Black	Black	Black		
AWS250ADH*/VFD*	14	332320822	33620800	33620800	33620800	33620800	33620800	33620800	33620500	33620500	332620500	332620500	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Black	Black	Black	Black		
AWS280ADH*/VFD*	16	332320823	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620500	332620500	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Black	Black		
AWS300ADH*/VFD*	16	332320823	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620500	332620500	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Black	Black		
AWS320ADH*/VFD*	20	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS360ADH*/VFD*	20	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS380ADH*/VFD*	22	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS405ADH*/VFD*	24	332320825	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	332620600	332620600
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Purple	Dk. Purple
AWS445ADH*/VFD*	24	332320825	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	332620600	332620600
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Purple	Dk. Purple
AWS470ADH*/VFD*	26	332320826	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	332620800	332620800
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green
AWS500ADH*/VFD*	28	332320826	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	332620800	332620800
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green
AWS530ADH*/VFD*	30	332320827	33620900	33620900	33620900	33620900	33620900	33620900	33620800	33620800	332620800	332620800	332620800	332620800
			Gray	Gray	Gray	Gray	Gray	Gray	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green
AWS210ADP*/VFD*	16	332320823	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620500	332620500	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Black	Black		
AWS230ADP*/VFD*	18	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS250ADP*/VFD*	18	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS280ADP*/VFD*	20	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS300ADP*/VFD*	20	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS320ADP*/VFD*	22	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS360ADP*/VFD*	24	332320825	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	332620600	332620600
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Purple	Dk. Purple

Table 67: Spring Isolators (for 60Hz Units with optional VFD and Copper Fin Condensers)

UNIT SIZE	# OF FANS	Kit P/N	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
AWS150ADS*VFD*	10	332320814	33620900	33620900	33620800	33620800	33620800	33620800	N/A	N/A	N/A	N/A	N/A	N/A
			Gray	Gray	Dark Green	Dark Green	Dark Green	Dark Green						
AWS175ADS*VFD*	12	332320814	33620900	33620900	33620800	33620800	33620800	33620800	N/A	N/A	N/A	N/A	N/A	N/A
			Gray	Gray	Dark Green	Dark Green	Dark Green	Dark Green						
AWS190ADS*VFD*	12	332320814	33620900	33620900	33620800	33620800	33620800	33620800	N/A	N/A	N/A	N/A	N/A	N/A
			Gray	Gray	Dark Green	Dark Green	Dark Green	Dark Green						
AWS210ADH*VFD*	12	332320821	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	N/A	N/A	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green				
AWS230ADH*VFD*	14	332320822	33620800	33620800	33620800	33620800	33620800	33620800	33620500	33620500	332620500	332620500	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Black	Black	Black	Black		
AWS250ADH*VFD*	14	332320822	33620800	33620800	33620800	33620800	33620800	33620800	33620500	33620500	332620500	332620500	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Black	Black	Black	Black		
AWS280ADH*VFD*	16	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS300ADH*VFD*	16	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS320ADH*VFD*	20	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS350ADH*VFD*	20	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS380ADH*VFD*	22	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS405ADH*VFD*	24	332320825	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	332620600	332620600
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Purple	Dk. Purple
AWS445ADH*VFD*	24	332320825	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	332620600	332620600
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Purple	Dk. Purple
AWS470ADH*VFD*	26	332320826	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	332620800	332620800
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green
AWS500ADH*VFD*	28	332320827	33620900	33620900	33620900	33620900	33620900	33620900	33620800	33620800	332620800	332620800	332620800	332620800
			Gray	Gray	Gray	Gray	Gray	Gray	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green
AWS530ADH*VFD*	30	332320827	33620900	33620900	33620900	33620900	33620900	33620900	33620800	33620800	332620800	332620800	332620800	332620800
			Gray	Gray	Gray	Gray	Gray	Gray	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green
AWS210ADP*VFD*	16	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS230ADP*VFD*	18	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS250ADP*VFD*	18	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS280ADP*VFD*	20	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS300ADP*VFD*	20	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS320ADP*VFD*	22	332320824	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	N/A	N/A
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green		
AWS350ADP*VFD*	24	332320825	33620800	33620800	33620800	33620800	33620800	33620800	33620800	33620800	332620800	332620800	332620600	332620600
			Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Green	Dk. Purple	Dk. Purple

Isolator Locations and Kit Numbers

Table 68: RIS Isolators (for 60Hz Units with optional VFD and Aluminum Fin Condensers)

UNIT SIZE	# OF FANS	Kit P/N	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
AWS160ADS*/VFD*	10	332325806	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A	N/A	N/A	N/A	N/A
			Green	Green	Green	Green	Red	Red						
AWS175ADS*/VFD*	12	332325806	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A	N/A	N/A	N/A	N/A
			Green	Green	Green	Green	Red	Red						
AWS190ADS*/VFD*	12	332325806	331481403	331481403	331481403	331481403	331481402	331481402	N/A	N/A	N/A	N/A	N/A	N/A
			Green	Green	Green	Green	Red	Red						
AWS210ADH*/VFD*	12	332325821	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	N/A	N/A	N/A	N/A
			Red	Red	Red	Red	Red	Red	Red	Red				
AWS230ADH*/VFD*	14	332325822	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	N/A	N/A
			Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		
AWS250ADH*/VFD*	14	332325822	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	N/A	N/A
			Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		
AWS280ADH*/VFD*	16	332325822	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	N/A	N/A
			Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		
AWS300ADH*/VFD*	16	332325822	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	N/A	N/A
			Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		
AWS320ADH*/VFD*	20	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS350ADH*/VFD*	20	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS380ADH*/VFD*	22	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS405ADH*/VFD*	24	332325824	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
AWS445ADH*/VFD*	24	332325824	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
AWS470ADH*/VFD*	26	332325824	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
AWS500ADH*/VFD*	28	332325824	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
AWS530ADH*/VFD*	30	332325825	331481404	331481404	331481404	331481404	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403
			Gray	Gray	Gray	Gray	Green	Green	Green	Green	Green	Green	Green	Green
AWS210ADP*/VFD*	16	332325822	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	331481402	N/A	N/A
			Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		
AWS230ADP*/VFD*	18	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS250ADP*/VFD*	18	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS280ADP*/VFD*	20	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS300ADP*/VFD*	20	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS320ADP*/VFD*	22	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS360ADP*/VFD*	24	332325824	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

Table 69: RIS Isolators (for 60Hz Units with optional VFD and Copper Fin Condensers)

UNIT SIZE	# OF FANS	Kit P/N	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
AWS150ADS*VFD*	10	332325812	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A	N/A	N/A	N/A	N/A
			Gray	Gray	Green	Green	Green	Green						
AWS175ADS*VFD*	12	332325812	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A	N/A	N/A	N/A	N/A
			Gray	Gray	Green	Green	Green	Green						
AWS190ADS*VFD*	12	332325812	331481404	331481404	331481403	331481403	331481403	331481403	N/A	N/A	N/A	N/A	N/A	N/A
			Gray	Gray	Green	Green	Green	Green						
AWS210ADH*VFD*	12	332325826	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green				
AWS230ADH*VFD*	14	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS250ADH*VFD*	14	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS280ADH*VFD*	16	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS300ADH*VFD*	16	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS320ADH*VFD*	20	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS350ADH*VFD*	20	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS380ADH*VFD*	22	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS405ADH*VFD*	24	332325824	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
AWS445ADH*VFD*	24	332325824	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
AWS470ADH*VFD*	26	332325824	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
AWS500ADH*VFD*	28	332325827	331481404	331481404	331481404	331481404	331481404	331481404	331481403	331481403	331481403	331481403	331481403	331481403
			Gray	Gray	Gray	Gray	Gray	Gray	Green	Green	Green	Green	Green	Green
AWS530ADH*VFD*	30	332325827	331481404	331481404	331481404	331481404	331481404	331481404	331481403	331481403	331481403	331481403	331481403	331481403
			Gray	Gray	Gray	Gray	Gray	Gray	Green	Green	Green	Green	Green	Green
AWS210ADP*VFD*	16	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS230ADP*VFD*	18	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS250ADP*VFD*	18	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS280ADP*VFD*	20	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS300ADP*VFD*	20	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS320ADP*VFD*	22	332325823	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	N/A	N/A
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green		
AWS350ADP*VFD*	24	332325824	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403	331481403
			Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

Sound Data

Sound levels can be as important as unit cost and efficiency, and must be addressed before the start of any project design.

The Daikin McQuay Pathfinder chiller is engineered for quiet operation with aerodynamically designed fan blades, low speed motors and inherently quiet single screw compressors.

Standards

AHRI Has established standards to provide uniform methods for the determination of the sound levels of equipment. For large air-cooled chillers, it is AHRI Standard 370, *Sound Ratings of Large Outdoor Refrigeration and Air-Conditioning Equipment.* Data contained in this section are in accordance with this standard.

Background Information

Sound is a vibration in an elastic medium and is essentially a pressure and particle displacement phenomenon. A vibrating body produces compression waves and as the waves are emitted from the vibrating body, molecules are ultimately compressed. These values are transmitted through gases, liquids or solids-anything that is elastic or viscous.

The sound data provided in this section is presented with both sound pressure and sound power levels.

Sound Power Levels

Sound power is the total sound energy radiated by a source per unit of time integrated over the surface through which the sound is radiated. Sound power is a calculated quantity and cannot be measured directly like sound pressure. Sound power is not dependent on the surrounding environment or distance from the source. Sound measurements are taken over a prescribed area around the unit and the data is mathematically calculated to give the sound power in dB.

Sound Pressure Levels - Full Load

All sound pressure tables give the “A” weighted sound pressure levels, which are considered typical of what can be measured in a hemispherical field with a hand-held sound meter in the absence of any nearby reflective surfaces, other than the ground itself. The sound pressures is measured at 30 feet from the side of the unit, at 100% unit load, no reflecting walls (Q=2), and AHRI conditions; 95°F (35°C) ambient air temperature and 54/44°F (12.22/6.67°C) chilled water temperatures.

Sound pressure varies with the distance from the source and is dependent on its surroundings. For example, a brick wall located 10 feet from a unit (two reflecting surfaces, the roof and the wall) will affect the sound pressure measurements differently than a unit mounted on a roof with only one reflecting surface (the roof). Sound pressure is measured in decibels (dB), which is a dimensionless ratio (on a logarithmic scale) between measured sound pressure and a reference sound pressure level.

One-third Octave Band Sound Levels

The A-weighted sound rating method is good for evaluating the overall average sound levels, but does not adequately address the problem of “pure tones” in compressor sound levels. These dB spikes are much more objectionable to the listener than similar levels of broadband noise. AHRI standard 370 provides a method to evaluate these pure tones, and penalizes the sound ratings of compressors displaying these tonal spikes. The McQuay AWS chiller has been engineered for quiet operation, and the full one-third octave band spectrum is included in the following pages to allow for effective comparison with other units.

For more information on pure tones, see also:

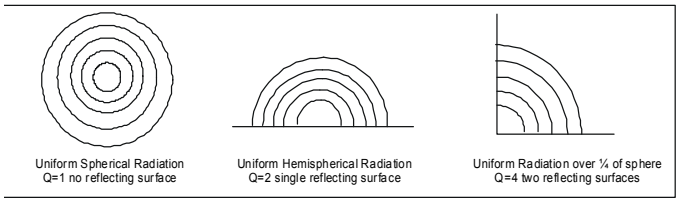
- AHRI Standard 370 (2001)
- ASHRAE Fundamentals Handbook, chapter 7
- Addressing Noise Problems in Screw Chillers, ASHRAE Journal Article (June 1999)

Acoustic Analyzer™ Program

The McQuay Acoustic Analyzer program is a tool that has been developed to assist the designer in determining sound levels in specific installations using actual equipment sound ratings. It is available through your local McQuay sales office.

Sound Reduction Due to Distance from Unit

The distance between a source of sound and the location of the sound measurement plays an important role in minimizing sound problems. The equation below can be used to calculate the sound pressure level at any distance if the sound power is known. Results for typical distances are tabulated in Table 70. Another way of determining the effect of distance is to work from sound pressure only. “Q”, the directionality factor, is a dimensionless number that compensates for the type of sound reflection from the source. For example, a unit sitting on a flat roof or ground with no other reflective surfaces or attenuation due to grass, snow, etc., between source and receiver: Q=2.



Sound pressure can be calculated at any distance from the unit if the sound power is known.

$Lp=Lw-(20 \log r) + (10 \log Q) -.5$

Lp = sound pressure

r = distance from unit in feet

Lw = sound power

Q = directionality factor

With Q=1, Unit suspended in space (theoretical condition), the equation simplifies to:

Lp = Lw – (20)(log r) –0.5

With Q=2, for a unit sitting on a flat roof or ground with no adjacent vertical wall as a reflective surface, the equation simplifies to:

Lp = Lw – (20)(log r) + 2.5

With Q=4 for a unit sitting on a flat roof or ground with one adjacent vertical wall as a reflective surface, the equation simplifies to:

Lp = Lw – (20)(log r) + 5.5

The equations are reduced to table form in Table 70 for various distances and the two most usual cases of "Q" type of location.

Table 70: dB Conversion of Sound Power to Pressure for Distance

Distance from Sound Source	dB Reduction from Sound Power at the Source to Sound Pressure at Referenced Distance	
M (FT)	Q=2	Q=4
9 (30)	26.3	23.8
15 (50)	30.7	27.7
23 (75)	34.3	31.2
30 (100)	36.7	33.7
46 (150)	40.3	37.3
61 (200)	42.8	39.8
91 (300)	46.3	43.3

Sound Isolation

The low sound level for the Pathfinder chiller satisfies most customer requirements. However, there can be applications where even lower sound levels are necessary. The most effective isolation method is to locate the unit away from sound sensitive areas. Avoid locations beneath windows or between structures where normal-operating sounds can be objectionable. Isolating water lines, electrical conduit and the unit itself can reduce structurally transmitted sound. Wall sleeves and rubber isolated piping hangers can be used to reduce transmission of water or pump noise into occupied spaces, and flexible electrical connections can be used to isolate sound through electrical conduit. Spring isolators are effective in reducing the low amplitude sound generated by screw compressors and can be used for unit isolation in sound sensitive areas.

Sound Pressure Levels, Low Ambient Operation

Unit operation at a lower ambient temperature than 95°F (35°C) will also result in lower sound pressure levels. The sound pressure level will decrease approximately 1 dBA for ambient air temperatures between 85°F and 94°F (29.4°C and 34.4°C), approximately 2 dBA for ambient air temperatures between 75F and 84°F (23.9°C and 28.9°C), and approximately 3 dBA for ambient air temperatures between 65F and 74°F (18.3°C and 23.3).

Sound Pressure Levels, Multiple Units

Multiple air-cooled unit installations will have a higher sound level than a single unit. Two units will have approximately 3 dB higher sound level of one unit, four units will be approximately 6 dB louder, and eight units approximately 9 dB louder than one unit.

Sound Control

Walls adjacent to a unit 20 feet (6 meters) or less will reflect the unit sound outwards, increasing the sound pressure on the side away from the wall. This sound increase could be as high as 3 dB for one wall and as high as 6 dB for a corner location. Unit orientation and/ or distance as noted above will decrease sound levels.

Sound levels can also be controlled by the installation of barrier walls. To be effective as sound blockers, walls must be solid with no open penetrations. Sound tends to leak out of openings. Block walls with filler material and slots on the side facing the unit are especially effective. The wall should be about 10 feet (3 meters) high or 2 feet (0.6 meters) higher than the unit and located at least 10 feet (3 meters) away so as not to affect unit performance. A three-sided enclosure will be the most effective solution and will reduce sound levels by about 10 dB. Remember that the wall will *increase* the sound level on the side opposite it by 3 to 6 dB (one or three-sided wall).

Note: The effect of adjacent walls on air recirculation and restriction must always be considered when using sound barrier walls.

Sound Data (non-VFD)

Table 71: Sound Power without sound enclosures (non-VFD)

Model	Power	Octave Band & Center Frequency.								100% Load A-Wtd	75% Load A-Wtd	50% Load A-Wtd	25% Load A-Wtd
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz				
175A Std Eff	60 Hz	84	86	89	88	84	79	70	61	94	93	91	90
190A Std Eff	60 Hz	85	87	89	89	85	80	70	61	94	93	92	91
210A Std Eff	60 Hz	85	87	89	89	85	80	70	61	94	93	92	91
230A Std Eff	60 Hz	85	87	90	89	85	81	71	62	95	94	93	91
250A Std Eff	60 Hz	85	87	90	89	85	81	71	62	95	94	93	91
280A Std Eff	60 Hz	86	88	91	90	86	81	72	62	95	95	94	92
300A Std Eff	60 Hz	86	88	91	90	86	81	72	62	95	95	94	92
320A Std Eff	60 Hz	87	89	92	91	87	82	73	63	96	96	95	93
350A Std Eff	60 Hz	87	89	92	91	87	82	73	63	96	96	95	93
375A Std Eff	60 Hz	88	90	93	92	88	84	74	65	98	97	96	95
400A Std Eff	60 Hz	88	90	93	92	88	84	74	65	98	97	96	95
425A Std Eff	60 Hz	89	91	94	93	89	84	75	65	99	98	97	95
445A Std Eff	60 Hz	89	91	94	93	89	84	75	65	99	98	97	95
470A Std Eff	60 Hz	89	91	94	93	89	85	75	66	99	98	97	96
500A Std Eff	60 Hz	89	92	94	94	89	85	75	66	99	98	97	96
530A Std Eff	60 Hz	90	92	95	94	90	85	76	67	100	99	98	96
210A High Eff	60 Hz	85	86	92	89	86	80	70	61	96	95	93	91
230A High Eff	60 Hz	86	86	93	90	87	80	71	61	96	95	94	92
250A High Eff	60 Hz	86	86	93	90	87	80	71	61	96	95	94	92
280A High Eff	60 Hz	86	87	93	90	88	81	72	62	97	96	95	93
300A High Eff	60 Hz	86	87	93	90	88	81	72	62	97	96	95	93
320A High Eff	60 Hz	87	88	94	91	88	82	72	63	98	97	96	94
350A High Eff	60 Hz	87	88	94	91	88	82	72	63	98	97	96	94
380A High Eff	60 Hz	88	88	95	91	89	82	73	63	98	97	96	95
405A High Eff	60 Hz	88	89	95	92	89	82	73	63	99	98	97	95
445A High Eff	60 Hz	90	90	96	93	91	84	75	65	100	99	98	96
470A High Eff	60 Hz	90	90	97	93	91	84	75	65	100	99	98	96
500A High Eff	60 Hz	90	91	97	94	91	85	75	66	101	100	98	97
530A High Eff	60 Hz	91	91	97	94	92	85	76	66	101	100	99	97
210A Prem Eff	60 Hz	86	87	93	90	88	81	72	62	97	96	95	93
230A Prem Eff	60 Hz	87	87	94	90	88	81	72	62	97	96	95	93
250A Prem Eff	60 Hz	87	87	94	90	88	81	72	62	97	96	95	93
280A Prem Eff	60 Hz	87	88	94	91	88	82	72	63	98	97	96	94
300A Prem Eff	60 Hz	87	88	94	91	88	82	72	63	98	97	96	94
320A Prem Eff	60 Hz	88	88	95	91	89	82	73	63	98	97	96	95
350A Prem Eff	60 Hz	88	89	95	92	89	82	73	63	99	98	97	95

Table 72: A-Weighted Sound Pressure without sound enclosures (non-VFD)

Pathfinder Model	Power	Octave Band & Center Frequency.								100% Control Box End A-Wtd	75% Load A-Wtd	50% Load A-Wtd	25% Load A-Wtd	100% Opposite Control Box A-	100% (Side A-Wtd)
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz						
175A Std Eff	60 Hz	55	57	60	59	55	50	41	31	65	64	62	60	63	65
190A Std Eff	60 Hz	55	57	60	59	55	51	41	32	66	64	63	61	63	66
210A Std Eff	60 Hz	55	57	60	59	55	51	41	32	66	64	63	61	63	66
230A Std Eff	60 Hz	56	58	61	60	56	51	42	32	66	65	63	62	64	66
250A Std Eff	60 Hz	56	58	61	60	56	51	42	32	66	65	63	62	64	66
280A Std Eff	60 Hz	56	58	61	60	56	51	42	33	67	65	64	62	64	67
300A Std Eff	60 Hz	56	58	61	60	56	51	42	33	67	65	64	62	64	67
320A Std Eff	60 Hz	57	59	62	61	57	52	43	33	67	66	65	63	65	67
350A Std Eff	60 Hz	57	59	62	61	57	52	43	33	67	66	65	63	65	67
375A Std Eff	60 Hz	58	60	63	62	58	54	44	35	69	67	66	65	66	69
400A Std Eff	60 Hz	58	60	63	62	58	54	44	35	69	67	66	65	66	69
425A Std Eff	60 Hz	59	61	63	63	59	54	44	35	69	68	66	65	67	69
445A Std Eff	60 Hz	59	61	63	63	59	54	44	35	69	68	66	65	67	69
470A Std Eff	60 Hz	59	61	64	63	59	54	45	36	70	68	67	65	67	70
500A Std Eff	60 Hz	59	61	64	63	59	54	45	36	70	68	67	66	67	70
530A Std Eff	60 Hz	59	61	64	63	59	55	45	36	70	68	67	66	67	70
210A High Eff	60 Hz	56	57	63	60	57	50	41	31	67	65	64	62	62	68
230A High Eff	60 Hz	56	57	63	60	58	51	42	32	67	66	65	63	62	68
250A High Eff	60 Hz	56	57	63	60	58	51	42	32	67	66	65	63	62	68
280A High Eff	60 Hz	57	57	64	60	58	51	42	32	68	66	65	63	62	69
300A High Eff	60 Hz	57	57	64	60	58	51	42	32	68	66	65	63	62	69
320A High Eff	60 Hz	57	58	64	61	59	52	43	33	68	67	66	64	63	69
350A High Eff	60 Hz	57	58	64	61	59	52	43	33	68	67	66	64	63	69
380A High Eff	60 Hz	58	58	65	61	59	52	43	33	68	67	66	65	63	70
405A High Eff	60 Hz	58	59	65	62	59	52	43	33	69	67	66	65	63	70
445A High Eff	60 Hz	59	60	66	63	60	54	44	35	70	69	67	66	65	71
470A High Eff	60 Hz	60	60	66	63	61	54	45	35	70	69	68	66	65	72
500A High Eff	60 Hz	60	60	67	63	61	54	45	35	71	69	68	66	65	72
530A High Eff	60 Hz	60	60	67	64	61	54	45	35	71	69	68	67	65	72
210A Prem Eff	60 Hz	57	57	64	60	58	51	42	32	68	66	65	63	62	69
230A Prem Eff	60 Hz	57	58	64	61	58	51	42	32	68	67	65	64	63	69
250A Prem Eff	60 Hz	57	58	64	61	58	51	42	32	68	67	65	64	63	69
280A Prem Eff	60 Hz	57	58	64	61	59	52	43	33	68	67	66	64	63	69
300A Prem Eff	60 Hz	57	58	64	61	59	52	43	33	68	67	66	64	63	69
320A Prem Eff	60 Hz	58	58	65	61	59	52	43	33	68	67	66	65	63	70
350A Prem Eff	60 Hz	58	59	65	62	59	52	43	33	69	67	66	65	63	70

Sound Data (non-VFD)

Table 73: Sound Power with sound enclosures (non-VFD)

Model	Power	Octave Band & Center Frequency.								100% Load A-Wtd	75% Load A-Wtd	50% Load A-Wtd	25% Load A-Wtd
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz				
175A Std Eff	60 Hz	84	85	87	85	82	78	68	60	92	91	90	88
190A Std Eff	60 Hz	85	86	88	86	83	78	69	61	93	92	91	89
210A Std Eff	60 Hz	85	86	88	86	83	78	69	61	93	92	91	89
230A Std Eff	60 Hz	85	86	88	86	83	79	69	61	93	93	91	90
250A Std Eff	60 Hz	85	86	88	86	83	79	69	61	93	93	91	90
280A Std Eff	60 Hz	86	87	89	87	84	79	70	62	94	93	92	91
300A Std Eff	60 Hz	86	87	89	87	84	79	70	62	94	93	92	91
320A Std Eff	60 Hz	87	88	90	88	85	80	71	63	95	94	93	92
350A Std Eff	60 Hz	87	88	90	88	85	80	71	63	95	94	93	92
375A Std Eff	60 Hz	88	89	91	89	86	82	72	64	96	95	94	93
400A Std Eff	60 Hz	88	89	91	89	86	82	72	64	96	95	94	93
425A Std Eff	60 Hz	89	90	92	90	87	82	73	64	97	96	95	93
445A Std Eff	60 Hz	89	90	92	90	87	82	73	64	97	96	95	93
470A Std Eff	60 Hz	89	90	92	90	87	82	73	65	97	96	95	94
500A Std Eff	60 Hz	89	90	92	90	87	83	73	65	97	97	96	94
530A Std Eff	60 Hz	90	91	93	91	88	83	74	65	98	97	96	95
210A High Eff	60 Hz	86	85	91	86	85	78	69	60	94	93	92	90
230A High Eff	60 Hz	86	86	91	87	85	79	69	61	95	94	92	91
250A High Eff	60 Hz	86	86	91	87	85	79	69	61	95	94	92	91
280A High Eff	60 Hz	87	86	92	87	86	79	70	61	95	94	93	91
300A High Eff	60 Hz	87	86	92	87	86	79	70	61	95	94	93	91
320A High Eff	60 Hz	88	87	92	88	87	80	71	62	96	95	94	92
350A High Eff	60 Hz	88	87	92	88	87	80	71	62	96	95	94	92
380A High Eff	60 Hz	88	88	93	89	87	80	71	62	97	96	95	93
405A High Eff	60 Hz	88	88	93	89	88	81	72	63	97	96	95	94
445A High Eff	60 Hz	90	89	94	90	89	82	73	64	98	97	96	94
470A High Eff	60 Hz	90	89	95	90	89	82	73	64	98	97	96	95
500A High Eff	60 Hz	90	90	95	91	89	83	73	65	99	98	97	95
530A High Eff	60 Hz	91	90	95	91	90	83	74	65	99	98	97	95
210A Prem Eff	60 Hz	87	86	92	87	86	79	70	61	95	94	93	91
230A Prem Eff	60 Hz	87	87	92	88	86	80	70	62	96	95	94	92
250A Prem Eff	60 Hz	87	87	92	88	86	80	70	62	96	95	94	92
280A Prem Eff	60 Hz	88	87	92	88	87	80	71	62	96	95	94	92
300A Prem Eff	60 Hz	88	87	92	88	87	80	71	62	96	95	94	92
320A Prem Eff	60 Hz	88	88	93	89	87	80	71	62	97	96	95	93
350A Prem Eff	60 Hz	88	88	93	89	88	81	72	63	97	96	95	94

Table 74: A-Weighted Sound Pressure with sound enclosures (non-VFD)

Pathfinder Model	Power	Octave Band & Center Frequency.								100% Control Box End A-Wtd	75% Load A-Wtd	50% Load A-Wtd	25% Load A-Wtd	100% Opposite Control Box A-Wtd	100% Side A-Wtd
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz						
175A Std Eff	60 Hz	55	56	57	56	53	48	38	30	63	62	60	58	61	63
190A Std Eff	60 Hz	55	56	58	56	53	48	39	31	64	62	61	59	61	64
210A Std Eff	60 Hz	55	56	58	56	53	48	39	31	64	62	61	59	61	64
230A Std Eff	60 Hz	55	57	58	57	53	49	39	31	64	63	61	60	62	64
250A Std Eff	60 Hz	55	57	58	57	53	49	39	31	64	63	61	60	62	64
280A Std Eff	60 Hz	56	57	59	57	54	49	40	32	65	63	62	60	62	65
300A Std Eff	60 Hz	56	57	59	57	54	49	40	32	65	63	62	60	62	65
320A Std Eff	60 Hz	57	58	59	58	55	50	40	32	65	64	63	61	63	65
350A Std Eff	60 Hz	57	58	59	58	55	50	40	32	65	64	63	61	63	65
375A Std Eff	60 Hz	58	60	61	60	56	52	42	34	67	66	64	63	65	67
400A Std Eff	60 Hz	58	60	61	60	56	52	42	34	67	66	64	63	65	67
425A Std Eff	60 Hz	59	60	62	60	57	52	43	34	68	66	65	63	65	68
445A Std Eff	60 Hz	59	60	62	60	57	52	43	34	68	66	65	63	65	68
470A Std Eff	60 Hz	59	60	62	60	57	52	43	35	68	66	65	64	65	68
500A Std Eff	60 Hz	59	60	62	60	57	53	43	35	68	66	65	64	65	68
530A Std Eff	60 Hz	59	60	62	60	57	53	43	35	68	67	66	64	66	68
210A High Eff	60 Hz	56	55	61	56	55	48	39	30	65	63	62	60	59	66
230A High Eff	60 Hz	56	56	61	57	55	49	39	30	65	64	62	61	60	66
250A High Eff	60 Hz	56	56	61	57	55	49	39	30	65	64	62	61	60	66
280A High Eff	60 Hz	57	56	61	57	56	49	40	31	65	64	63	61	60	67
300A High Eff	60 Hz	57	56	61	57	56	49	40	31	65	64	63	61	60	67
320A High Eff	60 Hz	57	57	62	58	56	49	40	31	66	65	64	62	61	67
350A High Eff	60 Hz	57	57	62	58	56	49	40	31	66	65	64	62	61	67
380A High Eff	60 Hz	57	57	62	58	57	50	41	32	66	65	64	62	61	68
405A High Eff	60 Hz	58	57	63	58	57	50	41	32	67	65	64	63	61	68
445A High Eff	60 Hz	59	59	64	60	58	52	42	34	68	67	66	64	63	70
470A High Eff	60 Hz	60	59	64	60	59	52	43	34	69	67	66	64	63	70
500A High Eff	60 Hz	60	59	65	60	59	52	43	34	69	67	66	65	63	70
530A High Eff	60 Hz	60	60	65	61	59	52	43	34	69	68	66	65	63	70
210A Prem Eff	60 Hz	57	56	61	57	56	49	40	31	65	64	63	61	60	67
230A Prem Eff	60 Hz	57	56	62	57	56	49	40	31	66	64	63	62	60	67
250A Prem Eff	60 Hz	57	56	62	57	56	49	40	31	66	64	63	62	60	67
280A Prem Eff	60 Hz	57	57	62	58	56	49	40	31	66	65	64	62	61	67
300A Prem Eff	60 Hz	57	57	62	58	56	49	40	31	66	65	64	62	61	67
320A Prem Eff	60 Hz	57	57	62	58	57	50	41	32	66	65	64	62	61	68
350A Prem Eff	60 Hz	58	57	63	58	57	50	41	32	67	65	64	63	61	68

Sound Data (non-VFD)

Table 75: One-third Octave Band Sound Power Ratings without Sound Enclosures (non-VFD)

Model	Power	A-weighted Sound Power without Sound Enclosures(Hz)																							
		50 Hz	63 Hz	80 Hz	100 Hz	1.25 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0 KHz	1.25 KHz	1.6 KHz	2.0 KHz	2.5 KHz	3.15 KHz	4.0 KHz	5.0 KHz	6.3 KHz	8.0 KHz	10.0 KHz	Overall "A" Rating
175A Std Eff	60 Hz	73	83	72	75	85	74	77	78	88	77	76	87	78	79	80	78	72	69	67	64	62	58	56	50	94
190A Std Eff	60 Hz	74	84	73	75	86	75	78	79	89	78	77	88	79	80	80	79	72	70	68	64	63	59	57	51	94
210A Std Eff	60 Hz	74	84	73	75	86	75	78	79	89	78	77	88	79	80	80	79	72	70	68	64	63	59	57	51	94
230A Std Eff	60 Hz	74	84	73	76	87	75	78	79	89	79	78	88	80	80	81	79	73	71	69	65	64	59	57	52	95
250A Std Eff	60 Hz	74	84	73	76	87	75	78	79	89	79	78	88	80	80	81	79	73	71	69	65	64	59	57	52	95
280A Std Eff	60 Hz	75	85	74	77	87	76	79	80	90	79	78	89	80	81	82	80	73	71	69	65	64	60	58	52	95
300A Std Eff	60 Hz	75	85	74	77	87	76	79	80	90	79	78	89	80	81	82	80	73	71	69	65	64	60	58	52	95
320A Std Eff	60 Hz	76	86	75	77	88	77	80	81	91	80	79	90	81	82	83	81	74	72	70	66	65	61	59	53	96
350A Std Eff	60 Hz	76	86	75	77	88	77	80	81	91	80	79	90	81	82	83	81	74	72	70	66	65	61	59	53	96
375A Std Eff	60 Hz	77	88	77	79	90	79	82	82	92	82	81	92	83	83	84	82	76	74	72	68	67	63	60	55	98
400A Std Eff	60 Hz	77	88	77	79	90	79	82	82	92	82	81	92	83	83	84	82	76	74	72	68	67	63	60	55	98
425A Std Eff	60 Hz	78	88	77	80	90	79	82	83	93	82	81	92	83	84	85	83	77	74	72	68	67	63	61	55	99
445A Std Eff	60 Hz	78	88	77	80	90	79	82	83	93	82	81	92	83	84	85	83	77	74	72	68	67	63	61	55	99
470A Std Eff	60 Hz	78	88	77	80	91	79	82	83	93	82	82	92	84	84	85	83	77	75	73	69	68	63	61	56	99
500A Std Eff	60 Hz	78	89	78	80	91	80	83	83	94	83	82	93	84	85	85	83	77	75	73	69	68	64	61	56	99
530A Std Eff	60 Hz	79	89	78	81	91	80	83	84	94	83	82	93	84	85	86	84	78	75	73	70	68	64	62	56	100
210A High Eff	60 Hz	73	85	73	76	85	76	78	80	92	77	77	88	82	82	82	77	74	71	67	65	64	59	55	50	96
230A High Eff	60 Hz	74	85	74	77	85	76	79	80	92	78	78	89	82	83	82	78	75	72	68	66	64	59	56	51	96
250A High Eff	60 Hz	74	85	74	77	85	76	79	80	92	78	78	89	82	83	82	78	75	72	68	66	64	59	56	51	96
280A High Eff	60 Hz	74	86	74	78	86	77	79	81	93	78	79	89	83	83	83	78	76	72	69	66	65	60	56	51	97
300A High Eff	60 Hz	74	86	74	78	86	77	79	81	93	78	79	89	83	83	83	78	76	72	69	66	65	60	56	51	97
320A High Eff	60 Hz	75	87	75	78	87	78	80	82	94	79	79	90	84	84	84	79	76	73	69	67	66	61	57	52	98
350A High Eff	60 Hz	75	87	75	78	87	78	80	82	94	79	79	90	84	84	84	79	76	73	69	67	66	61	57	52	98
380A High Eff	60 Hz	75	87	75	79	87	78	80	82	94	80	80	91	84	84	84	80	77	73	70	68	66	61	57	52	98
405A High Eff	60 Hz	76	88	76	79	88	78	81	83	95	80	80	91	84	85	84	80	77	74	70	68	66	62	58	53	99
445A High Eff	60 Hz	77	89	77	81	89	80	82	84	96	81	82	92	86	86	86	81	79	75	72	69	68	63	59	54	100
470A High Eff	60 Hz	77	89	78	81	89	80	82	84	96	82	82	93	86	86	86	82	79	75	72	70	68	63	59	55	100
500A High Eff	60 Hz	78	90	78	81	90	80	83	85	97	82	82	93	86	87	86	82	79	76	72	70	68	64	60	55	101
530A High Eff	60 Hz	78	90	78	82	90	81	83	85	97	82	83	93	87	87	87	82	80	76	73	70	69	64	60	55	101
210A Prem Eff	60 Hz	74	86	74	78	86	77	79	81	93	78	79	89	83	83	83	78	76	72	69	66	65	60	56	51	97
230A Prem Eff	60 Hz	75	86	75	78	86	77	80	81	93	79	79	90	83	83	83	79	76	72	69	67	65	60	57	52	97
250A Prem Eff	60 Hz	75	86	75	78	86	77	80	81	93	79	79	90	83	83	83	79	76	72	69	67	65	60	57	52	97
280A Prem Eff	60 Hz	75	87	75	78	87	78	80	82	94	79	79	90	84	84	84	79	76	73	69	67	66	61	57	52	98
300A Prem Eff	60 Hz	75	87	75	78	87	78	80	82	94	79	79	90	84	84	84	79	76	73	69	67	66	61	57	52	98
320A Prem Eff	60 Hz	75	87	75	79	87	78	80	82	94	80	80	91	84	84	84	80	77	73	70	68	66	61	57	52	98
350A Prem Eff	60 Hz	76	88	76	79	88	78	81	83	95	80	80	91	84	85	84	80	77	74	70	68	66	62	58	53	99

Table 76: Sound Power without sound enclosures (VFD models)

Model	Octave Band & Center Frequency								100% Load A-Wtd	75% Load A-Wtd	50% Load A-Wtd	25% Load A-Wtd
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz				
150ADS VFD	75	76	83	88	89	83	79	70	93	90	89	88
175ADS VFD	76	77	84	88	90	84	80	70	94	91	90	89
190ADS VFD	76	77	84	88	90	84	80	70	94	91	90	89
210ADH VFD	79	80	87	91	93	87	83	74	96	93	91	90
230ADH VFD	79	81	87	92	94	87	83	74	96	94	92	91
250ADH VFD	79	81	87	92	94	87	83	74	96	94	92	91
280ADH VFD	80	81	88	92	94	88	84	75	97	94	92	91
300ADH VFD	80	81	88	92	94	88	84	75	97	94	92	91
320ADH VFD	80	82	88	93	95	89	84	75	98	95	93	92
350ADH VFD	80	82	88	93	95	89	84	75	98	95	93	92
380ADH VFD	81	82	89	93	95	89	85	76	98	95	94	93
405ATH VFD	81	82	89	94	95	89	85	76	99	96	94	93
445ATH VFD	83	84	91	95	97	91	87	78	100	97	95	94
470ATH VFD	83	84	91	96	97	91	87	78	100	98	96	95
500ATH VFD	83	85	91	96	98	92	87	78	101	98	96	95
530ATH VFD	84	85	92	96	98	92	88	78	101	98	96	95
210ADP VFD	80	81	88	92	94	88	84	75	97	94	92	91
230ADP VFD	80	81	88	93	94	88	84	75	97	95	93	92
250ADP VFD	80	81	88	93	94	88	84	75	97	95	93	92
280ADP VFD	80	82	88	93	95	89	84	75	98	95	93	92
300ADP VFD	80	82	88	93	95	89	84	75	98	95	93	92
320ADP VFD	81	82	89	93	95	89	85	76	98	95	94	93
350ADP VFD	81	82	89	94	95	89	85	76	99	96	94	93

Table 77: Sound Pressure without sound enclosures (VFD models)

Model	Octave Band & Center Frequency								Control Box End 100% Load (A-Wtd)	75% Load A-Wtd	50% Load A-Wtd	25% Load A-Wtd	Opposite End 100% Load (A-Wtd)	Side 100% Load (A-Wtd)
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz						
150ADS VFD	46	47	54	58	60	54	50	41	62	61	60	59	64	65
175ADS VFD	46	48	54	59	61	54	50	41	63	62	60	60	64	66
190ADS VFD	46	48	54	59	61	54	50	41	63	62	60	60	64	66
210ADH VFD	49	51	58	62	64	58	53	44	66	64	62	61	67	68
230ADH VFD	50	51	58	62	64	58	54	45	66	64	62	61	68	68
250ADH VFD	50	51	58	62	64	58	54	45	66	64	62	61	68	68
280ADH VFD	50	51	58	63	64	58	54	45	66	65	63	62	68	69
300ADH VFD	50	51	58	63	64	58	54	45	66	65	63	62	68	69
320ADH VFD	51	52	59	63	65	59	55	45	67	65	63	62	68	69
350ADH VFD	51	52	59	63	65	59	55	45	67	65	63	62	68	69
380ADH VFD	51	52	59	63	65	59	55	46	67	65	64	63	69	70
405ATH VFD	51	52	59	64	65	59	55	46	67	66	64	63	69	70
445ATH VFD	53	54	61	65	67	61	57	47	69	67	65	64	70	71
470ATH VFD	53	54	61	65	67	61	57	48	69	67	65	64	71	72
500ATH VFD	53	54	61	66	67	61	57	48	69	67	66	65	71	72
530ATH VFD	53	54	61	66	67	61	57	48	69	68	66	65	71	72
210ADP VFD	50	51	58	63	64	58	54	45	66	65	63	62	68	69
230ADP VFD	50	52	58	63	65	59	54	45	67	65	63	62	68	69
250ADP VFD	50	52	58	63	65	59	54	45	67	65	63	62	68	69
280ADP VFD	51	52	59	63	65	59	55	45	67	65	63	62	68	69
300ADP VFD	51	52	59	63	65	59	55	45	67	65	63	62	68	69
320ADP VFD	51	52	59	63	65	59	55	46	67	65	64	63	69	70
350ADP VFD	51	52	59	64	65	59	55	46	67	66	64	63	69	70

Field Wiring

Wiring must comply with all applicable codes and ordinances. Warranty does not cover damage to the equipment caused by wiring not complying with specifications.

An open indicates a short, ground, or overload. Before replacing a fuse or restarting a compressor or fan motor, the trouble must be found and corrected.

Copper wire is required for all power lead terminations at the unit, and copper must be used for all other wiring to the unit.

Pathfinder chillers can be ordered with main power wiring for either multi-point power connection (standard) or single-point connection (optional).

If the optional single-point power connection is ordered, a single power connection is made to a power block (or optional disconnect switch) in the unit power panel. A separate disconnect is required if the optional factory-mounted disconnect is not ordered. Factory-mounted isolation circuit breakers for each circuit are included as standard on all single-point connection options.

If the standard multiple-point power wiring is ordered, two power connections are required on Pathfinder chiller models AWS###A**D**S or three power connections on AWS###A**T**S. They are made to factory-mounted disconnect switches in the power panel. See the dimension drawings beginning on page 68 for entry locations.

It can be desirable to have the unit evaporator heaters on a separate disconnect switch from the main unit power supply so that the unit power can be shut down without defeating the freeze protection provided by the evaporator heaters. See the field wiring diagram on page 183 for connection details.

The 120-volt control transformer is factory mounted and wired. .

⚠ CAUTION

If a separate disconnect is used for the 120V supply to the unit, it must power the entire control circuit. It must be clearly marked so that it is not accidentally shut off during freezing temperatures, thereby de-energizing the evaporator heaters. Freeze damage to the evaporator could result. If the evaporator is drained for winter freeze protection, the heaters must be *de-energized* to prevent heater burnout.

⚠ CAUTION

Pathfinder unit compressors are single-direction rotation compressors and can be damaged if rotated in the wrong direction. For this reason, proper phasing of electrical power is important. Electrical phasing must be A, B, C for electrical phases 1, 2 and 3 (A=L1, B=L2, C=L3) for single or multiple point wiring arrangements. The solid-state starters contain phase reversal protection. DO NOT ALTER THE WIRING TO THE STARTERS.

Electrical Data Notes

1 Explanation of field wiring designation:

Designation	Total Wires	Total Conduits
350 MCM	3	1
2-250 MCM	6	1
(2) 250 MCM	6	2
(2) 2-300 MCM	12	2

Note: NOTE: Wire size shown is for illustrative purposes only.

2 Allowable voltage limits:

- Unit nameplate 460V/60Hz/3Ph: 414V to 506V
- Unit nameplate 575V/60Hz/3Ph: 517V to 633V

3 Unit wire size ampacity (MCA) is equal to 125% of the largest compressor-motor RLA plus 100% of RLA of all other loads in the circuit including control transformer. Wire size ampacity for separate 115V control circuit power is 15 amps.

4 Units marked with (*) - These units require the use of a 100% rated disconnect; therefore, wire will be sized per 75ºC NEC ratings, however 90ºC wire must be used.

5 Compressor RLA values are for wire sizing purposes only, but do reflect normal operating current draw at unit rated capacity.

6 Single-point power supply requires a single disconnect to supply electrical power to the unit. This power must be fused.

7 Multiple point power supply requires a independent power supply for each circuit.

8 All field wiring to unit power block or optional nonfused disconnect switch must be copper.

9 Field wire size values given in tables apply to 75°C rated wire per NEC.

10 External disconnect switch(s) or HACR breakers must be field supplied. Note: On single-point power units, a non-fused disconnect switch in the panel is available as an option.

11 All wiring must be done in accordance with applicable local and national codes.

12 Recommended time delay fuse size is equal to 170% of the largest compressor motor RLA plus 100% of remaining compressor RLAs and the sum of condenser fan FLAs.

13 Maximum time delay fuse size or HACR breakers is equal to 225% of the largest compressor-motor RLA plus 100% of remaining compressor RLAs and the sum of condenser fan FLAs.

14 Power Limitations:

- Voltage within 10 percent of nameplate rating.
- Voltage unbalance not to exceed 2% with a resultant current unbalance of 6 to 10 times the voltage unbalance per NEMA MG-1, 1998 Standard.

Figure 143: Field Wiring Diagram

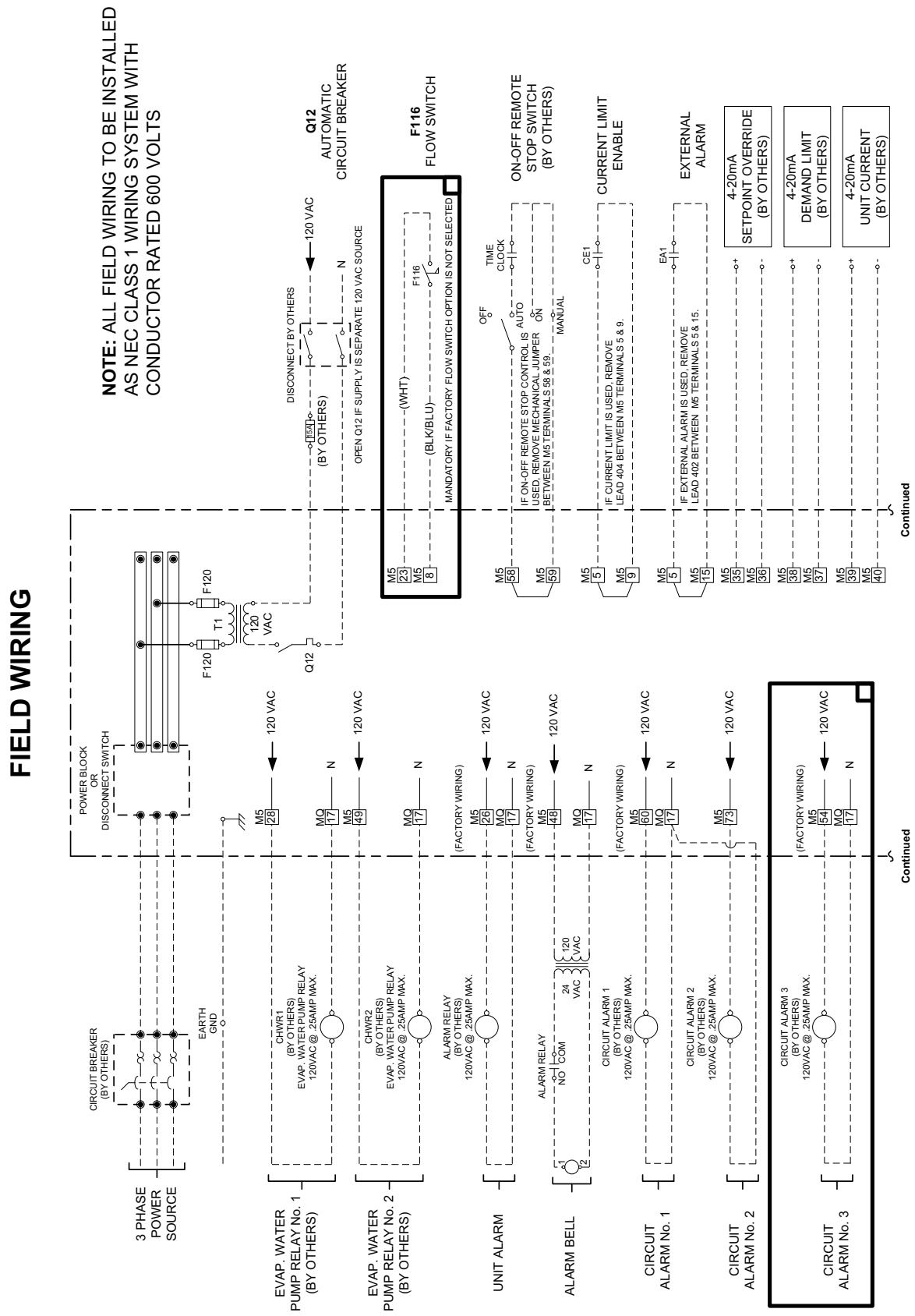


Figure 144: Field Wiring Diagram (continued)

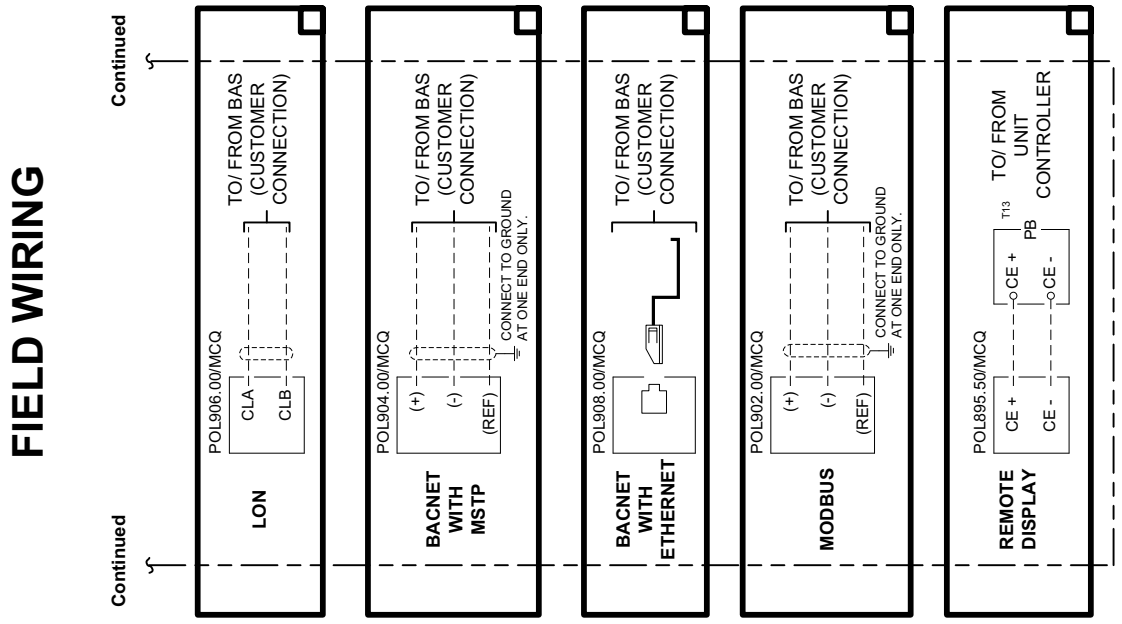


Table 78: Multipoint Electrical Data (60Hz, standard efficiency, non-VFD models)

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
175ADS	60	208V	5	441	600	700	6	4/0 AWG	2	2.0
		230V		399	600	600	6	3/0 AWG	2	2.0
		380V		242	350	400	3	250 MCM	1	2.0
		460V		200	300	300	3	3/0 AWG	1	2.0
		575V		160	225	250	3	2/0 AWG	1	1.5
190ADS	60	208V	6	449	600	700	6	4/0 AWG	2	2.0
		230V		406	600	600	6	4/0 AWG	2	2.0
		380V		246	350	400	3	250 MCM	1	2.0
		460V		203	300	300	3	4/0 AWG	1	2.0
		575V		163	250	250	3	2/0 AWG	1	1.5
210ADS	60	208V	6	540	800	800	6	300 MCM	2	2.5
		230V		488	700	800	6	250 MCM	2	2.0
		380V		296	450	500	3	350 MCM	1	2.5
		460V		244	350	400	3	250 MCM	1	2.0
		575V		195	300	300	3	3/0 AWG	1	2.0
230ADS	60	208V	7	548	800	800	6	300 MCM	2	2.5
		230V		495	700	800	6	250 MCM	2	2.0
		380V		300	450	500	3	350 MCM	1	2.5
		460V		248	350	400	3	250 MCM	1	2.0
		575V		198	300	300	3	3/0 AWG	1	2.0
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
175ADS	60	208V	5	441	600	700	6	4/0 AWG	2	2.0
		230V		399	600	600	6	3/0 AWG	2	2.0
		380V		242	350	400	3	250 MCM	1	2.0
		460V		200	300	300	3	3/0 AWG	1	2.0
		575V		160	225	250	3	2/0 AWG	1	1.5
190ADS	60	208V	6	540	800	800	6	300 MCM	2	2.5
		230V		488	700	800	6	250 MCM	2	2.0
		380V		296	450	500	3	350 MCM	1	2.5
		460V		244	350	400	3	250 MCM	1	2.0
		575V		195	300	300	3	3/0 AWG	1	2.0
210ADS	60	208V	6	540	800	800	6	300 MCM	2	2.5
		230V		488	700	800	6	250 MCM	2	2.0
		380V		296	450	500	3	350 MCM	1	2.5
		460V		244	350	400	3	250 MCM	1	2.0
		575V		195	300	300	3	3/0 AWG	1	2.0
230ADS	60	208V	7	644	1000	1000	6	400 MCM	2	2.5
		230V		583	800	1000	6	350 MCM	2	2.5
		380V		353	500	600	3	500 MCM	1	3.0
		460V		291	450	500	3	350 MCM	1	2.5
		575V		233	350	400	3	250 MCM	1	2.0

Multipoint Electrical Data (non-VFD)

Table 79: Multipoint Electrical Data (60Hz, standard efficiency, non-VFD models), continued

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
250ADS	60	208V	7	644	1000	1000	6	400 MCM	2	2.5
		230V		583	800	1000	6	350 MCM	2	2.5
		380V		353	500	600	3	500 MCM	1	3.0
		460V		291	450	500	3	350 MCM	1	2.5
		575V		233	350	400	3	250 MCM	1	2.0
280ADS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		357	500	600	3	500 MCM	1	3.0
		460V		295	450	500	3	350 MCM	1	2.5
		575V		236	350	400	3	250 MCM	1	2.0
300ADS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
320ADS	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		441	600	700	6	4/0 AWG	2	2.0
		460V		364	500	600	3	500 MCM	1	3.0
		575V		291	450	500	3	350 MCM	1	2.5
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
250ADS	60	208V	7	644	1000	1000	6	400 MCM	2	2.5
		230V		583	800	1000	6	350 MCM	2	2.5
		380V		353	500	600	3	500 MCM	1	3.0
		460V		291	450	500	3	350 MCM	1	2.5
		575V		233	350	400	3	250 MCM	1	2.0
280ADS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
300ADS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
320ADS	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		489	700	800	6	250 MCM	2	2.0
		460V		404	600	700	6	4/0 AWG	2	2.0
		575V		323	500	500	3	400 MCM	1	2.5

Table 80: Multipoint Electrical Data (60Hz, standard efficiency, non-VFD models), continued

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
350ADS	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		441	600	700	6	4/0 AWG	2	2.0
		460V		364	500	600	3	500 MCM	1	3.0
		575V		291	450	500	3	350 MCM	1	2.5
375ATS	60	208V	7	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		353	500	600	3	500 MCM	1	3.0
		460V		291	450	500	3	350 MCM	1	2.5
		575V		233	350	400	3	250 MCM	1	2.0
400ATS	60	208V	7	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		353	500	600	3	500 MCM	1	3
		460V		291	450	500	3	350 MCM	1	3
		575V		233	350	400	3	250 MCM	1	2
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
350ADS	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		489	700	800	6	250 MCM	2	2.0
		460V		404	600	700	6	4/0 AWG	2	2.0
		575V		323	500	500	3	400 MCM	1	2.5
375ATS	60	208V	7	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		353	500	600	3	500 MCM	1	3.0
		460V		291	450	500	3	350 MCM	1	2.5
		575V		233	350	400	3	250 MCM	1	2.0
400ATS	60	208V	7	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		353	500	600	3	500 MCM	1	3.0
		460V		291	450	500	3	350 MCM	1	2.5
		575V		233	350	400	3	250 MCM	1	2.0
Circuit 3										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
375ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		357	500	600	3	500 MCM	1	3.0
		460V		295	450	500	3	350 MCM	1	2.5
		575V		236	350	400	3	250 MCM	1	2.0
400ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5

Multipoint Electrical Data (non-VFD)

Table 81: Multipoint Electrical Data (60Hz, standard efficiency, non-VFD models), continued

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
425ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
445ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
470ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
425ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
445ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
470ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
Circuit 3										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
425ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		357	500	600	3	500 MCM	1	3.0
		460V		295	450	500	3	350 MCM	1	2.5
		575V		236	350	400	3	250 MCM	1	2.0
445ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
470ATS	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		489	700	800	6	250 MCM	2	2.0
		460V		404	600	700	6	4/0 AWG	2	2.0
		575V		323	500	500	3	400 MCM	1	2.5

Table 82: Multipoint Electrical Data (60Hz, standard efficiency, non-VFD models), continued

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
500ATS	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		489	700	800	6	250 MCM	2	2
		460V		404	600	700	6	4/0 AWG	2	2
		575V		323	500	500	3	400 MCM	1	3
530ATS	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		489	700	800	6	250 MCM	2	2
		460V		404	600	700	6	4/0 AWG	2	2
		575V		323	500	500	3	400 MCM	1	3
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
500ATS	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		489	700	800	6	250 MCM	2	2.0
		460V		404	600	700	6	4/0 AWG	2	2.0
		575V		323	500	500	3	400 MCM	1	2.5
530ATS	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		489	700	800	6	250 MCM	2	2.0
		460V		404	600	700	6	4/0 AWG	2	2.0
		575V		323	500	500	3	400 MCM	1	2.5
Circuit 3										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
500ATS	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		433	600	700	6	4/0 AWG	2	2.0
		460V		357	500	600	3	500 MCM	1	3.0
		575V		286	400	450	3	350 MCM	1	2.5
530ATS	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		489	700	800	6	250 MCM	2	2.0
		460V		404	600	700	6	4/0 AWG	2	2.0
		575V		323	500	500	3	400 MCM	1	2.5

Multipoint Electrical Data (non-VFD)

Table 83: Multipoint Electrical Data (60Hz, high efficiency, non-VFD models)

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
210ADH	60	208V	6	463	700	700	6	250 MCM	2	2.0
		230V		418	600	700	6	4/0 AWG	2	2.0
		380V		253	350	400	3	250 MCM	1	2.0
		460V		209	300	350	3	4/0 AWG	1	2.0
		575V		168	250	250	3	2/0 AWG	1	1.5
230ADH	60	208V	7	470	700	800	6	250 MCM	2	2.0
		230V		425	600	700	6	4/0 AWG	2	2.0
		380V		258	350	400	3	300 MCM	1	2.5
		460V		213	300	350	3	4/0 AWG	1	2.0
		575V		170	250	250	3	2/0 AWG	1	1.5
250ADH	60	208V	7	566	800	800	6	300 MCM	2	2.5
		230V		513	700	800	6	300 MCM	2	2.5
		380V		310	450	500	3	400 MCM	1	2.5
		460V		256	350	400	3	300 MCM	1	2.5
		575V		205	300	350	3	4/0 AWG	1	2.0
280ADH	60	208V	8	574	800	800	6	350 MCM	2	2.5
		230V		519	700	800	6	300 MCM	2	2.5
		380V		314	450	500	3	400 MCM	1	2.5
		460V		260	400	400	3	300 MCM	1	2.5
		575V		208	300	350	3	4/0 AWG	1	2.0
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
210ADH	60	208V	6	463	700	700	6	250 MCM	2	2.0
		230V		418	600	700	6	4/0 AWG	2	2.0
		380V		253	350	400	3	250 MCM	1	2.0
		460V		209	300	350	3	4/0 AWG	1	2.0
		575V		168	250	250	3	2/0 AWG	1	1.5
230ADH	60	208V	7	566	800	800	6	300 MCM	2	2.5
		230V		513	700	800	6	300 MCM	2	2.5
		380V		310	450	500	3	400 MCM	1	2.5
		460V		256	350	400	3	300 MCM	1	2.5
		575V		205	300	350	3	4/0 AWG	1	2.0
250ADH	60	208V	7	566	800	800	6	300 MCM	2	2.5
		230V		513	700	800	6	300 MCM	2	2.5
		380V		310	450	500	3	400 MCM	1	2.5
		460V		256	350	400	3	300 MCM	1	2.5
		575V		205	300	350	3	4/0 AWG	1	2.0
280ADH	60	208V	8	669	1000	1000	6	400 MCM	2	2.5
		230V		604	800	1000	6	350 MCM	2	2.5
		380V		365	500	600	3	500 MCM	1	3.0
		460V		302	450	500	3	350 MCM	1	2.5
		575V		242	350	400	3	250 MCM	1	2.0

Table 84: Multipoint Electrical Data (60Hz, high efficiency, non-VFD models), continued

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
300ADH	60	208V	8	669	1000	1000	6	400 MCM	2	2.5
		230V		604	800	1000	6	350 MCM	2	2.5
		380V		365	500	600	3	500 MCM	1	3.0
		460V		302	450	500	3	350 MCM	1	2.5
		575V		242	350	400	3	250 MCM	1	2.0
320ADH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		374	500	600	3	500 MCM	1	3.0
		460V		309	450	500	3	350 MCM	1	2.5
		575V		247	350	400	3	250 MCM	1	2.0
350ADH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		474	700	800	6	250 MCM	2	2.0
		460V		392	600	600	6	3/0 AWG	2	2.0
		575V		313	450	500	3	400 MCM	1	2.5
380ADH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		474	700	800	6	250 MCM	2	2.0
		460V		392	600	600	6	3/0 AWG	2	2.0
		575V		313	450	500	3	400 MCM	1	2.5
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
300ADH	60	208V	8	669	1000	1000	6	400 MCM	2	2.5
		230V		604	800	1000	6	350 MCM	2	2.5
		380V		365	500	600	3	500 MCM	1	3.0
		460V		302	450	500	3	350 MCM	1	2.5
		575V		242	350	400	3	250 MCM	1	2.0
320ADH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		474	700	800	6	250 MCM	2	2.0
		460V		392	600	600	6	3/0 AWG	2	2.0
		575V		313	450	500	3	400 MCM	1	2.5
350ADH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		474	700	800	6	250 MCM	2	2.0
		460V		392	600	600	6	3/0 AWG	2	2.0
		575V		313	450	500	3	400 MCM	1	2.5
380ADH	60	208V	12	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		528	800	800	6	300 MCM	2	2.5
		460V		436	600	700	6	4/0 AWG	2	2.0
		575V		349	500	600	3	500 MCM	1	3.0

Multipoint Electrical Data (non-VFD)

Table 85: Multipoint Electrical Data (60Hz, high efficiency, non-VFD models), continued

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
405ADH	60	208V	12	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		528	800	800	6	300 MCM	2	2.5
		460V		436	600	700	6	4/0 AWG	2	2.0
		575V		349	500	600	3	500 MCM	1	3.0
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
405ADH	60	208V	12	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		528	800	800	6	300 MCM	2	2.5
		460V		436	600	700	6	4/0 AWG	2	2.0
		575V		349	500	600	3	500 MCM	1	3.0

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
445ATH	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		365	500	600	3	500 MCM	1	3.0
		460V		302	450	500	3	350 MCM	1	2.5
		575V		242	350	400	3	250 MCM	1	2.0
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
445ATH	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		365	500	600	3	500 MCM	1	3.0
		460V		302	450	500	3	350 MCM	1	2.5
		575V		242	350	400	3	250 MCM	1	2.0
Circuit 3										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
445ATH	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		365	500	600	3	500 MCM	1	3.0
		460V		302	450	500	3	350 MCM	1	2.5
		575V		242	350	400	3	250 MCM	1	2.0

Table 86: Multipoint Electrical Data (60Hz, high efficiency, non-VFD models), continued

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
470ATH	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		365	500	600	3	500 MCM	1	3.0
		460V		302	450	500	3	350 MCM	1	2.5
		575V		242	350	400	3	250 MCM	1	2.0
500ATH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		474	700	800	6	250 MCM	2	2.0
		460V		392	600	600	6	3/0 AWG	2	2.0
		575V		313	450	500	3	400 MCM	1	2.5
530ATH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		474	700	800	6	250 MCM	2	2.0
		460V		392	600	600	6	3/0 AWG	2	2.0
		575V		313	450	500	3	400 MCM	1	2.5
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
470ATH	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		365	500	600	3	500 MCM	1	3.0
		460V		302	450	500	3	350 MCM	1	2.5
		575V		242	350	400	3	250 MCM	1	2.0
500ATH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		474	700	800	6	250 MCM	2	2.0
		460V		392	600	600	6	3/0 AWG	2	2.0
		575V		313	450	500	3	400 MCM	1	2.5
530ATH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		474	700	800	6	250 MCM	2	2.0
		460V		392	600	600	6	3/0 AWG	2	2.0
		575V		313	450	500	3	400 MCM	1	2.5
Circuit 3										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
470ATH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		474	700	800	6	250 MCM	2	2.0
		460V		392	600	600	6	3/0 AWG	2	2.0
		575V		313	450	500	3	400 MCM	1	2.5
500ATH	60	208V	8	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		365	500	600	3	500 MCM	1	3.0
		460V		302	450	500	3	350 MCM	1	2.5
		575V		242	350	400	3	250 MCM	1	2.0
530ATH	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		474	700	800	6	250 MCM	2	2.0
		460V		392	600	600	6	3/0 AWG	2	2.0
		575V		313	450	500	3	400 MCM	1	2.5

Multipoint Electrical Data (non-VFD)

Table 87: Multipoint Electrical Data (60Hz, premium efficiency, non-VFD models)

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
210ADP	60	208V	8	478	700	800	6	250 MCM	2	2.0
		230V		432	600	700	6	4/0 AWG	2	2.0
		380V		262	350	400	3	300 MCM	1	2.5
		460V		216	300	350	3	4/0 AWG	1	2.0
		575V		173	250	250	3	2/0 AWG	1	1.5
230ADP	60	208V	9	485	700	800	6	250 MCM	2	2.0
		230V		439	600	700	6	4/0 AWG	2	2.0
		380V		266	400	400	3	300 MCM	1	2.5
		460V		219	300	350	3	4/0 AWG	1	2.0
		575V		176	250	250	3	3/0 AWG	1	2.0
250ADP	60	208V	9	581	800	800	6	350 MCM	2	2.5
		230V		526	800	800	6	300 MCM	2	2.5
		380V		318	450	500	3	400 MCM	1	2.5
		460V		263	400	450	3	300 MCM	1	2.5
		575V		211	300	350	3	4/0 AWG	1	2.0
280ADP	60	208V	10	589	800	1000	6	350 MCM	2	2.5
		230V		533	800	800	6	300 MCM	2	2.5
		380V		322	450	500	3	400 MCM	1	2.5
		460V		267	400	450	3	300 MCM	1	2.5
		575V		213	300	350	3	4/0 AWG	1	2.0
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
210ADP	60	208V	8	478	700	800	6	250 MCM	2	2.0
		230V		432	600	700	6	4/0 AWG	2	2.0
		380V		262	350	400	3	300 MCM	1	2.5
		460V		216	300	350	3	4/0 AWG	1	2.0
		575V		173	250	250	3	2/0 AWG	1	1.5
230ADP	60	208V	9	581	800	800	6	350 MCM	2	2.5
		230V		526	800	800	6	300 MCM	2	2.5
		380V		318	450	500	3	400 MCM	1	2.5
		460V		263	400	450	3	300 MCM	1	2.5
		575V		211	300	350	3	4/0 AWG	1	2.0
250ADP	60	208V	9	581	800	800	6	350 MCM	2	2.5
		230V		526	800	800	6	300 MCM	2	2.5
		380V		318	450	500	3	400 MCM	1	2.5
		460V		263	400	450	3	300 MCM	1	2.5
		575V		211	300	350	3	4/0 AWG	1	2.0
280ADP	60	208V	10	684	1000	1000	6	500 MCM	2	3.0
		230V		618	1000	1000	6	350 MCM	2	2.5
		380V		374	500	600	3	500 MCM	1	3.0
		460V		309	450	500	3	350 MCM	1	2.5
		575V		247	350	400	3	250 MCM	1	2.0

Table 88: Multipoint Electrical Data (60Hz, premium efficiency, non-VFD models), continued

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
300ADP	60	208V	10	684	1000	1000	6	500 MCM	2	3.0
		230V		618	1000	1000	6	350 MCM	2	2.5
		380V		374	500	600	3	500 MCM	1	3.0
		460V		309	450	500	3	350 MCM	1	2.5
		575V		247	350	400	3	250 MCM	1	2.0
320ADP	60	208V	10	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		374	500	600	3	500 MCM	1	3.0
		460V		309	450	500	3	350 MCM	1	2.5
		575V		247	350	400	3	250 MCM	1	2.0
350ADP	60	208V	12	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		482	700	800	6	250 MCM	2	2.0
		460V		398	600	600	6	3/0 AWG	2	2.0
		575V		319	450	500	3	400 MCM	1	2.5
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
300ADP	60	208V	10	684	1000	1000	6	500 MCM	2	3.0
		230V		618	1000	1000	6	350 MCM	2	2.5
		380V		374	500	600	3	500 MCM	1	3.0
		460V		309	450	500	3	350 MCM	1	2.5
		575V		247	350	400	3	250 MCM	1	2.0
320ADP	60	208V	12	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		482	700	800	6	250 MCM	2	2.0
		460V		398	600	600	6	3/0 AWG	2	2.0
		575V		319	450	500	3	400 MCM	1	2.5
350ADP	60	208V	12	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		482	700	800	6	250 MCM	2	2.0
		460V		398	600	600	6	3/0 AWG	2	2.0
		575V		319	450	500	3	400 MCM	1	2.5

Multipoint Field Wiring Data (non-VFD)

Table 89: Multipoint Field Wiring Data (60Hz, Standard efficiency, non-VFD models)

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
175ADS	60	208V	5	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	250A	(1/PH) #6 - 350 kcmil
190ADS	60	208V	6	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	250A	(1/PH) #6 - 350 kcmil
210ADS	60	208V	6	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
230ADS	60	208V	7	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
250ADS	60	208V	7	--	--	800A	n/a	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
175ADS	60	208V	5	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	250A	(1/PH) #6 - 350 kcmil
190ADS	60	208V	6	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
210ADS	60	208V	6	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
230ADS	60	208V	7	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
250ADS	60	208V	7	--	--	800A	n/a	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Table 90: Multipoint Field Wiring Data (60Hz, Standard efficiency, non-VFD models), continued

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
280ADS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
300ADS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
320ADS	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
350ADS	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
280ADS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
300ADS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
320ADS	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
350ADS	60	208V		--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Multipoint Field Wiring Data (non-VFD)

Table 91: Multipoint Field Wiring Data (60Hz, Standard efficiency, non-VFD models), continued

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
375ATS	60	208V	7	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
400ATS	60	208V	7	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
425ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per	Power Block		Disconnect Switch		High Short Circuit Current Rating	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
375ATS	60	208V	7	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
400ATS	60	208V	7	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
425ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 3									
Model	HZ	Voltage	# of Fans per	Power Block		Disconnect Switch		High Short Circuit Current Rating	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
375ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
400ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
425ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Table 92: Multipoint Field Wiring Data (60Hz, Standard efficiency, non-VFD models), continued

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
445ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
470ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
500ATS	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
445ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
470ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
500ATS	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 3									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
445ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
470ATS	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
500ATS	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Multipoint Field Wiring Data (non-VFD)

Table 93: Multipoint Field Wiring Data (60Hz, High efficiency, non-VFD models)

Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
Circuit 1									
530ATS	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
530ATS	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 3									
530ATS	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Table 94: Multipoint Field Wiring Data (60Hz, High efficiency, non-VFD models), continued

Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
Circuit 1									
210ADH	60	208V	6	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	250A	(1/PH) #6 - 350 kcmil
230ADH	60	208V	7	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	250A	(1/PH) #6 - 350 kcmil
250ADH	60	208V	7	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
210ADH	60	208V	6	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	250A	(1/PH) #6 - 350 kcmil
230ADH	60	208V	7	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
250ADH	60	208V	7	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Table 95: Multipoint Field Wiring Data (60Hz, High efficiency, non-VFD models), continued

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
280ADH	60	208V	8	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
300ADH	60	208V	8	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
320ADH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
350ADH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
380ADH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
280ADH	60	208V	8	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
300ADH	60	208V	8	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
320ADH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
350ADH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
380ADH	60	208V	12	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Multipoint Field Wiring Data (non-VFD)

Table 96: Multipoint Field Wiring Data (60Hz, High efficiency, non-VFD models), continued

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
405ADH	60	208V	12	--	--	--	#N/A	--	#N/A
		230V		--	--	--	#N/A	--	#N/A
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
405ADH	60	208V	12	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Table 97: Multipoint Field Wiring Data (60Hz, High efficiency, non-VFD models), continued

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
445ATH	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
445ATH	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 3									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
445ATH	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Table 98: Multipoint Field Wiring Data (60Hz, High efficiency, non-VFD models), continued

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
470ATH	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
500ATH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
530ATH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
470ATH	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
500ATH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
530ATH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 3									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
470ATH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
500ATH	60	208V	8	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
530ATH	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Multipoint Field Wiring Data (non-VFD)

Table 99: Multipoint Field Wiring Data (60Hz, Premium efficiency, non-VFD models)

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
210ADP	60	208V	8	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	250A	(1/PH) #6 - 350 kcmil
230ADP	60	208V	9	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	250A	(1/PH) #6 - 350 kcmil
250ADP	60	208V	9	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
280ADP	60	208V	10	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
210ADP	60	208V	8	--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		230V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	250A	(1/PH) #6 - 350 kcmil
230ADP	60	208V	9	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
250ADP	60	208V	9	--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
280ADP	60	208V	10	--	--	800A	n/a	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Table 100: Multipoint Field Wiring Data (60Hz, Premium efficiency, non-VFD models), continued

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
300ADP	60	208V	10	--	--	800A	n/a	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
320ADP	60	208V	10	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
350ADP	60	208V	12	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
300ADP	60	208V	10	--	--	800A	n/a	800A	n/a
		230V		--	--	600A	(2/PH) 3/0 - 500 kcmil	800A	n/a
		380V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	250A	(1/PH) #6 - 350 kcmil	400A	(2/PH) 3/0 - 500 kcmil
320ADP	60	208V	12	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
350ADP	60	208V	12	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		--	--	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		--	--	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil

Terminal Amps (non-VFD) (single/multi-point)

Table 101: Terminal Amps Electrical Data (60Hz)

Model	HZ	Voltage	Compressor Rated Load Amps			# of Fans	Fan Motor FLA	Fan Motor LRA	Inrush Amps LRA (ATL)			Inrush Amps LRA (SS)			Inrush Amps LRA (YD)		
			CIR 1	CIR 2	CIR 3				CIR 1	CIR 2	CIR 3	CIR 1	CIR 2	CIR 3	CIR 1	CIR 2	CIR 3
175ADS	60	208V	323	323	--	10	7.5	23	2368	2368	-	1373	1373	-	789	789	-
		230V	292	292	--		6.8	23	2119	2119	-	1229	1229	-	706	706	-
		380V	177	177	--		4.1	16	1194	1194	-	693	693	-	398	398	-
		460V	146	146	--		3.4	14	976	976	-	566	566	-	326	326	-
		575V	117	117	--		2.7	11	846	846	-	491	491	-	282	282	-
190ADS	60	208V	323	396	--	12	7.5	23	2368	2788	-	1373	1617	-	789	929	-
		230V	292	358	--		6.8	23	2119	2339	-	1229	1357	-	706	780	-
		380V	177	217	--		4.1	16	1194	1410	-	693	818	-	398	470	-
		460V	146	179	--		3.4	14	976	1157	-	566	671	-	326	386	-
		575V	117	143	--		2.7	11	846	885	-	491	513	-	282	295	-
210ADS	60	208V	396	396	--	12	7.5	23	2788	2788	-	1617	1617	-	929	929	-
		230V	358	358	--		6.8	23	2339	2339	-	1357	1357	-	780	780	-
		380V	217	217	--		4.1	16	1410	1410	-	818	818	-	470	470	-
		460V	179	179	--		3.4	14	1157	1157	-	671	671	-	386	386	-
		575V	143	143	--		2.7	11	885	885	-	513	513	-	295	295	-
230ADS	60	208V	396	473	--	14	7.5	23	2788	2788	-	1617	1617	-	929	929	-
		230V	358	428	--		6.8	23	2339	2339	-	1357	1357	-	780	780	-
		380V	217	259	--		4.1	16	1410	1410	-	818	818	-	470	470	-
		460V	179	214	--		3.4	14	1157	1157	-	671	671	-	386	386	-
		575V	143	171	--		2.7	11	885	885	-	513	513	-	295	295	-
250ADS	60	208V	473	473	--	14	7.5	23	2788	2788	-	1617	1617	-	929	929	-
		230V	428	428	--		6.8	23	2339	2339	-	1357	1357	-	780	780	-
		380V	259	259	--		4.1	16	1410	1410	-	818	818	-	470	470	-
		460V	214	214	--		3.4	14	1157	1157	-	671	671	-	386	386	-
		575V	171	171	--		2.7	11	885	885	-	513	513	-	295	295	-
280ADS	60	208V	--	--	--	16	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	259	320	--		4.1	16	1410	2524	-	818	1464	-	470	841	-
		460V	214	264	--		3.4	14	1157	1947	-	671	1129	-	386	649	-
		575V	171	211	--		2.7	11	885	1663	-	513	965	-	295	554	-
300ADS	60	208V	--	--	--	16	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	320	320	--		4.1	16	2524	2524	-	1464	1464	-	841	841	-
		460V	264	264	--		3.4	14	1947	1947	-	1129	1129	-	649	649	-
		575V	211	211	--		2.7	11	1663	1663	-	965	965	-	554	554	-
320ADS	60	208V	--	--	--	20	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	320	358	--		4.1	16	2524	2524	-	1464	1464	-	841	841	-
		460V	264	296	--		3.4	14	1947	1947	-	1129	1129	-	649	649	-
		575V	211	237	--		2.7	11	1663	1663	-	965	965	-	554	554	-
350ADS	60	208V	--	--	--	20	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	358	358	--		4.1	16	2524	2524	-	1464	1464	-	841	841	-
		460V	296	296	--		3.4	14	1947	1947	-	1129	1129	-	649	649	-
		575V	237	237	--		2.7	11	1663	1663	-	965	965	-	554	554	-
375ATS	60	208V	--	--	--	22	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	259	259	259		4.1	16	1410	1410	1410	818	818	818	470	470	470
		460V	214	214	214		3.4	14	1157	1157	1157	671	671	671	386	386	386
		575V	171	171	171		2.7	11	885	885	885	513	513	513	295	295	295
400ATS	60	208V	--	--	--	22	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	259	259	320		4.1	16	1410	1410	2524	818	818	1464	470	470	841
		460V	214	214	264		3.4	14	1157	1157	1947	671	671	1129	386	386	649
		575V	171	171	211		2.7	11	885	885	1663	513	513	965	295	295	554

Table 102: Terminal Amps Electrical Data (60Hz), continued

Model	HZ	Voltage	Compressor Rated Load Amps			# of Fans	Fan Motor FLA	Fan Motor LRA	Inrush Amps LRA (ATL)			Inrush Amps LRA (SS)			Inrush Amps LRA (YD)		
			CIR 1	CIR 2	CIR 3				CIR 1	CIR 2	CIR 3	CIR 1	CIR 2	CIR 3	CIR 1	CIR 2	CIR 3
425ATS	60	208V	--	--	--	24	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	320	320	259		4.1	16	2524	2524	1410	1464	1464	818	841	841	470
		460V	264	264	214		3.4	14	1947	1947	1157	1129	1129	671	649	649	386
		575V	211	211	171		2.7	11	1663	1663	885	965	965	513	554	554	295
445ATS	60	208V	--	--	--	24	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	320	320	320		4.1	16	2524	2524	2524	1464	1464	1464	841	841	841
		460V	264	264	264		3.4	14	1947	1947	1947	1129	1129	1129	649	649	649
		575V	211	211	211		2.7	11	1663	1663	1663	965	965	965	554	554	554
470ATS	60	208V	--	--	--	26	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	320	320	358		4.1	16	2524	2524	2524	1464	1464	1464	841	841	841
		460V	264	264	296		3.4	14	1947	1947	1947	1129	1129	1129	649	649	649
		575V	211	211	237		2.7	11	1663	1663	1663	965	965	965	554	554	554
500ATS	60	208V	--	--	--	28	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	358	358	320		4.1	16	2524	2524	2524	1464	1464	1464	841	841	841
		460V	296	296	264		3.4	14	1947	1947	1947	1129	1129	1129	649	649	649
		575V	237	237	211		2.7	11	1663	1663	1663	965	965	965	554	554	554
530ATS	60	208V	--	--	--	30	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	358	358	358		4.1	16	2524	2524	2524	1464	1464	1464	841	841	841
		460V	296	296	296		3.4	14	1947	1947	1947	1129	1129	1129	649	649	649
		575V	237	237	237		2.7	11	1663	1663	1663	965	965	965	554	554	554
210ADH	60	208V	334	334	--	12	7.5	23	2368	2368	-	1373	1373	-	789	789	-
		230V	302	302	--		6.8	23	2119	2119	-	1229	1229	-	706	706	-
		380V	183	183	--		4.1	16	1194	1194	-	693	693	-	398	398	-
		460V	151	151	--		3.4	14	976	976	-	566	566	-	326	326	-
		575V	121	121	--		2.7	11	846	846	-	491	491	-	282	282	-
230ADH	60	208V	334	411	--	14	7.5	23	2368	2788	-	1373	1617	-	789	929	-
		230V	302	372	--		6.8	23	2119	2339	-	1229	1357	-	706	780	-
		380V	183	225	--		4.1	16	1194	1410	-	693	818	-	398	470	-
		460V	151	186	--		3.4	14	976	1157	-	566	671	-	326	386	-
		575V	121	149	--		2.7	11	846	885	-	491	513	-	282	295	-
250ADH	60	208V	411	411	--	14	7.5	23	2788	2788	-	1617	1617	-	929	929	-
		230V	372	372	--		6.8	23	2339	2339	-	1357	1357	-	780	780	-
		380V	225	225	--		4.1	16	1410	1410	-	818	818	-	470	470	-
		460V	186	186	--		3.4	14	1157	1157	-	671	671	-	386	386	-
		575V	149	149	--		2.7	11	885	885	-	513	513	-	295	295	-
280ADH	60	208V	411	487	--	16	7.5	23	2788	2788	-	1617	1617	-	929	929	-
		230V	372	440	--		6.8	23	2339	2339	-	1357	1357	-	780	780	-
		380V	225	266	--		4.1	16	1410	1410	-	818	818	-	470	470	-
		460V	186	220	--		3.4	14	1157	1157	-	671	671	-	386	386	-
		575V	149	176	--		2.7	11	885	885	-	513	513	-	295	295	-
300ADH	60	208V	487	487	--	16	7.5	23	2788	2788	-	1617	1617	-	929	929	-
		230V	440	440	--		6.8	23	2339	2339	-	1357	1357	-	780	780	-
		380V	266	266	--		4.1	16	1410	1410	-	818	818	-	470	470	-
		460V	220	220	--		3.4	14	1157	1157	-	671	671	-	386	386	-
		575V	176	176	--		2.7	11	885	885	-	513	513	-	295	295	-
320ADH	60	208V	--	--	--	20	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	266	346	--		4.1	16	1410	2524	-	818	1464	-	470	841	-
		460V	220	286	--		3.4	14	1157	1947	-	671	1129	-	386	649	-
		575V	176	229	--		2.7	11	885	1663	-	513	965	-	295	554	-

Terminal Amps (non-VFD) (single/multi-point)

Table 103: Terminal Amps Electrical Data (60Hz), continued

Model	HZ	Voltage	Compressor Rated Load Amps			# of Fans	Fan Motor FLA	Fan Motor LRA	Inrush Amps LRA (ATL)			Inrush Amps LRA (SS)			Inrush Amps LRA (YD)		
			CIR 1	CIR 2	CIR 3				CIR 1	CIR 2	CIR 3	CIR 1	CIR 2	CIR 3	CIR 1	CIR 2	CIR 3
350ADH	60	208V	--	--	--	20	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	346	346	--		4.1	16	2524	2524	-	1464	1464	-	841	841	-
		460V	286	286	--		3.4	14	1947	1947	-	1129	1129	-	649	649	-
		575V	229	229	--		2.7	11	1663	1663	-	965	965	-	554	554	-
380ADH	60	208V	--	--	--	22	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	346	383	--		4.1	16	2524	2524	-	1464	1464	-	841	841	-
		460V	286	316	--		3.4	14	1947	1947	-	1129	1129	-	649	649	-
		575V	229	253	--		2.7	11	1663	1663	-	965	965	-	554	554	-
405ADH	60	208V	--	--	--	24	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	383	383	--		4.1	16	2524	2524	-	1464	1464	-	841	841	-
		460V	316	316	--		3.4	14	1947	1947	-	1129	1129	-	649	649	-
		575V	253	253	--		2.7	11	1663	1663	-	965	965	-	554	554	-
445ATH	60	208V	--	--	--	24	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	266	266	266		4.1	16	1410	1410	1410	818	818	818	470	470	470
		460V	220	220	220		3.4	14	1157	1157	1157	671	671	671	386	386	386
		575V	176	176	176		2.7	11	885	885	885	513	513	513	295	295	295
470ATH	60	208V	--	--	--	26	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	266	266	346		4.1	16	1410	1410	2524	818	818	1464	470	470	841
		460V	220	220	286		3.4	14	1157	1157	1947	671	671	1129	386	386	649
		575V	176	176	229		2.7	11	885	885	1663	513	513	965	295	295	554
500ATH	60	208V	--	--	--	28	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		460V	286	286	220		3.4	14	1947	1947	1157	1129	1129	671	649	649	386
		575V	229	229	176		2.7	11	1663	1663	885	965	965	513	554	554	295
530ATH	60	208V	--	--	--	30	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		460V	286	286	286		3.4	14	1947	1947	1947	1129	1129	1129	649	649	649
		575V	229	229	229		2.7	11	1663	1663	1663	965	965	965	554	554	554
210ADP	60	208V	334	334	--	16	7.5	23	2368	2368	--	1373	1373	--	789	789	--
		230V	302	302	--		6.8	23	2119	2119	--	1229	1229	--	706	706	--
		380V	183	183	--		4.1	16	1194	1194	--	693	693	--	398	398	--
		460V	151	151	--		3.4	14	976	976	--	566	566	--	326	326	--
		575V	121	121	--		2.7	11	846	846	--	491	491	--	282	282	--
230ADP	60	208V	334	411	--	18	7.5	23	2368	2788	--	1373	1617	--	789	929	--
		230V	302	372	--		6.8	23	2119	2339	--	1229	1357	--	706	780	--
		380V	183	225	--		4.1	16	1194	1410	--	693	818	--	398	470	--
		460V	151	186	--		3.4	14	976	1157	--	566	671	--	326	386	--
		575V	121	149	--		2.7	11	846	885	--	491	513	--	282	295	--
250ADP	60	208V	411	411	--	18	7.5	23	2788	2788	--	1617	1617	--	929	929	--
		230V	372	372	--		6.8	23	2339	2339	--	1357	1357	--	780	780	--
		380V	225	225	--		4.1	16	1410	1410	--	818	818	--	470	470	--
		460V	186	186	--		3.4	14	1157	1157	--	671	671	--	386	386	--
		575V	149	149	--		2.7	11	885	885	--	513	513	--	295	295	--
280ADP	60	208V	411	487	--	20	7.5	23	2788	2788	--	1617	1617	--	929	929	--
		230V	372	440	--		6.8	23	2339	2339	--	1357	1357	--	780	780	--
		380V	225	266	--		4.1	16	1410	1410	--	818	818	--	470	470	--
		460V	186	220	--		3.4	14	1157	1157	--	671	671	--	386	386	--
		575V	149	176	--		2.7	11	885	885	--	513	513	--	295	295	--

Table 104: Terminal Amps Electrical Data (60Hz), continued

Model	HZ	Voltage	Compressor Rated Load Amps			# of Fans	Fan Motor FLA	Fan Motor LRA	Inrush Amps LRA (ATL)			Inrush Amps LRA (SS)			Inrush Amps LRA (YD)		
			CIR 1	CIR 2	CIR 3				CIR 1	CIR 2	CIR 3	CIR 1	CIR 2	CIR 3	CIR 1	CIR 2	CIR 3
300ADP	60	208V	487	487	--	20	7.5	23	2788	2788	--	1617	1617	--	929	929	--
		230V	440	440	--		6.8	23	2339	2339	--	1357	1357	--	780	780	--
		380V	266	266	--		4.1	16	1410	1410	--	818	818	--	470	470	--
		460V	220	220	--		3.4	14	1157	1157	--	671	671	--	386	386	--
		575V	176	176	--		2.7	11	885	885	--	513	513	--	295	295	--
320ADP	60	208V	--	--	--	22	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	266	346	--		4.1	16	1410	2524	--	818	1464	--	470	841	--
		460V	220	286	--		3.4	14	1157	1947	--	671	1129	--	386	649	--
		575V	176	229	--		2.7	11	885	1663	--	513	965	--	295	554	--
350ADP	60	208V	--	--	--	24	--	--	--	--	--	--	--	--	--	--	--
		230V	--	--	--		--	--	--	--	--	--	--	--	--	--	--
		380V	346	346	--		4.1	16	2524	2524	--	1464	1464	--	841	841	--
		460V	286	286	--		3.4	14	1947	1947	--	1129	1129	--	649	649	--
		575V	229	229	--		2.72	11	1663	1663	--	965	965	--	554	554	--

Single-point Electrical Data (non-VFD)

Table 105: Single-point Electrical Data (60 Hz, Standard efficiency, non-VFD models)

Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
175ADS	60	208V	10	802	1000	1000	12	250 MCM	2	3.0
		230V		725	1000	1000	6	500 MCM	2	3.0
		380V		439	600	600	6	4/0 AWG	2	2.0
		460V		363	450	500	3	500 MCM	1	3.0
		575V		290	350	400	3	350 MCM	1	2.5
190ADS	60	208V	12	908	1200	1200	12	300 MCM	2	3.5
		230V		821	1000	1000	12	300 MCM	2	3.5
		380V		498	600	700	6	250 MCM	2	2.0
		460V		411	500	500	6	4/0 AWG	2	2.0
		575V		328	400	450	3	400 MCM	1	2.5
210ADS	60	208V	12	981	1200	1200	12	350 MCM	2	3.5
		230V		887	1200	1200	12	300 MCM	2	3.5
		380V		538	700	700	6	300 MCM	2	2.5
		460V		444	600	600	6	4/0 AWG	2	2.0
		575V		354	450	450	3	500 MCM	1	3.0
230ADS	60	208V	14	1092	1200	1200	12	500 MCM	2	4.0
		230V		988	1200	1200	12	350 MCM	2	3.5
		380V		598	800	800	6	350 MCM	2	2.5
		460V		494	600	700	6	250 MCM	2	2.0
		575V		395	500	500	6	3/0 AWG	2	2.0
250ADS	60	208V	14	1169	1600	1600	12	500 MCM	2	4.0
		230V		1058	1200	1200	12	400 MCM	2	3.5
		380V		640	800	800	6	400 MCM	2	2.5
		460V		529	700	700	6	300 MCM	2	2.5
		575V		423	500	500	6	4/0 AWG	2	2.0
280ADS	60	208V	16	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		725	1000	1000	6	500 MCM	2	3.0
		460V		598	800	800	6	350 MCM	2	2.5
		575V		478	600	600	6	250 MCM	2	2.0
300ADS	60	208V	16	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		786	1000	1000	12	250 MCM	2	3.0
		460V		648	800	800	6	400 MCM	2	2.5
		575V		518	700	700	6	300 MCM	2	2.5
320ADS	60	208V	20	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		850	1200	1200	12	300 MCM	2	3.5
		460V		702	800	800	6	500 MCM	2	3.0
		575V		562	700	700	6	300 MCM	2	2.5
350ADS	60	208V	20	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		888	1200	1200	12	300 MCM	2	3.5
		460V		734	1000	1000	6	500 MCM	2	3.0
		575V		588	700	800	6	350 MCM	2	2.5

Table 106: Single-point Electrical Data (60 Hz, Standard efficiency, non-VFD models) continued

Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
375ATS	60	208V	22	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		932	1000	1000	12	350 MCM	2	3.5
		460V		783	1000	1000	12	250 MCM	2	3.0
		575V		616	700	700	6	350 MCM	2	2.5
400ATS	60	208V	22	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		1009	1200	1200	12	400 MCM	2	3.5
		460V		833	1000	1000	12	300 MCM	2	3.5
		575V		666	800	800	6	400 MCM	2	2.5
425ATS	60	208V	24	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		1078	1200	1200	12	500 MCM	2	4.0
		460V		890	1000	1000	12	300 MCM	2	3.5
		575V		711	800	800	6	500 MCM	2	3.0
445ATS	60	208V	24	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		--	--	--	--	--	--	--
		460V		940	1200	1200	12	350 MCM	2	3.5
		575V		751	800	800	6	500 MCM	2	3.0
470ATS	60	208V	26	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		--	--	--	--	--	--	--
		460V		980	1200	1200	12	350 MCM	2	3.5
		575V		784	1000	1000	12	250 MCM	2	3.0
500ATS	60	208V	28	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		--	--	--	--	--	--	--
		460V		1025	1200	1200	12	400 MCM	2	3.5
		575V		820	1000	1000	12	300 MCM	2	3.5
530ATS	60	208V	30	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		--	--	--	--	--	--	--
		460V		1064	1200	1200	12	400 MCM	2	3.5
		575V		852	1000	1000	12	300 MCM	2	3.5

Single-point Electrical Data (non-VFD)

Table 107: Single-point Electrical Data (60 Hz, High efficiency, non-VFD models)

Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
210ADH	60	208V	12	842	1000	1000	12	300 MCM	2	3.5
		230V		761	1000	1000	12	250 MCM	2	3.0
		380V		461	600	600	6	250 MCM	2	2.0
		460V		381	450	500	6	3/0 AWG	2	2.0
		575V		305	400	400	3	350 MCM	1	2.5
230ADH	60	208V	14	953	1200	1200	12	350 MCM	2	3.5
		230V		862	1200	1200	12	300 MCM	2	3.5
		380V		522	700	700	6	300 MCM	2	2.5
		460V		431	600	600	6	4/0 AWG	2	2.0
		575V		345	450	450	3	500 MCM	1	3.0
250ADH	60	208V	14	1030	1200	1200	12	400 MCM	2	3.5
		230V		932	1200	1200	12	350 MCM	2	3.5
		380V		564	700	700	6	300 MCM	2	2.5
		460V		466	600	600	6	250 MCM	2	2.0
		575V		373	450	500	3	500 MCM	1	3.0
280ADH	60	208V	16	1140	1600	1600	12	500 MCM	2	4.0
		230V		1031	1200	1200	12	400 MCM	2	3.5
		380V		623	800	800	6	400 MCM	2	2.5
		460V		515	700	700	6	300 MCM	2	2.5
		575V		413	500	500	6	4/0 AWG	2	2.0
300ADH	60	208V	16	1216	1600	1600	12	500 MCM	2	4.0
		230V		1099	1200	1200	12	500 MCM	2	4.0
		380V		664	800	800	6	400 MCM	2	2.5
		460V		549	700	700	6	300 MCM	2	2.5
		575V		440	600	600	6	4/0 AWG	2	2.0
320ADH	60	208V	20	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		781	1000	1000	12	250 MCM	2	3.0
		460V		646	800	800	6	400 MCM	2	2.5
		575V		517	700	700	6	300 MCM	2	2.5
350ADH	60	208V	20	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		861	1200	1200	12	300 MCM	2	3.5
		460V		712	800	800	6	500 MCM	2	3.0
		575V		570	700	700	6	300 MCM	2	2.5
380ADH	60	208V	22	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		915	1200	1200	12	350 MCM	2	3.5
		460V		756	1000	1000	6	500 MCM	2	3.0
		575V		605	800	800	6	350 MCM	2	2.5
405ADH	60	208V	24	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		961	1200	1200	12	350 MCM	2	3.5
		460V		793	1000	1000	12	250 MCM	2	3.0
		575V		635	700	800	6	400 MCM	2	2.5

Table 108: Single-point Electrical Data (60 Hz, High efficiency, non-VFD models) continued

Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
445ATH	60	208V	24	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		963	1200	1200	12	350 MCM	2	3.5
		460V		797	1000	1000	12	250 MCM	2	3.0
		575V		637	800	800	6	400 MCM	2	2.5
470ATH	60	208V	26	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		1072	1200	1200	12	400 MCM	2	3.5
		460V		886	1000	1000	12	300 MCM	2	3.5
		575V		709	800	800	6	500 MCM	2	3.0
500ATH	60	208V	28	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		--	--	--	--	--	--	--
		460V		959	1200	1200	12	350 MCM	2	3.5
		575V		767	800	800	12	250 MCM	2	3.0
530ATH	60	208V	30	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		--	--	--	--	--	--	--
		460V		1032	1200	1200	12	400 MCM	2	3.5
		575V		826	1000	1000	12	300 MCM	2	3.5

Single-point Electrical Data (non-VFD)

Table 109: Single-point Electrical Data (60 Hz, Premium efficiency, non-VFD models)

Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
210ADP	60	208V	16	872	1200	1200	12	300 MCM	2	3.5
		230V		788	1000	1000	12	250 MCM	2	3.0
		380V		478	600	600	6	250 MCM	2	2.0
		460V		394	500	500	6	3/0 AWG	2	2.0
		575V		316	400	400	3	400 MCM	1	2.5
230ADP	60	208V	18	983	1200	1200	12	350 MCM	2	3.5
		230V		889	1200	1200	12	300 MCM	2	3.5
		380V		538	700	700	6	300 MCM	2	2.5
		460V		445	600	600	6	4/0 AWG	2	2.0
		575V		356	450	500	3	500 MCM	1	3.0
250ADP	60	208V	18	1060	1200	1200	12	400 MCM	2	3.5
		230V		959	1200	1200	12	350 MCM	2	3.5
		380V		580	700	800	6	350 MCM	2	2.5
		460V		480	600	600	6	250 MCM	2	2.0
		575V		384	450	500	6	3/0 AWG	2	2.0
280ADP	60	208V	20	1170	1600	1600	12	500 MCM	2	4.0
		230V		1058	1200	1200	12	400 MCM	2	3.5
		380V		640	800	800	6	400 MCM	2	2.5
		460V		529	700	700	6	300 MCM	2	2.5
		575V		423	600	600	6	4/0 AWG	2	2.0
300ADP	60	208V	20	--	--	--	--	--	--	--
		230V		1126	1200	1200	12	500 MCM	2	4.0
		380V		681	800	800	6	500 MCM	2	3.0
		460V		563	700	700	6	300 MCM	2	2.5
		575V		450	600	600	6	4/0 AWG	2	2.0
320ADP	60	208V	22	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		789	1000	1000	12	250 MCM	2	3.0
		460V		652	800	800	6	400 MCM	2	2.5
		575V		522	700	700	6	300 MCM	2	2.5
350ADP	60	208V	24	--	--	--	--	--	--	--
		230V		--	--	--	--	--	--	--
		380V		877	1200	1200	12	300 MCM	2	3.5
		460V		725	1000	1000	6	500 MCM	2	3.0
		575V		581	700	800	6	350 MCM	2	2.5

Table 110: Single-point Field Wiring Data (60 Hz, Standard efficiency, non-VFD models)

Model	HZ	Voltage	# of Fans	PowerBlock		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
175ADS	60	208V	10	1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		230V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		380A	(1/PH) #4 - 500	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		380A	(1/PH) #4 - 500	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
190ADS	60	208V	12	1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		230V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		380A	(1/PH) #4 - 500	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
210ADS	60	208V	12	1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		230V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		380A	(1/PH) #4 - 500	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
230ADS	60	208V	14	1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		230V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
250ADS	60	208V	14	1400A	(4/PH) 1/0 - 750 mcm	1600A	(5/PH) 300-600 kcmil	1600A	(5/PH) 300-600 kcmil
		230V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
280ADS	60	208V	16		--		--		--
		230V			--		--		--
		380V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
300ADS	60	208V	16		--		--		--
		230V			--		--		--
		380V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
320ADS	60	208V	20		--		--		--
		230V			--		--		--
		380V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
350ADS	60	208V	20		--		--		--
		230V			--		--		--
		380V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
375ATS	60	208V	22		--		--	--	--
		230V			--		--	--	--
		380V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil

Single-point Field Wiring Data (non-VFD)

Table 111: Single-point Field Wiring Data (60 Hz, Standard efficiency, non-VFD models) continued

Model	HZ	Voltage	# of Fans	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
400ATS	60	208V	22	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	--	--
		460V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
425ATS	60	208V	24	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	--	--
		460V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
445ATS	60	208V	24	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V			--		--	--	--
		460V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
470ATS	60	208V	26	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	--	--	--	--
		460V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		575V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
500ATS	60	208V	28	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	--	--	--	--
		460V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		575V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
530ATS	60	208V	30	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	--	--	--	--
		460V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		575V		1400A	(4/PH) 1/0 - 750 mcm	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil

Table 112: Single-point Field Wiring Data (60 Hz, High efficiency, non-VFD models)

Model	HZ	Voltage	# of Fans	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
210ADH	60	208V	12	1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		230V		1400A	#N/A	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		380A	(1/PH) #4 - 500	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
230ADH	60	208V	14	1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		230V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		380A	(1/PH) #4 - 500	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
250ADH	60	208V	14	1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		230V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		380A	(1/PH) #4 - 500	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
280ADH	60	208V	16	1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		230V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil

Table 113: Single-point Field Wiring Data (60 Hz, High efficiency, non-VFD models) continued

Model	HZ	Voltage	# of Fans	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
300ADH	60	208V	16	1400A	#N/A	1600A	(5/PH) 300-600 kcmil	1600A	(5/PH) 300-600 kcmil
		230V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
320ADH	60	208V	20	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		1400A	#N/A	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
350ADH	60	208V	20	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
380ADH	60	208V	22	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
405ADH	60	208V	24	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
445ATH	60	208V	24	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		460V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
470ATH	60	208V	26	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	--	--
		460V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
500ATH	60	208V	28	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	--	--	--	--
		460V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		575V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
530ATH	60	208V	30	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		--	--	--	--	--	--
		460V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		575V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil

Single-point Field Wiring Data (non-VFD)

Table 114: Single-point Field Wiring Data (60 Hz, Premium efficiency, non-VFD models)

Model	HZ	Voltage	# of Fans	Power Block		Disconnect Switch		High Short Circuit Current Rating	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
210ADP	60	208V	16	1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		230V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		380A	(1/PH) #4 - 500	400A	(2/PH) 3/0 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil
230ADP	60	208V	18	1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		230V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		380A	(1/PH) #4 - 500	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
250ADP	60	208V	18	1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		230V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	400A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
280ADP	60	208V	20	1400A	#N/A	1600A	(5/PH) 300-600 kcmil	1600A	(5/PH) 300-600 kcmil
		230V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
300ADP	60	208V	20	--	--	--	--	--	--
		230V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1600A	(5/PH) 300-600 kcmil
		380V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil
320ADP	60	208V	22	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	600A	(2/PH) 3/0 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil
350ADP	60	208V	24	--	--	--	--	--	--
		230V		--	--	--	--	--	--
		380V		1400A	#N/A	1200A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		460V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	1200A	(4/PH) 250 mcm - 500 kcmil
		575V		760A	(2/PH) #2 - 500 kcmil	800A	(4/PH) 250 - 500 kcmil	800A	(4/PH) 250 mcm - 500 kcmil

Table 115: Multipoint Electrical Data (60Hz, standard and high efficiency, VFD models)

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
150ADS	60	380V	5	218	300	350	3	4/0 AWG	1	2.0
		460V	5	180	250	300	3	3/0 AWG	1	2.0
175ADS	60	380V	6	222	300	350	3	4/0 AWG	1	2.0
		460V	6	183	250	300	3	3/0 AWG	1	2.0
190ADS	60	380V	6	266	400	450	3	300 MCM	1	2.5
		460V	6	219	300	350	3	4/0 AWG	1	2.0
210ADH	60	380V	6	277	400	450	3	300 MCM	1	2.5
		460V	6	229	350	350	3	4/0 AWG	1	2.0
230ADH	60	380V	7	281	400	450	3	300 MCM	1	2.5
		460V	7	233	350	400	3	250 MCM	1	2.0
250ADH	60	380V	7	336	500	500	3	500 MCM	1	3.0
		460V	7	278	400	450	3	300 MCM	1	2.5
280ADH	60	380V	8	340	500	500	3	500 MCM	1	3.0
		460V	8	281	400	450	3	300 MCM	1	2.5
300ADH	60	380V	8	393	600	600	6	3/0 AWG	2	2.0
		460V	8	325	500	500	3	400 MCM	1	2.5
320ADH	60	380V	10	401	600	600	6	4/0 AWG	2	2.0
		460V	10	332	500	500	3	400 MCM	1	2.5
350ADH	60	380V	10	474	700	800	6	250 MCM	2	2.0
		460V	10	392	600	600	6	3/0 AWG	2	2.0
380ADH	60	380V	10	--	--	--	--	--	--	--
		460V	12	392	600	600	6	3/0 AWG	2	2.0
405ADH	60	380V	12	--	--	--	--	--	--	--
		460V	12	460	700	700	6	4/0 AWG	2	2.0
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
150ADS	60	380V	5	218	300	350	3	4/0 AWG	1	2.0
		460V	5	180	250	300	3	3/0 AWG	1	2.0
175ADS	60	380V	6	266	400	450	3	300 MCM	1	2.5
		460V	6	219	300	350	3	4/0 AWG	1	2.0
190ADS	60	380V	6	266	400	450	3	300 MCM	1	2.5
		460V	6	219	300	350	3	4/0 AWG	1	2.0
210ADH	60	380V	6	277	400	450	3	300 MCM	1	2.5
		460V	6	229	350	350	3	4/0 AWG	1	2.0
230ADH	60	380V	7	336	500	500	3	500 MCM	1	3.0
		460V	7	278	400	450	3	300 MCM	1	2.5
250ADH	60	380V	7	336	500	500	3	500 MCM	1	3.0
		460V	7	278	400	450	3	300 MCM	1	2.5
280ADH	60	380V	8	393	600	600	6	3/0 AWG	2	2.0
		460V	8	325	500	500	3	400 MCM	1	2.5
300ADH	60	380V	8	393	600	600	6	3/0 AWG	2	2.0
		460V	8	325	500	500	3	400 MCM	1	2.5
320ADH	60	380V	10	474	700	800	6	250 MCM	2	2.0
		460V	10	392	600	600	6	3/0 AWG	2	2.0
350ADH	60	380V	10	474	700	800	6	250 MCM	2	2.0
		460V	10	392	600	600	6	3/0 AWG	2	2.0
380ADH	60	380V	10	--	--	--	--	--	--	--
		460V	12	460	700	700	6	4/0 AWG	2	2.0
405ADH	60	380V	12	--	--	--	--	--	--	--
		460V	12	460	700	700	6	4/0 AWG	2	2.0

Multipoint Electrical Data (VFD)

Table 116: Multipoint Electrical Data (60Hz, standard efficiency, VFD models), continued

Circuit 1										
Model	HZ	Voltage	# of Fans per Circuit	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
445ATH	60	380V	8	393	600	600	6	3/0 AWG	2	2.0
		460V		325	500	500	3	400 MCM	1	2.5
470ATH	60	380V	8	--	--	--	--	--	--	--
		460V		325	500	500	3	400 MCM	1	2.5
500ATH	60	380V	10	--	--	--	--	--	--	--
		460V		392	600	600	6	3/0 AWG	2	2.0
530ATH	60	380V	10	--	--	--	--	--	--	--
		460V		392	600	600	6	3/0 AWG	2	2.0
Circuit 2										
Model	HZ	Voltage	# of Fans per Circuit	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
445ATH	60	380V	8	393	600	600	6	3/0 AWG	2	2.0
		460V		325	500	500	3	400 MCM	1	2.5
470ATH	60	380V	8	--	--	--	--	--	--	--
		460V		325	500	500	3	400 MCM	1	2.5
500ATH	60	380V	10	--	--	--	--	--	--	--
		460V		392	600	600	6	3/0 AWG	2	2.0
530ATH	60	380V	10	--	--	--	--	--	--	--
		460V		392	600	600	6	3/0 AWG	2	2.0
Circuit 3										
Model	HZ	Voltage	# of Fans per Circuit	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
445ATH	60	380V	8	393	600	600	6	3/0 AWG	2	2.0
		460V		325	500	500	3	400 MCM	1	2.5
470ATH	60	380V	10	--	--	--	--	--	--	--
		460V		392	600	600	6	3/0 AWG	2	2.0
500ATH	60	380V	8	--	--	--	--	--	--	--
		460V		325	500	500	3	400 MCM	1	2.5
530ATH	60	380V	10	--	--	--	--	--	--	--
		460V		392	600	600	6	3/0 AWG	2	2.0

Table 117: Multipoint Electrical Data (60Hz, premium efficiency, VFD models), continued

Circuit 1										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
210ADP		380V	8	285	400	450	3	350 MCM	1	2.5
		460V		236	350	400	3	250 MCM	1	2.0
230ADP		380V	9	290	400	450	3	350 MCM	1	2.5
		460V		239	350	400	3	250 MCM	1	2.0
250ADP		380V	9	345	500	500	3	500 MCM	1	3.0
		460V		284	400	450	3	300 MCM	1	2.5
280ADP		380V	10	349	500	500	3	500 MCM	1	3.0
		460V		288	400	450	3	350 MCM	1	2.5
300ADP		380V	10	401	600	600	6	4/0 AWG	2	2.0
		460V		332	500	500	3	400 MCM	1	2.5
320ADP		380V	10	401	600	600	6	4/0 AWG	2	2.0
		460V		332	500	500	3	400 MCM	1	2.5
350ADP		380V	12	482	700	800	6	250 MCM	2	2.0
		460V		398	600	600	6	3/0 AWG	2	2.0
Circuit 2										
Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
210ADP		380V	8	285	400	450	3	350 MCM	1	2.5
		460V		236	350	400	3	250 MCM	1	2.0
230ADP		380V	9	345	500	500	3	500 MCM	1	3.0
		460V		284	400	450	3	300 MCM	1	2.5
250ADP		380V	9	345	500	500	3	500 MCM	1	3.0
		460V		284	400	450	3	300 MCM	1	2.5
280ADP		380V	10	401	600	600	6	4/0 AWG	2	2.0
		460V		332	500	500	3	400 MCM	1	2.5
300ADP		380V	10	401	600	600	6	4/0 AWG	2	2.0
		460V		332	500	500	3	400 MCM	1	2.5
320ADP		380V	12	482	700	800	6	250 MCM	2	2.0
		460V		398	600	600	6	3/0 AWG	2	2.0
350ADP		380V	12	482	700	800	6	250 MCM	2	2.0
		460V		398	600	600	6	3/0 AWG	2	2.0

Multipoint Field Wiring Data (VFD)

Table 118: Multipoint Field Wiring Data (60Hz, High efficiency, VFD models)

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
150ADS	60	380V	5	--	--	250A	(1/PH) # 3/0 - 350 MCM	250A	(1/PH) # 3/0 - 350 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	250A	(1/PH) # 3/0 - 350 MCM
175ADS	60	380V	6	--	--	250A	(1/PH) # 3/0 - 350 MCM	250A	(1/PH) # 3/0 - 350 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	250A	(1/PH) # 3/0 - 350 MCM
190ADS	60	380V	6	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	250A	(1/PH) # 3/0 - 350 MCM
210ADH	60	380V	6	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	400A	(2/PH) 2/0 - 500 MCM
230ADH	60	380V	7	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	400A	(2/PH) 2/0 - 500 MCM
250ADH	60	380V	7	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
280ADH	60	380V	8	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
300ADH	60	380V	8	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
320ADH	60	380V	10	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
350ADH	60	380V	10	--	--	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
380ADH	60	380V	10	--	--	--	--	--	--
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
405ADH	60	380V	12	--	--	--	--	--	--
		460V		--	--	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
150ADS	60	380V	5	--	--	250A	(1/PH) # 3/0 - 350 MCM	250A	(1/PH) # 3/0 - 350 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	250A	(1/PH) # 3/0 - 350 MCM
175ADS	60	380V	6	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	250A	(1/PH) # 3/0 - 350 MCM
190ADS	60	380V	6	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	250A	(1/PH) # 3/0 - 350 MCM
210ADH	60	380V	6	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	400A	(2/PH) 2/0 - 500 MCM
230ADH	60	380V	7	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
250ADH	60	380V	7	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
280ADH	60	380V	8	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
300ADH	60	380V	8	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
320ADH	60	380V	10	--	--	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
350ADH	60	380V	10	--	--	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
380ADH	60	380V	12	--	--	--	--	--	--
		460V		--	--	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
405ADH	60	380V	12	--	--	--	--	--	--
		460V		--	--	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM

Table 119: Multipoint Field Wiring Data (60Hz, High efficiency, VFD models), continued

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
445ATH	60	380V	8	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
470ATH	60	380V	8	--	--	--	--	--	--
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
500ATH	60	380V	10	--	--	--	--	--	--
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
530ATH	60	380V	10	--	--	--	--	--	--
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
445ATH	60	380V	8	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
470ATH	60	380V	8	--	--	--	--	--	--
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
500ATH	60	380V	10	--	--	--	--	--	--
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
530ATH	60	380V	10	--	--	--	--	--	--
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
Circuit 3									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
445ATH	60	380V	8	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
470ATH	60	380V	10	--	--	--	--	--	--
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
500ATH	60	380V	8	--	--	--	--	--	--
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
530ATH	60	380V	10	--	--	--	--	--	--
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM

Multipoint Field Wiring Data (VFD)

Table 120: Multipoint Field Wiring Data (60Hz, Premium efficiency, VFD models), continued

Circuit 1									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	(2/PH) 2/0 - 500 MCM
210ADP	60	380V	8	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	400A	(2/PH) 2/0 - 500 MCM
230ADP	60	380V	9	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	400A	(2/PH) 2/0 - 500 MCM
250ADP	60	380V	9	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
280ADP	60	380V	10	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
300ADP	60	380V	10	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
320ADP	60	380V	10	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
350ADP	60	380V	12	--	--	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
Circuit 2									
Model	HZ	Voltage	# of Fans per Circuit	Power Block		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
210ADP	60	380V	8	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	250A	(1/PH) # 3/0 - 350 MCM	400A	(2/PH) 2/0 - 500 MCM
230ADP	60	380V	9	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
250ADP	60	380V	9	--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
280ADP	60	380V	10	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
300ADP	60	380V	10	--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
320ADP	60	380V	12	--	--	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
350ADP	60	380V	12	--	--	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		--	--	400A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM

Table 121: Terminal Amps Electrical Data (60Hz)

Model	HZ	Voltage	Compressor Rated Load Amps			# of Fans per Circuit	Fan Motor FLA	Fan Motor LRA	Inrush Amps LRA VFD		
			CIR 1	CIR 2	CIR 3				CIR 1	CIR 2	CIR 3
150ADS VFD	60	380V	158	158	--	5	4.1	16	158	158	--
		460V	130	130	--	5	3.4	14	130	130	--
175ADS VFD	60	380V	158	193	--	6	4.1	16	158	193	--
		460V	130	159	--	6	3.4	14	130	159	--
190ADS VFD	60	380V	193	193	--	6	4.1	16	193	193	--
		460V	159	159	--	6	3.4	14	159	159	--
210ADH VFD	60	380V	202	202	--	6	4.1	16	202	202	--
		460V	167	167	--	6	3.4	14	167	167	--
230ADH VFD	60	380V	202	246	--	7	4.1	16	202	246	--
		460V	167	203	--	7	3.4	14	167	203	--
250ADH VFD	60	380V	246	246	--	7	4.1	16	246	246	--
		460V	203	203	--	7	3.4	14	203	203	--
280ADH VFD	60	380V	246	288	--	8	4.1	16	246	288	--
		460V	203	238	--	8	3.4	14	203	238	--
300ADH VFD	60	380V	288	288	--	8	4.1	16	288	288	--
		460V	238	238	--	8	3.4	14	238	238	--
320ADH VFD	60	380V	288	346	--	10	4.1	16	288	346	--
		460V	238	286	--	10	3.4	14	238	286	--
350ADH VFD	60	380V	346	346	--	10	4.1	16	346	346	--
		460V	286	286	--	10	3.4	14	286	286	--
380ADH VFD	60	380V	--	--	--	10	--	--	--	--	--
		460V	286	335	--	12	3.4	14	286	335	--
405ADH VFD	60	380V	--	--	--	12	--	--	--	--	--
		460V	335	335	--	12	3.4	14	335	335	--
445ATH VFD	60	380V	288	288	288	8/8/8	4.1	16	288	288	288
		460V	238	238	238		3.4	14	238	238	238
470ATH VFD	60	380V	--	--	--	8/8/10	--	--	--	--	--
		460V	238	238	286		3.4	14	238	238	286
500ATH VFD	60	380V	--	--	--	10/10/8	--	--	--	--	--
		460V	286	286	238		3.4	14	286	286	238
530ATH VFD	60	380V	--	--	--	10/10/10	--	--	--	--	--
		460V	286	286	286		3.4	14	286	286	286
210ADP VFD	60	380V	202	202	--	1/8/1900	4.1	16	202	202	--
		460V	167	167	--		3.4	14	167	167	--
230ADP VFD	60	380V	202	246	--	1/9/1900	4.1	16	202	246	--
		460V	167	203	--		3.4	14	167	203	--
250ADP VFD	60	380V	246	246	--	9	4.1	16	246	246	--
		460V	203	203	--	9	3.4	14	203	203	--
280ADP VFD	60	380V	246	288	--	10	4.1	16	246	288	--
		460V	203	238	--	10	3.4	14	203	238	--
300ADP VFD	60	380V	288	288	--	10	4.1	16	288	288	--
		460V	238	238	--	10	3.4	14	238	238	--
320ADP VFD	60	380V	288	346	--	10	4.1	16	288	346	--
		460V	238	286	--	12	3.4	14	238	286	--
350ADP VFD	60	380V	346	346	--	12	4.1	16	346	346	--
		460V	286	286	--	12	3.4	14	286	286	--

Single-point Electrical Data (VFD)

Table 122: Single-point Electrical Data (60 Hz, High and Premium efficiency, VFD models)

Model	HZ	Voltage	# of Fans	(Wire 75°C for SP Power Block / Disconnect Sw. - 90°C for SP HSCCR)						
				MCA	Recommended Fuse Size	Maximum Fuse Size	# of Leads	Wire Size	# of Hubs	Hub Size
150ADS	60	380V	10	397	500	500	6	3/0 AWG	2	2.0
		460V		327	400	450	3	400 MCM	1	2.5
175ADS	60	380V	12	449	500	600	6	4/0 AWG	2	2.0
		460V		370	450	500	3	500 MCM	1	3.0
190ADS	60	380V	12	484	600	600	6	250 MCM	2	2.0
		460V		399	500	500	6	3/0 AWG	2	2.0
210ADH	60	380V	12	504	600	700	6	250 MCM	2	2.0
		460V		417	500	500	6	4/0 AWG	2	2.0
230ADH	60	380V	14	567	700	800	6	300 MCM	2	2.5
		460V		468	600	600	6	250 MCM	2	2.0
250ADH	60	380V	14	611	700	800	6	350 MCM	2	2.5
		460V		504	600	700	6	250 MCM	2	2.0
280ADH	60	380V	16	672	800	800	6	500 MCM	2	3.0
		460V		555	700	700	6	300 MCM	2	2.5
300ADH	60	380V	16	714	800	1000	6	500 MCM	2	3.0
		460V		590	700	800	6	350 MCM	2	2.5
320ADH	60	380V	20	803	1000	1000	12	250 MCM	2	3.0
		460V		664	800	800	6	400 MCM	2	2.5
350ADH	60	380V	20	861	1000	1200	12	300 MCM	2	3.5
		460V		712	800	800	6	500 MCM	2	3.0
380ADH	60	380V	22	--	--	--	--	--	--	--
		460V		780	1000	1000	12	250 MCM	2	3.0
405ADH	60	380V	24	--	--	--	--	--	--	--
		460V		835	1000	1000	12	300 MCM	2	3.5
445ATH	60	380V	24	1035	1200	1200	12	400 MCM	2	3.5
		460V		855	1000	1000	12	300 MCM	2	3.5
470ATH	60	380V	26	--	--	--	--	--	--	--
		460V		922	1200	1200	12	350 MCM	2	3.5
500ATH	60	380V	28	--	--	--	--	--	--	--
		460V		977	1200	1200	12	350 MCM	2	3.5
530ATH	60	380V	30	--	--	--	--	--	--	--
		460V		1032	1200	1200	12	400 MCM	2	3.5
210ADP	60	380V	16	520	600	700	6	300 MCM	2	2.5
		460V		430	500	500	6	4/0 AWG	2	2.0
230ADP	60	380V	18	584	700	800	6	350 MCM	2	2.5
		460V		482	600	600	6	250 MCM	2	2.0
250ADP	60	380V	18	628	800	800	6	400 MCM	2	2.5
		460V		518	600	700	6	300 MCM	2	2.5
280ADP	60	380V	20	688	800	800	6	500 MCM	2	3.0
		460V		569	700	800	6	300 MCM	2	2.5
300ADP	60	380V	20	730	800	1000	6	500 MCM	2	3.0
		460V		604	700	800	6	350 MCM	2	2.5
320ADP	60	380V	22	811	1000	1000	12	250 MCM	2	3.0
		460V		670	800	800	6	500 MCM	2	3.0
350ADP	60	380V	24	877	1000	1200	12	300 MCM	2	3.5
		460V		725	800	1000	6	500 MCM	2	3.0

Table 123: Single-point Field Wiring Data (60 Hz, High and Premium efficiency, VFD models)

Model	HZ	Voltage	# of Fans	PowerBlock		Disconnect Switch		High Short Circuit Current Rating Circuit Breaker (note 1)	
				Size	Std Lug Size	Size	Std Lug Size	Size	Std Lug Size
150ADS	60	380V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		380A	(1/PH) #4 - 500	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
175ADS	60	380V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		380A	(1/PH) #4 - 500	400A	(2/PH) 2/0 - 500 MCM	400A	(2/PH) 2/0 - 500 MCM
190ADS	60	380V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
210ADH	60	380V	12	620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
230ADH	60	380V	14	620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
250ADH	60	380V	14	620A	(2/PH) # 6 - 350 MCM	800A	(4/PH) #3/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
280ADH	60	380V	16	760A	(2/PH) #4 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
300ADH	60	380V	16	760A	(2/PH) #4 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	800A	(4/PH) #3/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
320ADH	60	380V	20	1400A	(4/PH) #2 - 600 MCM	1200A	(4/PH) #3/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
		460V		760A	(2/PH) #4 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
350ADH	60	380V	20	1400A	(4/PH) #2 - 600 MCM	1200A	(4/PH) #3/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
		460V		760A	(2/PH) #4 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
380ADH	60	380V	22	--	--	--	--	--	--
		460V		1400A	(4/PH) #2 - 600 MCM	1200A	(4/PH) #3/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
405ADH	60	380V	24	--	--	--	--	--	--
		460V		1400A	(4/PH) #2 - 600 MCM	1200A	(4/PH) #3/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
445ATH	60	380V	24	1400A	(4/PH) #2 - 600 MCM	1200A	(4/PH) #3/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
		460V		1400A	(4/PH) #2 - 600 MCM	1200A	(4/PH) #3/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
470ATH	60	380V	26	--	--	--	--	--	--
		460V		1400A	(4/PH) #2 - 600 MCM	1200A	(4/PH) #3/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
500ATH	60	380V	28	--	--	--	--	--	--
		460V		1400A	(4/PH) #2 - 600 MCM	1200A	(4/PH) #3/0 - 500 MCM	--	--
530ATH	60	380V	30	--	--	--	--	--	--
		460V		1400A	(4/PH) #2 - 600 MCM	1200A	(4/PH) #3/0 - 500 MCM	--	--
210ADP	60	380V	16	620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
230ADP	60	380V	18	620A	(2/PH) # 6 - 350 MCM	800A	(2/PH) 2/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	600A	(2/PH) 2/0 - 500 MCM
250ADP	60	380V	18	760A	(2/PH) #4 - 500 MCM	800A	(2/PH) 2/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
280ADP	60	380V	20	760A	(2/PH) #4 - 500 MCM	800A	(2/PH) 2/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	600A	(2/PH) 2/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
300ADP	60	380V	20	760A	(2/PH) #4 - 500 MCM	800A	(2/PH) 2/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
		460V		620A	(2/PH) # 6 - 350 MCM	800A	(2/PH) 2/0 - 500 MCM	800A	(4/PH) #3/0 - 500 MCM
320ADP	60	380V	22	1400A	(4/PH) #2 - 600 MCM	1200A	(2/PH) 2/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
		460V		760A	(2/PH) #4 - 500 MCM	800A	(2/PH) 2/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
350ADP	60	380V	24	1400A	(4/PH) #2 - 600 MCM	1200A	(2/PH) 2/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM
		460V		760A	(2/PH) #4 - 500 MCM	800A	(2/PH) 2/0 - 500 MCM	1200A	(4/PH) #3/0 - 500 MCM

Unit

Right-hand Evaporator Water Connections

Right-hand evaporator water connections (as viewed from the control panel) are an available option.

Black Fin Coil

Aluminum fin stock is pre-coated with a phenolic-epoxy coating with 1000-hour salt spray resistance (ASTM B117-90).

Copper Fin Condenser Coils

Copper fin condenser coils are available as an option on all models for corrosion protection.

Baked Epoxy Condenser Fin Coating

ElectroFin™ flexible dip and baked epoxy protective coating with 5000+ hour salt spray resistance (ASTM B117-90) is available on the condenser coils and coil frames. Provides protection against adverse environments such as salt air as found on seacoast applications and many chemical environments. The coating can be applied to copper or aluminum coils. Consult the local McQuay sales office for complete specification and chemical resistance chart.

Protective Base Guards

Optional factory installed wire mesh lower base guards provide protection for ground level installations. Wire mesh coil guards are standard.

Louvers (Wind and Hail Protection)

Coil-Only Louvers

The presence of wind will have an adverse affect on any air-cooled chiller. Wind across a condenser coil will not allow a chiller to operate as efficiently, or possibly not even start, at low ambient temperatures. Wind raises the minimum ambient temperature in which the chiller can operate. The Pathfinder air-cooled chillers are available with factory-installed (or as a field-installed kit) coil louvers, which allow the chiller to operate effectively down to the ambient temperature for which it was designed.

Hail can have a damaging effect on the performance of an air-cooled condenser. As the outer finned area is flattened against the coil, restricting airflow, the efficiency of the coil is reduced.

Coil and Base Louvers

The coil louvers can also be supplied with base louvers, which when combined, enclose the entire side and end of the unit. The base louvers are primarily for appearance and provide some protection against vandalism. This option is available as factory-mounted or as a field-installed kit.

Vibration Isolators

Spring or rubber-in-shear vibration isolators are available for field installation under the unit base frame on sound sensitive applications. Consult the local McQuay sales office for seismic isolation.

Double Evaporator Insulation

Double evaporator thermal insulation is available and recommended for low fluid temperature applications.

Sound Enclosures

Removable sound reduction enclosures reduce unit overall sound level.

Suction Shutoff Valves

Factory-mounted suction shutoff valves that, when used in conjunction with the compressor discharge valve, isolate the compressor for service.

Liquid line Solenoid Valve

Factory-mounted liquid line solenoid valve acts in conjunction with the electronic expansion valve for liquid shutoff to the evaporator.

Evaporator Inlet Strainer

Evaporator inlet water strainer kit consisting of Y-type strainer with 304 stainless steel perforated basket, blowdown valve, matching pipe extension with two Schrader fittings and two Victaulic couplings; all for field installation. See page 13 for details.

Controls

Water Flow Switch (Field-Installed, Paddle Type)

(Part Number 01750330) A 150 psig water flow switch is available for field installation in the chilled water piping to protect against evaporator freeze-up under low, or no flow conditions. Terminals are provided in the unit control center for field connection of the water flow detection switch. A flow detection device of some type is required.

Water Flow Switch (Factory-Installed, Solid State)

A solid-state thermal dispersion flow switch located in the evaporator outlet nozzle is factory installed and wired. In addition to the electronic output signal, the switch has an LED display to visually indicate the presence of flow.

The 24 Vac powered flow sensor is a solid-state alternative to mechanical switches for sensing the acceptable flow rate of water. These compact units are constructed of corrosion-resistant materials and 316 stainless steel parts and installed directly through a ¼ inch NPT into the flow.

The flow sensors operate on the calorimetric principle. The sensors use the cooling effect of a flowing fluid to provide

reliable flow rate detection of liquids over a very wide flow range. The amount of thermal energy that is removed from the tip determines the local flow rate and when it exceeds a setpoint it changes the output-state.

BAS Modules

A factory-installed communication module allows as BACnet w/ MSTP, BACnet w/ Ethernet, LonMark or Modbus. communications with BAS standard protocols. See for details. The module can also be retrofitted after shipment.

Remote User Interface

A remote control panel that mimics operation of the controller located on the unit. Up to eight Pathfinder units can be connected to it and selected on the screen. It provides HMI (Human Machine Interface) within a building, the building engineer's office for example, without going outdoors to the unit. It can be ordered and shipped loose as a field installed option. The remote panel is powered from the unit and no additional power supply is required.

High Ambient Operation

This option is required for operation at ambient temperatures above 100°F (38°C), up to 125°F (51°C) or when the unit is equipped with the VFD low ambient fan control option. The kit includes a thermostat controlled, panel ventilation fan and inlet grille with filter. The option can be ordered with any unit. Compressor loading and unloading is adaptively determined by system load, ambient air temperature and other inputs to the MicroTech III control algorithms.

Low Ambient Operation

Factory mounting of a variable frequency drive (VFD) motor on the lead condenser fan motor for each circuit provides for chiller operation between 35°F (2°C) and 0°F (-18 C). Line reactors for the VFDs are included. This option requires the addition of the High Ambient Operation option to remove excess VFD heat.

Electrical

Power Factor Correction Capacitors

Factory-installed PFCC option improves the compressor power factor to at least .95 at full load. Available on most non-vfd models (models with VFD achieve .94-.95 correction without capacitors). See Physical Data beginning on page 45 for weight-add for PFCC option.

RapidRestore™

Data center and other critical installations often require a rapid restart after a power interruption. McQuay's RapidRestore option provides a 30-second restart capability (available only on units with compressor VFDs). The power interruption must be longer than one second and the Start-to-Start timer timed out.

Power Connections

The standard power connection is multi-point to disconnect switches (two or three) with through-the-door handles and no individual branch circuit breakers.

Note: See page 182 for ratings of standard and optional electrical panels.

Single-Point Connection to Disconnect Switch

Single power supply to a factory-mounted, molded case, disconnect switch. Each circuit is factory-wired from the disconnect switch to an isolating circuit breaker for each compressor circuit.

Single-Point Connection with High Short-Circuit Current Rated Panel

High short-circuit current rated panel. Includes high interrupting capacity unit disconnect switch and factory-wiring to standard isolating circuit breakers for each circuit. Interrupt ratings are shown in Table 4, page 15. The high short circuit rated panel means that a short circuit current up to the ratings shown in Table 4 will not destroy the enclosure, even though the internal components may be destroyed.

Multi-Point Connection with High Short Circuit Current Rated Panel

High short-circuit current rated panel. Includes two or three high interrupting capacity disconnect switches. Interrupt ratings are shown Table 4, page 15. Isolating circuit breakers for each compressor are not included. The high short circuit rated panel means that a short circuit current up to the ratings shown in Table 4 will not destroy the enclosure, even though the internal components may be destroyed.

Wye-Delta Compressor Starters

Wye-delta starters in lieu of the standard solid-state starters.

Phase/Voltage Monitor

Phase/voltage monitor for wye-delta starters provides under/over voltage and phase sequence protection with LED indicating light. It comes as standard on solid-state starters.

Ground Fault Protection

Provides ground fault protection for the entire unit on wye-delta starters. It comes as standard on solid-state starters.

Engineering Guide Specification

Note: The specification is available in MSWord from the local McQuay sales office.

SECTION 15XXX: AIR-COOLED ROTARY SCREW CHILLERS

PART 1 - GENERAL

1.01 Summary

A Section includes design, performance criteria, refrigerants, controls, and installation requirements for air-cooled rotary screw packaged chillers.

1.02 References

A Comply with applicable Standards/Codes of AHRI 550/590, ANSI/ASHRAE 15, ASHRAE 90.1 current version requirements, and ASME Section VIII.

1.03 Submittals

A Submit shop drawings and product data in accordance with specification requirements.

B Submittals shall include the following:

1 Dimensioned plan and elevation view drawings, required clearances, and location of all field connections.

2 Single line schematic drawing of the field power hookup requirements, indicating all items that are furnished.

3 Schematic diagram of control system indicating points for field connection and fully delineate field and factory wiring.

4 Installation manuals.

1.04 Quality Assurance

A Qualifications; Equipment manufacturer must specialize in the manufacture of the products specified and have five years experience with the equipment and refrigerant offered.

B Regulatory Requirements: Comply with the codes and standards specified.

C Factory Tested: Chiller shall be pressure-tested, evacuated, and fully charged with refrigerant and oil, and be operationally run-tested at the factory with water flowing through the vessel.

D Chiller must be manufactured in an ISO certified facility.

E Factory trained and authorized service personnel shall perform pre-startup checks and startup procedures.

1.05 Delivery and Handling

A Chillers shall be delivered to the job site completely assembled and charged with refrigerant and oil by the manufacturer (except for field-installed piping on remote evaporator installations).

B Comply with the manufacturer's instructions for rigging and handling.

C If unit is to be stored, comply with Manufacturer instructions for storage.

1.06 Warranty

The refrigeration equipment manufacturer's warranty shall be for a period of one year from date of equipment start up, but not more than 18 months from shipment. It shall cover replacement parts (and the labor to replace them) having proven defective within the above period.

Part 2: PRODUCTS

2.01 Acceptable Manufacturers

A Basis of Design - McQuay Model AWS, including the standard product features and all special features required per the plans and specifications.

B Equal Products - Equipment manufactured by [ENTER MANUFACTURER NAME HERE] may be acceptable as an equal. Naming these products as equal does not imply that their standard construction or configuration is acceptable or meets the specifications. Equipment proposed “as equal”, must meet the specifications including all architectural, mechanical, electrical, and structural details, all scheduled performance and the job design, plans and specifications.

2.02 Unit Description

A Provide and install as shown on the plans, factory assembled, factory charged with R-134a, and factory run-tested, air-cooled, rotary screw compressor packaged chillers in the quantity and size specified. Each chiller shall consist of multiple semi-hermetic screw compressors, direct expansion evaporator, air-cooled condenser section, control system and all components necessary for protected and controlled unit operation.

2.03 Design Requirements

A General: Provide a complete rotary screw packaged chiller as specified herein and as shown on the drawings. The unit shall be in accordance with the standards referenced in section 1.02.

B Performance: Refer to the schedule of performance on the drawings. The chiller shall be capable of stable operation to a minimum of [varies - consult physical data tables] percent of full load without hot gas bypass. The unit shall be capable of operating to 35°F (4.4°C) ambient temperature.
[OPTION]: The unit shall have factory mounted, low ambient head pressure control providing operation to 0°F (-18°C).
[OPTION]: The unit shall provide ventilation in the controller to provide operation above 100°F (38°C)up to 125°F(51°C) ambient air temperatures.

C Acoustics: Manufacturer must provide both sound power and sound pressure data in decibels. Sound pressure data per ARI 370 must be provided in 8 octave band format at full load. In addition, A-weighted sound pressure at 30 feet should be provided at 100%, 75%, 50% and 25% load

points to identify the full operational noise envelope. Sound power must be provided in 1/3 octave band format to highlight any tonal quality issues.

If manufacturer cannot meet the noise levels (per the attached chart), sound attenuation devices and / or barrier walls must be installed to meet this performance level.

Sound Pressure (at 30 feet)											
63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall dBA	75% Load dBA	50% Load dBA	25% Load dBA

Sound Power											
63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall dBA	75% Load dBA	50% Load dBA	25% Load dBA

One-third Octave Band Sound Power																							
50 Hz	63 Hz	80 Hz	100 HZ	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1000 Hz	1250 Hz	1600 Hz	2000 Hz	2500 Hz	3150 Hz	4000 Hz	5000 Hz	6300 Hz	8000 Hz	10 kHz

2.04 Chiller Components

A Compressors: The compressors shall be field serviceable, semi-hermetic, single-rotor screw type with one central helical rotor meshing with two opposing gaterotors. The gaterotor contact element shall be constructed of engineered composite material, dimensionally stable up to 1500°F and wear resistant for extended life. Compressors shall be vibration isolated from the frame by neoprene compression mounts. If a twin-screw design is used, the manufacturer shall provide an extended 5-year parts and labor warranty covering all additional moving parts.
[OPTION]: Each compressor shall be equipped with a suction service shutoff valve.
[OPTION]: Each compressor shall have a factory-installed sound enclosure. Attenuated sound pressure for the unit shall not exceed the following tabulated levels. Sound measurements are to be taken in accordance with AHRI Standard 370 Octave Band.

B Electric motors: Motors shall be high torque, two pole, semi-hermetic, squirrel cage induction type with inherent thermal protection on all three phases and cooled by suction gas.

C Solid-State Compressor Motor Starters: Each starter shall be designed using the current generation of reliable solid-state technology. Each starter shall provide controlled motor acceleration and deceleration, and shall provide protection for the following conditions: ground faults, phase rotation, electronic thermal overload, over/under current, stalled motor, single phase, high load current and current unbalance. Acceptable solid-state starter manufacturers are GE, Cutler-Hammer, Benshaw or Reliance. The solid state starters shall be capable of self-diagnostics, metering, and have an LED display to include the following operating and fault messages:

1 Operating Messages:

- **a** Line voltage not present
- **b** Voltage present, starter ready
- **c** Motor accelerating
- **d** Motor at full speed
- **e** Motor at full speed, ramp time expired
- **f** Stop command received, motor decelerating
- **g** Thermal overload has reached 90% to 99%
- **h** Thermal overload at 100%, motor stopped
- **i** Thermal overload reduced to 60%, motor can restart
- **j** Passcode enabled
- **k** Passcode disabled
- **l** Thermal overload content in percentage

2 Fault Messages:

- **a** System power not three phase
- **b** Phase sequence incorrect
- **c** Line frequency less than 25 Hz
- **d** Line frequency more than 72 Hz
- **e** Excessive current unbalance
- **f** Operating parameters lost
- **g** No current after “Run” command
- **h** Undercurrent trip occurred
- **i** Overcurrent trip occurred
- **j** Control power too low
- **k** Motor stalled during acceleration
- **l** External fault

[OPTION]: Wye-Delta Compressor Motor Starter: Each compressor shall be equipped with an open transition, wye-delta starter.
[OPTION]: Variable Frequency Drive (VFD): Each compressor shall be equipped with a VFD providing compressor speed control as a function of the cooling load. Each

VFD shall provide controlled motor acceleration and deceleration, and shall provide protection for the following conditions: electronic thermal overload, over/under current, stalled motor, input and output phase loss, high load current, and current unbalance. The VFD shall provide a minimum [**94%** (High/Premium efficiency VFD models)] **OR** [**91%** (Standard efficiency VFD models)] unit power factor at all load points. The drive shall be equipped with DC reactors. Compressors used in VFD controlled units must have electrically insulated, coated bearings to mitigate bearing and/or lubricant damage from stray electric current passage. Units without this protection must have an extended 5-year compressor warranty.
The unit controller shall display the following data:

- **a** Output Frequency
- **b** Output Current
- **c** Output Voltage
- **d** Output Power
- **e** Fault Code

The unit controller shall display the following alarms and faults:

- **a** Over Current-Hold
- **b** Over Current-Unload
- **c** Over Current-Alarm
- **d** Overheat-Hold
- **e** Overheat-Unload
- **f** Overheat-Alarm
- **g** Communication Fault

[OPTION]: The unit shall be equipped with factory-installed Power Factor Correction Capacitors that shall provide 95% compressor power factor at full load.
[OPTION]: The unit shall be equipped with factory-installed EMI filters.
[OPTION]: The unit shall be equipped with ground fault protection.

D Evaporator: The evaporator shall be of the direct expansion type with single pass on the refrigerant and water side for high efficiency counterflow heat transfer and low pressure drops, carbon steel shell, and high efficiency finned copper tubes rolled into steel tubesheets. The evaporator shall be designed, inspected, and stamped in accordance with ASME Section VIII requirements. It shall be heated with a thermostatically controlled electric heater to help freeze protection to -20°F (-29°C). The evaporator shall be insulated with ¾-inch (19 mm) closed cell polyurethane insulation
[OPTION]: Double evaporator insulation for low chilled fluid applications
[OPTION]: Right-hand evaporator connections on two-compressor units, when looking at the unit control panel. Left-hand connections are standard.
[OPTION]: Chilled water thermal dispersion switch to be factory mounted in the chilled water outlet nozzle and factory wired to terminals in the control panel to prevent unit operation with no flow.
[OPTION]: Chilled water flow switch to be field mounted in the chilled water line and field wired to terminals in the control panel.

E Condenser: The condenser coils shall have seamless copper tubes mechanically bonded into aluminum plate type fins.
[OPTION]: Copper tubes mechanically bonded into copper, plate type fins.
[OPTION]: Copper tubes mechanically bonded into Black Fin® precoated plate type fins.
[OPTION]: Copper tubes mechanically bonded into aluminum plate type fins with Electrofin® baked epoxy coating after coil assembly.
The fins shall have full drawn collars to completely cover the tubes. A subcooling coil shall be an integral part of the main condenser coil. Condenser fans shall be propeller type arranged for vertical air discharge and individually driven by direct drive fan motors. Each fan shall be housed in its own compartment to eliminate condenser air cross flow during fan cycling and shall be equipped with a heavy-gauge close-meshed PVC coated fan guard.
Fan motors shall be weather protected, three-phase, direct-drive, (850rpm for 60Hz) (950rpm for 50Hz), TEAO, totally enclosed air-over motors with class F insulation or better. ODP motors are not acceptable.

F Refrigerant Circuit: The unit must have refrigerant circuits completely independent of each other with one compressor per circuit. Each circuit shall include an electronic expansion valve, liquid line shutoff valves, replaceable core filter-driers, sight glass with moisture indicator and combination discharge check and shutoff valve
[OPTION]: Unit shall be equipped with a liquid line solenoid valve.

G Unit casing and all structural members and rails shall be fabricated of steel and painted to meet ASTM B117 500-hour salt spray test. The control enclosure and unit panels shall be corrosion resistant painted before assembly.
Unit shall have condenser coils grilles.
[OPTION]: Condenser coil grilles and base frame grilles
[OPTION]: Condenser coil louvers and base frame grilles
[OPTION]: Condenser coil louvers only
[OPTION]: Condenser coil louvers and base frame louvers

H Advanced microprocessor based control system:

1 Control Panel: A NEMA Type 3R weatherproof control panel shall contain the unit control system, control interlock terminals and field-power connection points. Hinged control panel access doors shall be tool-lockable. Barrier panels shall be provided to protect against accidental contact with line voltage when accessing the control system.
Factory-supplied power components shall include: individual contactors and circuit breakers for fan motors, circuit breakers and factory mounted transformers for each control-circuit, unit power terminal blocks for

connection to remote disconnect switch, and terminals for power supply to the evaporator heater circuit. Fan motors shall have inherent overload protection and compressor motors shall have three-phase motor overload protection.
A 10.0 amp, 115-volt convenience outlet shall be mounted inside the control panel on all 60-Hz units.
[OPTION]: Single-Point Connection to Disconnect Switch.
[OPTION]: Multi-point power supply to factory-mounted disconnect switches with through-the-door handles, for each compressor circuit.
[OPTION]: High short-circuit current rated panel including a single-point high interrupting capacity unit disconnect switch and factory-wiring to standard isolating circuit breakers for each circuit.
[OPTION]: Multi-point connection to high short-circuit current rated panel. Includes two or three high interrupting capacity disconnect switches. Isolating circuit breakers for each compressor are not included.

2 Control system starting components shall include solid-state start timer.

3 The control logic shall be designed to maximize operating efficiency and equipment life with protections for operation under unusual conditions and to provide a history of operating conditions. The system shall intelligently stage the unit to sustain leaving water temperature precision and stability while minimizing compressor cycling.

4 Equipment protection functions controlled by the microprocessor shall include high discharge pressure, loss of refrigerant, loss of water flow, freeze protection, and low refrigerant pressure.

5 User controls shall include auto/stop switch, chilled water set-point adjustment, anti-recycle timer, and digital display with water temperature and setpoint, operating temperatures and pressures, and diagnostic messages.

6 The following features and functions shall be included:

- Durable liquid crystal display (LCD) screen type, having minimum four 20-character lines with 6 key input pad conveniently mounted on the unit controller. Default language and units of measure shall be English and I-P respectively. Messages shall be in plain English. Coded messages, LED indicators and LED displays are not acceptable.
- Separate control section and password protection for critical parameters.
- Remote reset of chilled water temperature using a 4-20mA signal.
- Soft-load operation, protecting the compressor by preventing full-load operation during the initial chilled fluid pull-down period.
- [OPTION]: BAS communication flexibility through modular plug-in LONTALK , Modbus and BACnet .
- Non-volatile program memory allowing auto-restart after a power failure.
- Recording of safety shutdowns, including date-and-time stamp, system temperatures and pressures. A minimum of six previous occurrences shall be maintained in a revolving memory.
- Start-to-start and stop-to-start cycle timers, providing minimum compressor off time while maximizing motor protection.
- Lead-lag compressor staging for part-load operation by manual selection or automatically by circuit run hours.
- Discharge pressure control through intelligent cycling of condenser fans to maximize efficiency.
- Pro-active compressor unloading when selected operating parameters exceed design settings, such as high discharge pressure or low evaporator pressure.
- Diagnostic monitoring of unit operation, providing a pre-alarm signal in advance of a potential shutdown, allowing time for corrective action.
- [OPTION]: RapidRestore™ - resarts unit within 30 seconds of power interruption on VFD equipped units.
- [OPTION]: Factory-installed amperage and voltage meter
- [OPTION]: Ground fault protection
- [OPTION]: Remote User Display allowing full unit control and user input. Remote User Display shall be capable of providing remote control for eight (8) chillers.

PART 3 - EXECUTION

3.01 Installation

A Install in strict accordance with manufacturer's requirements, shop drawings, and contract documents.

B A 20 mesh strainer shall be placed in the supply water line just prior to the inlet of the evaporator. Care shall be exercised when welding pipe or flanges to the evaporator to prevent any slag from entering the vessel.

C Adjust and level chiller in alignment on supports.

D Coordinate electrical installation with electrical contractor.

E Coordinate controls with control contractor.

F Provide all appurtenances required to insure a fully operational and functional chiller.

3.02 Startup

A Provide Factory Authorized starting of chillers, and instruction to the owner on proper operation and maintenance.

END OF SECTION

Revision History

Number	Date	Description
Cat 600	06-01-09	Initial Release
Cat 600-1	08-31-09	Extended product line.
Cat 600-2	12-01-09	Added 60Hz models with VFD (50Hz models removed from this catalog to Cat 606); corrected phys data tables to match performance tables.
Cat 600-3	03-23-10	Added refrigerant diagram; updated glycol performance derates (Marketing News 01/20/10); revised lug sizes in field wiring data; revised drawings for clarity and completeness; corrected 30°C SI perf. data conversion error; added 20-mesh strainer note to spec and refrig diagram; corrected 380v VFD (380/405) as unavailable;
Cat 600-4	06-11-10	Added AWS150-190ADS with VFD models; Added new strainer kit as optional accessory.
Cat 600-4	06-28-10	fixed table 77 formatting; corrected weights on non-vfd high/prem models
Cat 600-4	09-10-10	Corrected drawings (280ADS, 350ADP, 405ADH, 230ADP/VFD); Corrected 400/600 amp lug size from 350 to 500
Cat 600-5	10-18-10	Added RapidRestore™ option
CAT 600-5	01-06-11	Added "with disconnect switch" to single point high short circuit panel options and "with disconnect switch and no isolation circuit breakers" to the multipoint description in Table 3, page 15.

McQuay Training and Development

Now that you have made an investment in modern, efficient McQuay equipment, its care should be a high priority. For training information on all McQuay HVAC products, please visit us at www.mcquay.com and click on training, or call 540-248-9646 and ask for the Training Department.

Warranty

All McQuay equipment is sold pursuant to its standard terms and conditions of sale, including Limited Product Warranty. Consult your local McQuay Representative for warranty details. Refer to Form 933-43285Y. To find your local McQuay Representative, go to www.mcquay.com.

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