



TRANE®

Packaged Rooftop Air Conditioners

27½ to 50 Tons - 60Hz

22.9 to 41.7 Tons (81-148 kW) - 50 Hz

***Voyager™ Commercial with
ReliaTel™ Controls***





Introduction

Packaged Rooftop Air Conditioners

Through the years, Trane has designed and developed the most complete line of Packaged Rooftop products available in the market today. Trane was the first to introduce the Micro—microelectronic unit controls—and has continued to improve and revolutionize this design concept.

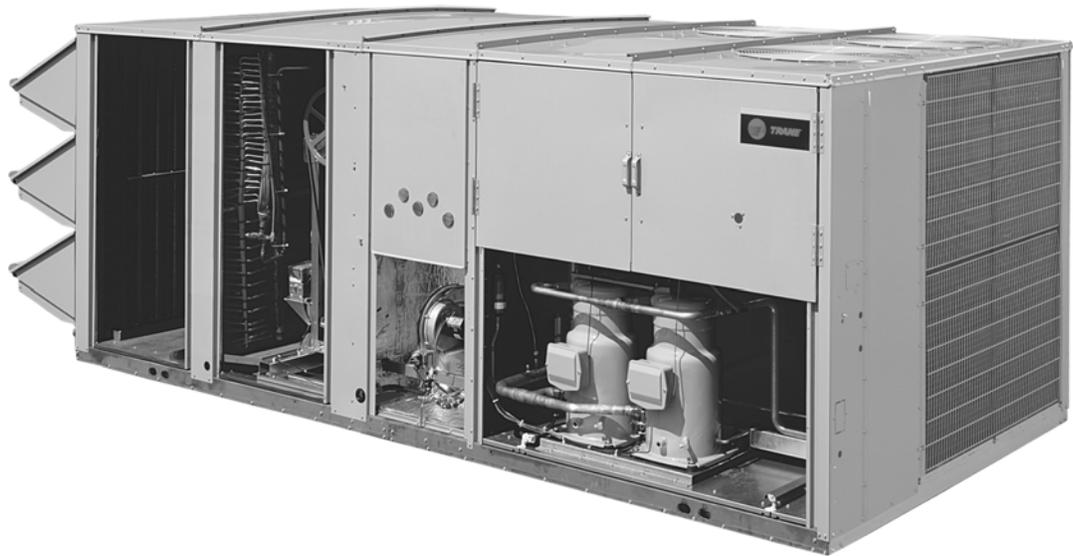
The ReliaTel control platform offers the same great features and functionality as the original Micro, with additional benefits for greater application flexibility.

The Voyager Commercial line offers 27½ to 50 ton, 60 Hz and 23 to 42 ton 50 Hz models. Both 50 and 60 Hz models come in a choice of five sizes to meet the changing demands of the commercial rooftop market.

Trane customers demand products that provide exceptional reliability, meet stringent performance requirements, and are competitively priced. Trane delivers with Voyager Commercial.

Voyager Commercial features cutting edge technologies: reliable 3-D™ Scroll compressors, Trane engineered ReliaTel controls, computer-aided run testing, and Integrated Comfort™ Systems. So, whether you're the contractor, the engineer, or the owner you can be certain Voyager Commercial Products are built to meet your needs.

It's Hard To Stop A Trane.®



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Features and Benefits

Standard Features

- Factory installed and commissioned ReliaTel™ controls
- Trane 3-D™ Scroll Compressors
- Dedicated downflow or horizontal configuration
- CV or VAV control
- Froststat™ coil frost protection on all units
- Supply air overpressurization protection on VAV units
- Supply airflow proving
- Emergency stop input
- Compressor lead-lag
- Occupied-Unoccupied switching
- Timed override activation
- FC supply fans
- UL and CSA listing on standard options
- Two inch standard efficiency filters
- Finish exceeds salt spray requirements of ASTM B117
- Sloped condensate drain pan
- Cleanable, IAQ-enhancing, foil faced insulation on all interior surfaces exposed to the unit air stream

Optional Features

- Electric heat
- Natural gas heat with single stage, two stage and modulating options
- Two Stage LP Gas Heat (kit only)
- Factory installed R-407C Refrigerant
- Barometric Relief
- 100% Power Exhaust
- 50% Power Exhaust
- 100% Fresh Air Tracking Power Exhaust
- 50% Fresh Air Tracking Power Exhaust
- High Efficiency 2" or 4" Throwaway Filters
- High Efficiency supply fan motors
- High Efficiency condenser coil
- Manual fresh air damper
- Economizer with dry bulb control
- Economizer with reference enthalpy control
- Economizer with differential (comparative) enthalpy control
- Inlet guide vanes on VAV units
- Variable frequency drives on VAV units (with or without bypass)
- Service Valves
- Through-the-base electrical provision
- Factory mounted disconnect with external handle (non-fused)
- Factory powered or field powered 15A GFI convenience outlet
- Trane Communication Interface (TCI)
- Ventilation Override
- Hinged Service Access
- Factory installed condenser coil guards
- Black epoxy pre-coated standard or high efficiency condenser coil
- Sloped stainless steel evaporator coil drain pans

- CO₂ sensors for space comfort control (SCC) or discharge air control (DAC)
- LonTalk® Communication Interface (LCI-R)
- Clogged filter switch
- Discharge air temperature sensor (CV only)

Trane 3-D™ Scroll Compressor

Simple Design with 70% Fewer Parts

Fewer parts than an equal capacity reciprocating compressor means significant reliability and efficiency benefits. The single orbiting scroll eliminates the need for pistons, connecting rods, wrist pins and valves. Fewer parts lead to increased reliability. Fewer moving parts, less rotating mass and less internal friction means greater efficiency than reciprocating compressors.

The Trane 3-D Scroll provides important reliability and efficiency benefits. The 3-D Scroll allows the orbiting scrolls to touch in all three dimensions, forming a completely enclosed compression chamber which leads to increased efficiency. In addition, the orbiting scrolls only touch with enough force to create a seal; there is no wear between the scroll plates. The fixed and orbiting scrolls are made of high strength cast iron which results in less thermal distortion, less leakage, and higher efficiencies. The most outstanding feature of the 3-D Scroll compressor is that slugging will not cause failure. In a reciprocating compressor, however, the liquid or dirt can cause serious damage.

Low Torque Variation

The 3-D Scroll compressor has a very smooth compression cycle; torque variations are only 30 percent of that produced by a reciprocating compressor. This means that the scroll compressor imposes very little stress on the motor resulting in greater reliability. Low torque variation reduces noise and vibration.

Suction Gas Cooled Motor

Compressor motor efficiency and reliability is further optimized with the latest scroll design. Cool suction gas keeps the motor cooler for longer life and better efficiency.

- Proven Design Through Testing and Research

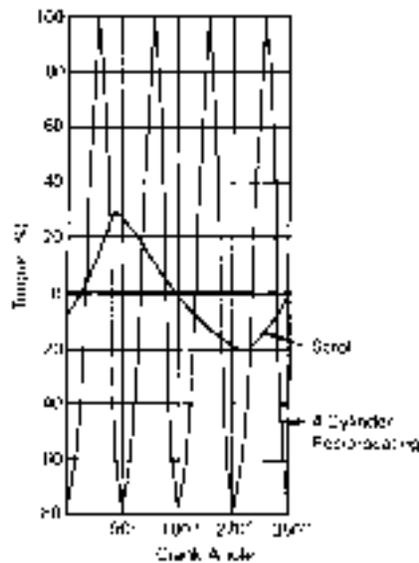
With over 20 years of development and testing, Trane 3-D Scroll compressors have undergone more than 400,000 hours of laboratory testing and field operation. This work combined with over 25 patents makes Trane the worldwide leader in air conditioning scroll compressor technology.



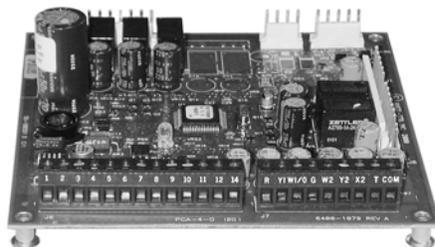
Figure 1. One of two matched scroll plates — the distinguishing feature of the scroll compressor.



Figure 2. Chart illustrates low torque variation of 3-D Scroll compressor vs reciprocating compressor.



Quality and Reliability



Easy to Install, Service and Maintain

Because today's owners are very cost-conscious when it comes to service and maintenance, the Trane Voyager was designed with direct input from service contractors. This valuable information helped to design a product that would get the service technician off the job quicker and save the owner money. Voyager does this by offering:

ReliaTel™ Controls (LCI-R)

ReliaTel controls provide unit control for heating, cooling and ventilating utilizing input from sensors that measure outdoor and indoor temperature.

Quality and Reliability are enhanced through ReliaTel control and logic:

- prevents the unit from short cycling, considerably improving compressor life.
- ensures that the compressor will run for a specific amount of time which allows oil to return for better lubrication, enhancing the reliability of the commercial compressor.

Voyager with ReliaTel reduces the number of components required to operate the unit, thereby reducing possibilities for component failure.

ReliaTel Makes Installing and Servicing Easy

ReliaTel eliminates the need for field installed anti-shortcycle timer and time delay relays. ReliaTel controls provide these functions as an integral part of the unit. The contractor no longer has to purchase these controls as options and pay to install them.

The wiring of the low voltage connections to the unit and the zone sensors is as easy as 1-1, 2-2, and 3-3. This simplified system makes it easier for the installer to wire.

ReliaTel Makes Testing Easy

ReliaTel requires no special tools to run the Voyager unit through its paces. Simply place a jumper between Test 1 and Test 2 terminals on the Low Voltage Terminal Board and the unit will walk through its operational steps automatically.

Note: *The unit automatically returns control to the zone sensor after stepping through the test mode a single time, even if the jumper is left on the unit.*

As long as the unit has power and the “system on” LED is lit, ReliaTel is operational. The light indicates that the controls are functioning properly. ReliaTel features expanded diagnostic capabilities when utilized with Trane Integrated Comfort™ Systems. Some Zone Sensor options have central control panel lights which indicate the mode the unit is in and possible diagnostic information (dirty filters for example).

Other ReliaTel Benefits

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

Intelligent Anticipation is a standard ReliaTel feature. It functions continuously as ReliaTel and zone sensor(s) work together in harmony to provide much tighter comfort control than conventional electro-mechanical thermostats.

Trane Communication Interface (TCI)

The TCI is available factory or field installed. When applied with ReliaTel, this module easily interfaces with the Trane Integrated Comfort™ System.

Interoperability with LonTalk® (LCI-R)

The LonTalk Communication (LCI-R) for Voyager Commercial offers a building automation control system with outstanding interoperability benefits. LonTalk, which is an industry standard, is an open, secure and reliable network communication protocol for controls, created by Echelon Corporation and adopted by the LonMark Interoperability Association. It has been adopted by

several standards, such as: EIA-709.1, the Electronic Industries Alliance (EIA) Control Network Protocol Specification and ANSI/ASHRAE 135, part of the American Society of Heating, Refrigeration, and Air-Conditioning Engineer's BACnet control standard for buildings.

Interoperability allows application or project engineers to specify the best products of a given type, rather than one individual supplier's entire system. It reduces product training and installation costs by standardizing communications across products.

Interoperable systems allow building managers to monitor and control Voyager Commercial equipment with a Trane Tracer Summit™ or a 3rd party building automation system.

It enables integration with many different building controls such as access/intrusion monitoring, lighting, fire and smoke devices, energy management, and a wide variety of sensors for temperature, pressure, humidity and occupancy CO₂. For additional information visit LonMark, www.lonmark.org or Echelon, www.echelon.com.

Variable Frequency Drives (VFD)

Variable Frequency Drives are factory installed and tested to provide supply fan motor speed modulation, as well as modulating gas heat. VFD's on the supply fan, as compared to inlet guide vanes or discharge dampers, are quieter, more efficient, and are eligible for utility rebates. The VFD's are available with or without a bypass option. Bypass control will simply provide full nominal airflow in the event of drive failure.

Modulating gas heat models with VFD's allow tighter space temperature control with less temperature swing.

VariTrac™ changeover-bypass VAV

For light commercial applications, Trane offers constant volume (CV) Voyager Commercial models with a changeover-bypass VAV system. For the most advanced comfort management systems, count on Trane.



Delivered VAV

Trane provides true pressure independent variable air volume with Voyager Commercial delivered VAV. The system is auto-configured to reduce programming and set-up time on the job. Generally available only on sophisticated larger models, this Voyager Commercial system can economically handle comfort requirements for any zone in the facility.

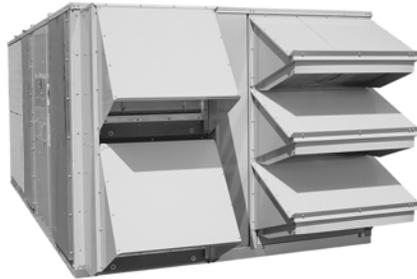
The system consists of:

- Voyager™ Commercial VAV packaged rooftops
- Up to 32 VariTrane™ VAV boxes with DDC (direct digital controls)
- VariTrac™ Central Control Panel (CCP) with Operator Display (OD)

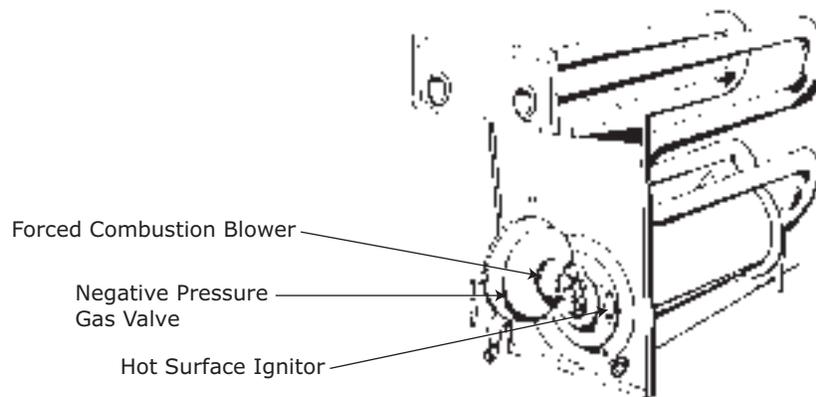
The VariTrac Central Control Panel acts as a communications hub by coordinating the actions of the VAV rooftop and the VAV boxes. Single duct or fan powered VAV boxes are available, along with an option for factory-installed local heat. For more details, see VAV-SLM003-EN.

Downflow and Horizontal Economizers

The economizers come with three control options: dry bulb, enthalpy and differential enthalpy. (Photo below shows the three fresh air hoods on the Horizontal Discharge Configuration).



Outstanding Standard and Optional Components



Drum and Tube Heat Exchanger

The drum and tube heat exchanger is designed for increased efficiency and reliability and utilizes the same technology that has been incorporated into large commercial roof top units for over 20 years.

The heat exchanger is manufactured using optional stainless, or standard aluminized, steel with stainless steel components for maximum durability. The requirement for cycle testing of heat exchangers is 10,000 cycles by ANSI Z21.47. This is the standard required by both UL and AGA for cycle test requirements. Trane requires the design to be tested to 2½ times this current standard. The drum and tube design has been tested and passed over 150,000 cycles which is over 15 times the current ANSI cycling requirements.

The regulated gas valve will not allow gas flow unless the combustion blower is operating. This is one of the unique safety features of Voyager Commercial. The forced combustion blower supplies pre-mixed fuel through a single stainless steel burner screen into a sealed drum where ignition takes place. It is more reliable to operate and maintain than a multiple burner system.

The hot surface ignitor is a gas ignition device which doubles as a safety device utilizing a continuous test to prove the flame. The design is cycle tested at the factory for quality and reliability.

All the gas/electric rooftops exceed all California seasonal efficiency requirements. They also perform better than required to meet the California NOx emission requirements.

High Efficiency Condenser Coil

Increased capacity and energy efficiency with optional high capacity third row condenser coil with or without black epoxy pre-coating.

Excellent Part-Load Efficiency

The unique design of the scroll compressor allows it to be applied in a passive parallel manifolded piping scheme, something that a “recip” just doesn’t do very well. When the unit begins stage back at part load it still has the full area and circuitry of its evaporator and condenser coils available to transfer heat. In simple terms this means superior part-load efficiencies (IPLV) and lower unit operating costs.



Rigorous Testing

All of Voyager’s designs were rigorously rain tested at the factory to ensure water integrity. Actual shipping tests are performed to determine packaging requirements. Units are test shipped around the country. Factory shake and drop tested as part of the package design process to help assure that the unit will arrive at your job site in top condition.

Rigging tests include lifting a unit into the air and letting it drop one foot, assuring that the lifting lugs and rails hold up under stress. We perform a 100% coil leak test at the factory. The evaporator and condenser coils are leak tested at 200 psig and pressure tested to 450 psig.

All parts are inspected at the point of final assembly. Sub-standard parts are identified and rejected immediately. Every unit receives a 100% unit run test before leaving the production line to make sure it lives up to rigorous Trane requirements.

Power Exhaust Option

Provides exhaust of the return air when using an economizer to maintain proper building pressurization. Great for relieving most building overpressurization problems.

Figure 3. Horizontal Discharge with Power Exhaust Option



Easy to Install

Contractors look for lower installation (jobsite) costs. Voyager's conversionless units provide many time and money saving features.

Conversionless Units

The dedicated design units (either downflow or horizontal) require no panel removal or alteration time to convert in the field — a major cost savings during installation.

Improved Airflow

U-shaped airflow allows for improved static capabilities. The need for high static motor conversion is minimized and saves the time normally spent changing to high static oversized motors.

Single Point Power

A single electrical connection powers the unit.

Trane factory built roof curbs

Available for all units.

Added Efficiency

Low Ambient Cooling

All Voyager Commercial units have cooling capabilities down to 0°F as standard.

FC Fans with Inlet Guide Vanes

Trane's forward-curved fans with inlet guide vanes pre-rotate the air in the direction of the fan wheel, decreasing static pressure and horsepower, essentially unloading the fan wheel. The unloading characteristics of a Trane FC fan with inlet guide vanes result in superior part load performance.



One of Our Finest Assets

Trane Commercial Sales Engineers are a support group that can assist you with:

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



Application Considerations

60 Hz Units

Exhaust Air Options

When is it necessary to provide building exhaust?

Whenever an outdoor air economizer is used, a building generally requires an exhaust system. The purpose of the exhaust system is to exhaust the proper amount of air to prevent over or under-pressurization of the building.

A building may have all or part of its exhaust system in the rooftop unit. Often, a building provides exhaust external to the air conditioning equipment. This external exhaust must be considered when selecting the rooftop exhaust system.

Voyager Commercial rooftop units offer three types of exhaust systems:

1. 50% or 100% Power exhaust fan(s)
2. 50% or 100% Fresh Air Tracking Power Exhaust Fan(s)
3. Barometric relief dampers

Application Recommendations

Power Exhaust Fan

The exhaust fan option is either a single fan for exhausting approximately half of the air-moving capabilities of the supply fan system or dual fans for 100% exhaust. Either exhaust capability arrangement is configured as an on/off non-modulating exhaust or an on/off exhaust with an actuator controlled damper to track the position of the fresh air damper.

For non-100% air applications, the 50% non-tracking power exhaust fan generally should not be selected for more than 40 to 50 percent of design supply airflow. Since it is an on/off non-modulating fan, it does not vary exhaust cfm with the amount of outside air entering the building. Therefore, if selected for more than 40 to 50 percent of supply airflow, the building may become underpressurized when economizer operation is allowing lesser amounts of outdoor air into the building. If, however, building pressure is not of a critical nature, the non-modulating exhaust fan may be sized for more than 50 percent of design supply airflow. Consult [Table 34, p. 63](#) for specific exhaust fan capabilities with Voyager Commercial units.

Barometric Relief Dampers

Barometric relief dampers consist of gravity dampers which open with increased building pressure. As the building pressure increases, the pressure in the unit return section also increases, opening the dampers and relieving air. Barometric relief may be used to provide relief for single story buildings with no return ductwork and exhaust requirements less than 25 percent.

Altitude Corrections

The rooftop performance tables and curves of this catalog are based on standard air (.075 lbs/ft). If the rooftop airflow requirements are at other than standard conditions (sea level), an air density correction is needed to project accurate unit performance.

[Figure 5, p. 41](#) shows the air density ratio at various temperatures and elevations. Trane rooftops are designed to operate between 40° and 90°F leaving air temperature.

The procedure to use when selecting a supply or exhaust fan on a rooftop for elevations and temperatures other than standard is as follows:

1. First, determine the air density ratio using [Figure 5, p. 41](#).
2. Divide the static pressure at the nonstandard condition by the air density ratio to obtain the corrected static pressure.
3. Use the actual cfm and the corrected static pressure to determine the fan rpm and bhp from the rooftop performance tables or curves.
4. The fan rpm is correct as selected.
5. Bhp must be multiplied by the air density ratio to obtain the actual operating bhp.

In order to better illustrate this procedure, the following example is used:

Consider a 30 ton rooftop unit that is to deliver 11,000 actual cfm at 1.50 inches total static pressure (tsp), 55°F leaving air temperature, at an elevation of 5,000 ft.

1. From [Figure 5, p. 41](#), the air density ratio is 0.86.
2. $Tsp = 1.50 \text{ inches} / 0.86 = 1.74 \text{ inches tsp}$.
3. From the performance tables: a 30 ton rooftop will deliver 11,000 cfm at 1.74 inches tsp at 668 rpm and 6.93 bhp.
4. The rpm is correct as selected — 668 rpm.
5. $Bhp = 6.93 \times 0.86 = 5.96$.

Compressor MBh, SHR, and kW should be calculated at standard and then converted to actual using the correction factors in [Table 10, p. 41](#). Apply these factors to the capacities selected at standard cfm so as to correct for the reduced mass flow rate across the condenser.

Heat selections other than gas heat will not be affected by altitude. Nominal gas capacity (output) should be multiplied by the factors given in [Table 11, p. 41](#) before calculating the heating supply air temperature.

50Hz Units

Exhaust Air Options

When is it necessary to provide building exhaust?

Whenever an outdoor air economizer is used, a building generally requires an exhaust system. The purpose of the exhaust system is to exhaust the proper amount of air to prevent over or under-pressurization of the building.

A building may have all or part of its exhaust system in the rooftop unit. Often, a building provides exhaust external to the air conditioning equipment. This external exhaust must be considered when selecting the rooftop exhaust system.

Voyager™ Commercial rooftop units offer three types of exhaust systems:

1. 50% or 100% Power exhaust fan
2. 50% or 100% Fresh Air Tracking Power Exhaust Fan(s)

3. Barometric relief dampers

Application Recommendations

Power Exhaust Fan

The exhaust fan option is either a single fan for exhausting approximately half of the air-moving capabilities of the supply fan system or dual fans for 100% exhaust. Either exhaust capability arrangement is configured as an on/off non-modulating exhaust or an on/off exhaust with an actuator controlled damper to track the position of the fresh air damper.

For non-100% air applications, the 50% non-tracking power exhaust fan generally should not be selected for more than 40 to 50 percent of design supply airflow. Since it is an on/off non-modulating fan, it does not vary exhaust cfm with the amount of outside air entering the building. Therefore, if selected for more than 40 to 50 percent of supply airflow, the building may become underpressurized when economizer operation is allowing lesser amounts of outdoor air into the building. If, however, building pressure is not of a critical nature, the non-modulating exhaust fan may be sized for more than 50 percent of design supply airflow. Consult [Table 34, p. 63](#) for specific exhaust fan capabilities with Voyager Commercial units.

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Altitude Corrections

The rooftop performance tables and curves of this catalog are based on standard air (.075 lb/ft³ (.034 kg/cm³)). If the rooftop airflow requirements are at other than standard conditions (sea level), an air density correction is needed to project accurate unit performance.

[Figure 5, p. 41](#) shows the air density ratio at various temperatures and elevations. Trane rooftops are designed to operate between 40° and 90°F (4.4 and 32.2°C) leaving air temperature.

The procedure to use when selecting a supply or exhaust fan on a rooftop for elevations and temperatures other than standard is as follows:

1. First, determine the air density ratio using [Figure 5, p. 41](#).
2. Divide the static pressure at the nonstandard condition by the air density ratio to obtain the corrected static pressure.
3. Use the actual cfm and the corrected static pressure to determine the fan rpm and bhp from the rooftop performance tables or curves.
4. The fan rpm is correct as selected.
5. Bhp must be multiplied by the air density ratio to obtain the actual operating bhp.

In order to better illustrate this procedure, the following example is used:

Consider a 29-ton (105 kW) rooftop unit that is to deliver 9,160 actual cfm (4323 L/s) at 1.50 inches total static pressure (tsp) (38 mm, 373 Pa), 55°F (12.8°C) leaving air temperature, at an elevation of 5,000 ft (1524 m).

1. From [Figure 5, p. 41](#), the air density ratio is 0.86.
2. $Tsp = 1.50 \text{ inches} / 0.86 = 1.74 \text{ inches}$ $374 / .86 = 434 \text{ Pa}$.
3. From the performance tables: a 29-ton (105 kW) rooftop will deliver 9,160 cfm at 1.74 inches tsp 4323 L/s at 434 Pa) at 651 rpm and 5.51 bhp (4.11 kW).
4. The rpm is correct as selected – 651 rpm.

5. $Bhp = 5.51 \times 0.86 = 4.74$ bhp actual. $kW = 4.11 \times 0.86 = 3.5$ kW

Compressor MBh, SHR, and kW should be calculated at standard and then converted to actual using the correction factors in [Table 10, p. 41](#). Apply these factors to the capacities selected at standard cfm so as to correct for the reduced mass flow rate across the condenser.

Heat selections other than gas heat will not be affected by altitude. Nominal gas capacity (output) should be multiplied by the factors given in [Table 11, p. 41](#) before calculating the heating supply air temperature.

50/60 Hz Units

Acoustical Considerations

Proper placement of rooftops is critical to reducing transmitted sound levels to the building. The ideal time to make provisions to reduce sound transmissions is during the design phase. And the most economical means of avoiding an acoustical problem is to place the rooftop(s) away from acoustically critical areas. If possible, rooftops should not be located directly above areas such as: offices, conference rooms, executive office areas and classrooms. Instead, ideal locations might be over corridors, utility rooms, toilets or other areas where higher sound levels directly below the unit(s) are acceptable.

Several basic guidelines for unit placement should be followed to minimize sound transmission through the building structure:

1. Never cantilever the compressor end of the unit. A structural cross member must support this end of the unit.
2. Locate the unit center of gravity which is close to, or over, a column or main support beam.
3. If the roof structure is very light, roof joists must be replaced by a structural shape in the critical areas described above.
4. If several units are to be placed on one span, they should be staggered to reduce deflection over that span.

It is impossible to totally quantify the effect of building structure on sound transmission, since this depends on the response of the roof and building members to the sound and vibration of the unit components. However, the guidelines listed above are experience- proven guidelines which will help reduce sound transmissions.

Clearance Requirements

The recommended clearances identified with unit dimensions should be maintained to assure adequate serviceability, maximum capacity and peak operating efficiency. A reduction in unit clearance could result in condenser coil starvation or warm condenser air recirculation. If the clearances shown are not possible on a particular job, consider the following:

Do the clearances available allow for major service work such as changing compressors or coils?

Do the clearances available allow for proper outside air intake, exhaust air removal and condenser airflow?

If screening around the unit is being used, is there a possibility of air recirculation from the exhaust to the outside air intake or from condenser exhaust to condenser intake?

Actual clearances which appear inadequate should be reviewed with a local Trane sales engineer.

When two or more units are to be placed side by side, the distance between the units should be increased to 150 percent of the recommended single unit clearance. The units should also be staggered for two reasons:

1. To reduce span deflection if more than one unit is placed on a single span. Reducing deflection discourages sound transmission.
2. To assure proper diffusion of exhaust air before contact with the outside air intake of adjacent unit.

Duct Design

It is important to note that the rated capacities of the rooftop can be met only if the rooftop is properly installed in the field. A well designed duct system is essential in meeting these capacities.

The satisfactory distribution of air throughout the system requires that there be an unrestricted and uniform airflow from the rooftop discharge duct. This discharge section should be straight for at least several duct diameters to allow the conversion of fan energy from velocity pressure to static pressure.

However, when job conditions dictate elbows be installed near the rooftop outlet, the loss of capacity and static pressure may be reduced through the use of guide vanes and proper direction of the bend in the elbow. The high velocity side of the rooftop outlet should be directed at the outside radius of the elbow rather than the inside.



Selection Procedure

60 Hz Units

Selection of Trane commercial air conditioners is divided into five basic areas:

1. Cooling capacity
2. Heating capacity
3. Air delivery
4. Unit electrical requirements
5. Unit designation

Factors Used In Unit Cooling Selection:

1. Summer design conditions — 95 DB/76 WB, 95°F entering air to condenser.
2. Summer room design conditions — 76 DB/66 WB.
3. Total peak cooling load — 321 MBh (26.75 tons).
4. Total peak supply cfm — 12000 cfm.
5. External static pressure — 1.2 inches.
6. Return air temperatures — 80 DB/66 WB.
7. Return air cfm — 10800 cfm.
8. Outside air ventilation cfm and load — 1200 cfm and 18.23 MBh (1.52 tons).
9. Unit accessories include:
 - a. Aluminized heat exchanger — high heat module.
 - b. 2" Hi-efficiency throwaway filters.
 - c. Economizer.

Step 1. A summation of the peak cooling load and the outside air ventilation load shows: 26.75 tons + 1.52 tons = 28.27 required unit capacity. From [Table 13, p. 43](#), 30-ton unit capacity at 80 DB/67 WB, 95°F entering the condenser and 12,000 total peak supply cfm, is 30 tons. Thus, a nominal 30-ton unit is selected.

Step 2. Having selected a nominal 30-ton unit, the supply fan and exhaust fan motor bhp must be determined.

Supply Air Fan:

Determine unit static pressure at design supply cfm:

External static pressure = 1.20 inches

Heat exchanger = -.14 inches [Table 32, p. 61](#)

High efficiency filter 2" = .09 inches [Table 32](#)

Indoor coil = 0.22 [Table 32](#)

Economizer = .07 inches [Table 32](#)

Unit total static pressure = 1.50 inches

Using total cfm of 12000 and total static pressure of 1.86 inches, enter [Table 30, p. 58](#). [Table 30](#) shows 7.49 bhp with 657 rpm.

Step 3. Determine evaporator coil entering air conditions. Mixed air dry bulb temperature determination.

Using the minimum percent of OA (1,200 cfm ÷ 12,000 cfm = 10 percent), determine the mixture dry bulb to the evaporator. $RADB + \%OA (OADB - RADB) = 80 + (0.10) (95 - 80) = 80 + 1.5 = 81.5^{\circ}\text{F}$

Approximate wet bulb mixture temperature:

$RAWB + OA (OAWB - RAWB) = 66 + (0.10) (76 - 66) = 66 + 1 = 67^{\circ}\text{F}$. A psychrometric chart can be used to more accurately determine the mixture temperature to the evaporator coil.

Step 4.

Determine total required unit cooling capacity:

Required capacity = total peak load + O.A. load + supply air fan motor heat. From [Figure 4](#), the supply air fan motor heat for 7.27 bhp = 20.6 MBh. Capacity = 321 + 18.23 + 20.6 = 359.8 MBh (30 tons)

Step 5.

Determine unit capacity:

From [Table 12, p. 42](#) unit capacity at 81.5 DB, 67 WB entering the evaporator, 12000 supply air cfm, 95°F entering the condenser is 361 MBh (30.1 tons) 279 sensible MBh.

Step 6.

Determine leaving air temperature:

Unit sensible heat capacity, corrected for supply air fan motor heat $279 - 20.6 = 258.4$ MBh.

Supply air dry bulb temperature difference = $258.4 \text{ MBh} \div (1.085 \times 12,000 \text{ cfm}) = 19.8^{\circ}\text{F}$.

Supply air dry bulb: $81.5 - 19.8 = 61.7$.

Unit enthalpy difference = $361 \div (4.5 \times 12,000) = 6.7$

Btu/lb leaving enthalpy = h (ent WB) = 31.62

Leaving enthalpy = $31.62 \text{ Btu/lb} - 6.7 \text{ Btu/lb} = 24.9 \text{ Btu/lb}$.

From [Table 9, p. 40](#), the leaving air wet bulb temperature corresponding to an enthalpy of 24.9 Btu/lb = 57.5.

Leaving air temperatures = 61.7 DB/57.5

Heating capacity selection:

1. Winter outdoor design conditions—5°F.
2. Total return air temperature — 72°F.
3. Winter outside air minimum ventilation load and cfm — 1,200 cfm and 87.2 MBh.
4. Peak heating load 225 MBh.

Utilizing unit selection in the cooling capacity procedure.

Mixed air temperature = $RADB + \%O.A. (OADB - RADB) = 72 + (0.10) (0-72) = 64.8^{\circ}F$.

Supply air fan motor heat temperature rise = $20,600 \text{ BTU} \div (1.085 \times 12,000) \text{ cfm} = 1.6^{\circ}F$.

Mixed air temperature entering heat module = $64.8 + 1.6 = 66.4^{\circ}F$.

Total winter heating load = peak heating + ventilation load - total fan motor heat = $225 + 87.2 - 20.6 = 291.6 \text{ MBh}$.

Electric Heating System

Unit operating on 480/60/3 power supply. From [Table 27, p. 57](#), kw may be selected for a nominal 30-ton unit operating on 480-volt power. The high heat module — 90 KW or 307 MBh will satisfy the winter heating load of 291.6 MBh.

[Table 27](#) also shows an air temperature rise of $23.6^{\circ}F$ for 12,000 cfm through the 90 kw heat module.

Unit supply temperature at design heating conditions = mixed air temperature + air temperature rise = $66.4 + 23.6 = 90^{\circ}F$.

Natural Gas Heating System

Assume natural gas supply — 1000 Btu/ft³. From [Table 29, p. 57](#) select the high heat module (486 MBh output) to satisfy 291.6 at unit cfm.

[Table 29](#) also shows air temperature rise of $37.3^{\circ}F$ for 12,000 cfm through heating module.

Unit supply temperature design heating conditions = mixed air temperature + air temperature rise = $66.4 + 37.3 = 103.7^{\circ}F$.

Air Delivery Procedure

Supply air fan bhp and rpm selection. Unit supply air fan performance shown in [Table 30, p. 58](#) includes pressure drops for dampers and casing losses. Static pressure drops of accessory components such as heating systems, and filters if used, must be added to external unit static pressure for total static pressure determination.

The supply air fan motor selected in the previous cooling capacity determination example was 7.27 bhp with 652 rpm. Thus, the supply fan motor selected is 7.5 hp.

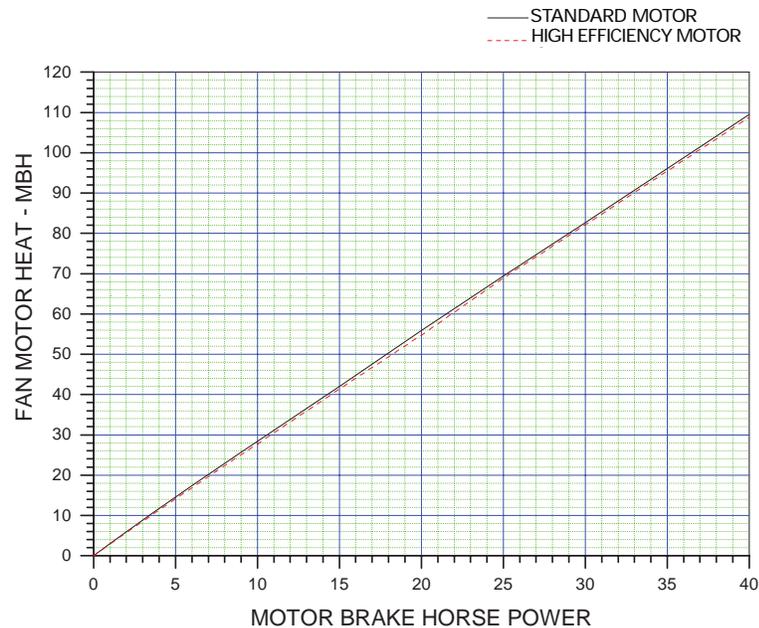
To select the drive, enter [Table 33, p. 62](#) for a 30-ton unit. Select the appropriate drive for the applicable rpm range. Drive selection letter C with a range of 650 rpm, is required for 652 rpm. Where altitude is significantly above sea level, use [Table 10](#), [Table 11](#) and [Figure 5, p. 41](#) for applicable correction factors.

Unit Electrical Requirements

Selection procedures for electrical requirements for wire sizing amps, maximum fuse sizing and dual element fuses are given in the electrical service selection of this catalog.

Unit Designation

After determining specific unit characteristics utilizing the selection procedure and additional job information, the complete unit model number can be developed using the model number nomenclature page.

Figure 4. Fan Motor Heat


50 Hz Units

Selection of Trane commercial air conditioners is divided into five basic areas:

1. Cooling capacity
2. Heating capacity
3. Air delivery
4. Unit electrical requirements
5. Unit designation

Factors Used In Unit Cooling Selection:

1. Summer design conditions – 95 DB/76 WB (35/24.4°C), 95°F (35°C) entering air to condenser.
2. Summer room design conditions – 76 DB/66 WB (24.4/18.9°C).
3. Total peak cooling load – 270 MBh (79 kW) (22.5 tons).
4. Total peak supply cfm – 10,000 cfm (4720 L/s).
5. External static pressure – 1.0 inches wc (249 Pa).
6. Return air temperatures – 80 DB/66°F WB (26.7/18.9°C).
7. Return air cfm – 3540 cfm (1671 L/s).
8. Outside air ventilation cfm and load – 1000 cfm and 15.19 MBh (1.27 tons or 4.45 kW) 472 L/s.
9. Unit accessories include:
 - a. Aluminized heat exchanger – high heat module.
 - b. 2" Hi-efficiency throwaway filters.
 - c. Exhaust fan.
 - d. Economizer cycle.

Step 1.

A summation of the peak cooling load and the outside air ventilation load shows: 22.5 tons + 1.27 tons = 23.77 (79 kW + 4.45 kW = 83.45) required unit capacity. From [Table 38, p. 66](#), 25.4 ton (89 kW) unit capacity at 80 DB/67 WB (27/19°C), 95°F entering the condenser and 10,000 total peak supply cfm (4720 L/s), is YC/TC/TE*305.

Step 2.

Having selected the correct unit, the supply fan and exhaust fan motor bhp must be determined.

Supply Air Fan:

Determine unit static pressure at design supply cfm:

External static pressure = 1.24 inches (310 Pa)

Heat exchanger = ([Table 74, p. 102](#)) .12 inches (30 Pa)

High efficiency filter 2" (25 mm) = ([Table 74](#)) .07 inches (17 Pa)

Economizer = ([Table 74](#)) .07 inches (17 Pa)

Unit total static pressure = 1.50 inches (374 Pa)

Using total cfm of 10,000 (4720 L/s) and total static pressure of 1.50 inches (38 mm), enter [Table 70, p. 96](#). [Table 70](#) shows 5.35 bhp (4 kW) with 616 rpm.

Step 3.

Determine evaporator coil entering air conditions. Mixed air dry bulb temperature determination.

Using the minimum percent of OA (1,000 cfm ÷ 10,000 cfm = 10 percent), determine the mixture dry bulb to the evaporator. $RADB + \% OA$

$$(OADB - RADB) = 80 + (0.10) (95 - 80) = 80 + 1.5 = 81.5^{\circ}\text{F} [26.7 + 1.5 = 28^{\circ}\text{C}].$$

Approximate wet bulb mixture temperature:

$$RAWB + OA (OAWB - RAWB) = 66 + (0.10) (76 - 66) = 66 + 1 = 67^{\circ}\text{F}.$$

A psychrometric chart can be used to more accurately determine the mixture temperature to the evaporator coil.

Step 4.

Determine total required unit cooling capacity:

Required capacity = total peak load + O.A. load + supply air fan motor heat. From [Figure 4, p. 21](#), the supply air fan motor heat for 5.35 bhp = 15 MBh. Capacity = 270 + 15 + 15 = 300 MBh (89 kW)

Step 5.

Determine unit capacity:

From [Table 48, p. 76](#) unit capacity at 81.5 DB/67 WB entering the evaporator, 10,000 supply air cfm, 95°F (35°C) entering the condenser about 304 MBh (89 kW) with 235 MBh (68.8 kW) sensible.

50 Hz

Step 6.**Determine leaving air temperature:**

Unit sensible heat capacity, corrected for supply air fan motor heat $235 - 15 = 220$ MBh (64.4 kW).

Supply air dry bulb temperature difference = $220 \text{ MBh} \div (1.085 \times 10,000 \text{ cfm}) = 20.2^\circ\text{F}$ (-6.6°C)

Supply air dry bulb: $81.5 - 20.2 = 61.3$ (16.3°C)

Unit enthalpy difference = $305.6 \div (4.5 \times 10,000) = 6.76$

Btu/lb leaving enthalpy = h (ent WB)= 31.62

Leaving enthalpy = $31.62 \text{ Btu/lb} - 6.76 \text{ Btu/lb} = 24.86 \text{ Btu/lb}$.

From Table PD-1, the leaving air wet bulb temperature corresponding to an enthalpy of 24.8 Btu/lb = 57.5.

Leaving air temperatures = 61.3 DB/57.5 WB (16.3/14.2°C).

Heating Capacity Selection

1. Winter outdoor design conditions – 0°F (17.7°C).
2. Total return air temperature – 72°F (22.2°C).
3. Winter outside air minimum ventilation load and cfm – 1,000 cfm and 87.2 MBh.
4. Peak heating load 150 MBh.

Utilizing unit selection in the cooling capacity procedure.

Mixed air temperature = $\text{RADB} + \% \text{ O.A.} (\text{OADB} - \text{RADB}) = 72 + (0.10) (0 - 72) = 64.8^\circ\text{F}$.

Supply air fan motor heat temperature rise = $20,600 \text{ Btu} \div (1.085 \times 10,000) \text{ cfm} = 1.9^\circ\text{F}$.

Mixed air temperature entering heat module = $64.8 + 1.9 = 66.7^\circ\text{F}$.

Total winter heating load = peak heating + ventilation load - total fan motor heat = $150 + 87.2 - 15 = 222.2$ MBh.

Electric Heating System

Unit operating on 415 power supply. From [Table 66, p. 94](#), kW may be selected for TC*305 unit to satisfy the winter heating load. The 67 kW module will do the job.

[Table 66](#) also shows an air temperature rise of 21.2°F for 10,000 cfm through the 67 kW heat module.

Unit supply temperature at design heating conditions = mixed air temperature + air temperature rise = $66.7 + 21.2 = 87.9^\circ\text{F}$.

Natural Gas Heating System

Assume natural gas supply – 1000 Btu/ft³. From [Table 69, p. 95](#), select the low heat module (243 MBh output) to satisfy 222 at unit cfm.

[Table 70, p. 96](#) also shows air temperature rise of 37.3°F for 10,000 cfm through heating module.

Unit supply temperature design heating conditions = mixed air temperature + air temperature rise = $66.7 + 37.3 = 104.0^\circ\text{F}$.

Air Delivery Procedure

Supply air fan bhp and rpm selection. Unit supply air fan performance shown in [Table 70](#) includes pressure drops for dampers and casing losses. Static pressure drops of accessory components such as heating systems, and filters if used, must be added to external unit static pressure for total static pressure determination.

The supply air fan motor selected in the previous cooling capacity determination example was 5.35 bhp with 616 rpm. Thus, the supply fan motor selected is 7.5 hp.

To select the drive, enter [Table 76, p. 104](#) for a 25.4 unit. Select the appropriate drive for the applicable rpm range. Drive selection letter E with a range of 625 rpm, is required for 616 rpm. Where altitude is significantly above sea level, use [Table 10](#), [Table 11](#) and [Figure 5, p. 41](#) for applicable correction factors.

Unit Electrical Requirements

Selection procedures for electrical requirements for wire sizing amps, maximum fuse sizing and dual element fuses are given in the electrical service selection of this catalog.

Unit Designation

After determining specific unit characteristics utilizing the selection procedure and additional job information, the complete unit model number can be developed using the model number nomenclature page.



Model Number Description

60 Hz Description

Digit 1, 2 — Unit Function

- TC = DX Cooling, No Heat
- TE = DX Cooling, Electric Heat
- YC = DX Cooling, Natural Gas Heat

Digit 3 — Unit Airflow Design

- D = Downflow Configuration
- H = Horizontal Configuration

Digit 4, 5, 6 — Nominal Cooling Capacity

- 330 = 27½ Tons
- 360 = 30 Tons
- 420 = 35 Tons
- 480 = 40 Tons
- 600 = 50 Tons

Digit 7 — Major Development Sequence

- A = First

Digit 8 — Power Supply¹

- E = 208/60/3
- F = 230/60/3
- 4 = 460/60/3
- 5 = 575/60/3

Digit 9 — Heating Capacity⁴

- 0 = No Heat (TC only)
- L = Low Heat (YC only)
- H = High Heat (YC only)
- J = Low Heat-Stainless Steel Gas Heat Exchangers (YC only)
- K = High Heat-Stainless Steel Gas Heat Exchanger (YC only)
- M = Low Heat-Stainless Steel Gas Heat Exchangers w/ Modulating control (27.5-35 ton YC only)
- P = High Heat-Stainless Steel Gas Heat Exchangers w/ Modulating control (27.5-35 ton YC only)
- R = Low Heat-Stainless Steel Gas Heat Exchangers w/ Modulating control (40-50 ton YC only)
- T = High Heat-Stainless Steel Gas Heat Exchangers w/ Modulating control (40-50 ton YC only)

Note: When second digit is "E" for Electric Heat, the following values apply in the ninth digit.

- A = 36 KW
- B = 54 KW
- C = 72 KW
- D = 90 KW
- E = 108 KW

Digit 10 — Design Sequence

- A = First

Digit 11 — Exhaust¹

- 0 = None
- 1 = Barometric Relief (Available w/ Economizer only)
- 2 = 100% Power Exhaust Fan (Available w/ Economizer only)
- 3 = 50% Power Exhaust Fan (Available w/ Economizer only)
- 4 = 100% Fresh Air Tracking Power Exhaust Fan (Available w/ Economizer only)
- 5 = 50% Fresh Air Tracking Power Exhaust Fan (Available w/ Economizer only)

Digit 12 — Filter

- A = Standard 2" Throwaway Filters
- B = High Efficiency 2" Throwaway Filters
- C = High Efficiency 4" Throwaway Filters

Digit 13 — Supply Fan Motor, HP

- 1 = 7.5 Hp Std. Eff.
- 2 = 10 Hp Std. Eff.
- 3 = 15 Hp Std. Eff.
- 4 = 20 Hp Std. Eff.
- 5 = 7.5 Hp Hi. Eff.
- 6 = 10 Hp Hi. Eff.
- 7 = 15 Hp Hi. Eff.
- 8 = 20 Hp Hi. Eff.

Digit 14 — Supply Air Fan Drive Selections³

- | | |
|-------------|-------------|
| A = 550 RPM | H = 500 RPM |
| B = 600 RPM | J = 525 RPM |
| C = 650 RPM | K = 575 RPM |
| D = 700 RPM | L = 625 RPM |
| E = 750 RPM | M = 675 RPM |
| F = 790 RPM | N = 725 RPM |
| G = 800 RPM | |

Digit 15 — Fresh Air Selection

- A = No Fresh Air
- B = 0-25% Manual Damper
- C = 0-100% Economizer, Dry Bulb Control
- D = 0-100% Economizer, Reference Enthalpy Control
- E = 0-100% Economizer, Differential Enthalpy Control
- F = "C" Option and Low Leak Fresh Air Damper
- G = "D" Option and Low Leak Fresh Air Damper
- H = "E" Option and Low Leak Fresh Air Damper

Digit 16 — System Control

- 1 = Constant Volume
- 2 = VAV Supply Air Temperature Control w/o Inlet Guide Vanes
- 3 = VAV Supply Air Temperature Control w/Inlet Guide Vanes
- 4 = VAV Supply Air Temperature Control w/Variable Frequency Drive w/o Bypass
- 5 = VAV Supply Air Temperature Control w/Variable Frequency Drive and Bypass

Note: Zone sensors are not included with option and must be ordered as a separate accessory.

Digit 17 - 28 — Miscellaneous Options

- A = Service Valves²
- B = Through the Base Electrical Provision
- C = Non-Fused Disconnect Switch with External Handle
- D = Factory-Powered 15A GFI Convenience Outlet and Non-Fused Disconnect Switch with External Handle
- E = Field-Powered 15A GFI Convenience Outlet
- F = Trane Communication Interface (TCI)
- G = Ventilation Override
- H = Hinged Service Access
- J = Condenser Coil Guards
- K = LCI (LonTalk)
- 4 = R-407C Refrigerant
- M = Stainless Steel Drain Pans

Digit 29 — Condenser Coil Options

- 0 = Standard Efficiency Condenser Coil
- N = Standard Efficiency Condenser Coil with Black Epoxy Pre-Coating
- 3 = High Efficiency Condenser Coil
- Q = High Efficiency Condenser Coil with Black Epoxy Pre-Coating

Note: If ordering R-407C, digit 29 must be 3 or Q.

Digit 30-31 — Miscellaneous Options

- P = Discharge Temperature Sensor
- R = Clogged Filter Switch

Note:

1. All voltages are across the line starting only.
2. Option includes Liquid, Discharge, Suction Valves.

¹ Ventilation override exhaust mode is not available for the exhaust fan with fresh air tracking power exhaust. VOM is available for the exhaust fan without fresh air tracking power exhaust.

3. Supply air fan drives A thru G are used with 27½-35 ton units only and drives H thru N are used with 40 & 50 ton units only.
4. Electric Heat KW ratings are based upon voltage ratings of 240/480/600 V. Voltage offerings are as follows (see [Table 27, p. 57](#) for additional information):

| Tons | Voltage | KW | | | | |
|-----------------|---------|----|----|----|----|-----|
| | | 36 | 54 | 72 | 90 | 108 |
| 27½ to 35 | 240 | x | x | | | |
| | 480 | x | x | x | x | |
| | 600 | | x | x | x | |
| 40 and 50 | 240 | | x | | | |
| | 480 | | x | x | x | x |
| | 600 | | x | x | x | x |

5. The service digit for each model number contains 31 digits; all 31 digits must be referenced.

Model Number Description

50 Hz Description

Digits 1, 2 – Unit Function

TC = DX Cooling, No Heat
TE = DX Cooling, Electric Heat
YC = DX Cooling, Natural Gas Heat

Digit 3 – Unit Airflow Design

D = Downflow Configuration
H = Horizontal Configuration

Digits 4, 5, 6 – Nominal Cooling Capacity

275 = 22.9 Tons (82 kW)
305 = 25.4 Tons (89 kW)
350 = 29.2 Tons (105 kW)
400 = 33.3 Tons (120 kW)
500 = 41.7 Tons (148 kW)

Digit 7 – Major Development Sequence

A = First
B = Second, Etc.

Digit 8 – Power Supply¹

C = 380/50/3
D = 415/50/3

Digit 9 – Heating Capacity⁴

Note: 0=No Heat (TC only)
L = Low Heat (YC only)
H = High Heat (YC only)
When second digit is "E" for Electric Heat, the following values apply in the ninth digit.

380V / 415V

A = 23kW / 27kW
B = 34kW / 40kW
C = 45kW / 54kW
D = 56kW / 67kW
E = 68kW / 81kW

Digit 10 – Design Sequence

A = First

Digit 11 – Exhaust⁶

0 = None
1 = Barometric Relief (Available w/ Economizer only)
2 = 100% Power Exhaust Fan (Available w/ Economizer only)
3 = 50% Power Exhaust Fan (Available w/ Economizer only)
4 = 100% Fresh Air Tracking Power Exhaust Fan (Available w/ Economizer only)
5 = 50% Fresh Air Tracking Power Exhaust Fan (Available w/ Economizer only)

Digit 12 – Filter

A = Standard 2" (51 mm) Throwaway Filters
B = High Efficiency 2" (51 mm) Throwaway Filters
C = High Efficiency 4" (102 mm) Throwaway Filters

Digit 13 – Supply Fan Motor, HP

1 = 7.5 Hp Std. Eff. (5.6 kW)
2 = 10 Hp Std. Eff. (7.5 kW)
3 = 15 Hp Std. Eff. (11.2 kW)
4 = 20 Hp Std. Eff. (14.9 kW)

Digit 14 – Supply Air Fan Drive Selections³

A = 458 RPM H = 417 RPM
B = 500 RPM J = 437 RPM
C = 541 RPM K = 479 RPM
D = 583 RPM L = 521 RPM
E = 625 RPM M = 562 RPM
F = 658 RPM N = 604 RPM
G = 664 RPM

Digit 15 – Fresh Air Selection

A = No Fresh Air
B = 0-25% Manual Damper
C = 0-100% Economizer, Dry Bulb Control
D = 0-100% Economizer, Reference Enthalpy Control
E = 0-100% Economizer, Differential Enthalpy Control
F = "C" Option and Low Leak Fresh Air Damper
G = "D" Option and Low Leak Fresh Air Damper
H = "E" Option and Low Leak Fresh Air Damper

Digit 16 – System Control

1 = Constant Volume
2 = VAV Supply Air Temperature Control w/o Inlet Guide Vanes
3 = VAV Supply Air Temperature Control w/Inlet Guide Vanes

Note: Zone sensors are not included with option and must be ordered as a separate accessory.

Digit 17 - 28 — Miscellaneous Options

A = Service Valves²
B = Through the Base Electrical Provision
C = Non-Fused Disconnect Switch with External Handle
D = Factory-Powered 15A GFI Convenience Outlet and Non-Fused Disconnect Switch with External Handle
E = Field-Powered 15A GFI Convenience Outlet
F = Trane Communication Interface (TCI)
G = Ventilation Override
H = Hinged Service Access
J = Condenser Coil Guards
K = LCI (LonTalk)
4 = R-407C Refrigerant
M = Stainless Steel Drain Pans

Digit 29 — Condenser Coil Options

0 = Standard Efficiency Condenser Coil
N = Standard Efficiency Condenser Coil with Black Epoxy Pre-Coating
3 = High Efficiency Condenser Coil
Q = High Efficiency Condenser Coil with Black Epoxy Pre-Coating

Note: If ordering R-407C, digit 29 must be 3 or Q.

Digit 30-31 — Miscellaneous Options

P = Discharge Temperature Sensor
R = Clogged Filter Switch

Note:

- All voltages are across-the-line starting only.
- Option includes Liquid, Discharge, Suction Valves.
- Supply air fan drives A thru G are used with 22.9-29.2 ton (82-105 kW) units only and drives H thru N are used with 33.3 and 41.7 ton (120-148 kW) units only.
- Electric Heat kW ratings are based upon voltage ratings of 380/415 V. Heaters A, B, C, D are used with 22.9-29.2 ton (82-105 kW) units only and heaters B, C, D, E are used with 33.3-41.7 ton (120-148 kW) units only.
- The service digit for each model number contains 31 digits; all 31 digits must be referenced.
- Ventilation override exhaust mode is not available for the exhaust fan with fresh air tracking power exhaust. VOM is available for the exhaust fan without fresh air tracking power exhaust.



General Data

Table 1. General Data — 27½ - 30 Tons (60 Hz)

| Cooling Performance ¹ | 27½ Ton | | | | 30 Ton | | | |
|---|---|----------|-----------------|----------|---------------------|----------|-----------------|----------|
| | Standard Efficiency Nominal Gross Capacity (R-22) | 329,000 | | | | 363,000 | | |
| High Efficiency Nominal Gross Capacity (R-22) | 332,000 | | | | 373,000 | | | |
| Nominal Gross Capacity (R-407C) | 328,000 | | | | 370,000 | | | |
| Natural Gas Heat ^{2,6} | Two Stage | | Modulating | | Two Stage | | Modulating | |
| | Low | High | Low | High | Low | High | Low | High |
| Heating Input (BTUH) | 350,000 | 600,000 | 350,000 | 600,000 | 350,000 | 600,000 | 350,000 | 600,000 |
| First Stage/Low Fire | 250,000 | 425,000 | 70,000 | 70,000 | 250,000 | 425,000 | 70,000 | 70,000 |
| Heating Output (BTUH) | 283,500 | 486,000 | 283,500 | 486,000 | 283,500 | 486,000 | 283,500 | 486,000 |
| First Stage/Low Fire | 202,500 | 344,500 | 56,700 | 56,700 | 202,500 | 344,500 | 56,700 | 56,700 |
| Steady State Efficiency (%) ³ | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 |
| No. Burners | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| No. Stages/Turn down rate | 2 | 2 | 5:1 | 8:1 | 2 | 2 | 5:1 | 8:1 |
| Gas Supply Pressure (in. w.c.) | | | | | | | | |
| Natural or LP (Two Stage only) (min/max) 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 |
| Gas Connection Pipe Size (in.) | 3/4 | 1 | 3/4 | 1 | 3/4 | 1 | 3/4 | 1 |
| Electric Heat | | | | | | | | |
| kW Range ⁵ | 27-90 ⁵ | | | | 27-90 ⁵ | | | |
| Capacity Steps | 2 | | | | 2 | | | |
| Compressor | | | | | | | | |
| Number/Type | 2/Scroll | | | | 2/Scroll | | | |
| Size (Nominal) | 10/15 | | | | 15 | | | |
| Unit Capacity Steps (%) | 100/40 | | | | 100/50 | | | |
| Motor RPM | 3450 | | | | 3450 | | | |
| Outdoor Coil | Standard Efficiency | | High Efficiency | | Standard Efficiency | | High Efficiency | |
| Type | Lanced | | Lanced | | Lanced | | Lanced | |
| Tube Size (in.) OD | 3/8 | | 3/8 | | 3/8 | | 3/8 | |
| Face Area (sq. ft.) | 51.33 | | 51.33 | | 51.33 | | 51.33 | |
| Rows/Fins Per Inch | 2/16 | | 3/16 | | 2/16 | | 3/16 | |
| Indoor Coil - Type | Hi-Performance | | | | Hi-Performance | | | |
| Tube Size (in.) OD | 1/2 | | | | 1/2 | | | |
| Face Area (sq. ft.) | 31.67 | | | | 31.67 | | | |
| Rows/Fins Per Foot | 2/180 | | | | 2/180 | | | |
| Refrigerant Control | TXV | | | | TXV | | | |
| No. of Circuits | 1 | | | | 1 | | | |
| Drain Connection No./Size (in) | 1/1.25 | | | | 1/1.25 | | | |
| Type | PVC | | | | PVC | | | |
| Outdoor Fan Type | Propeller | | | | Propeller | | | |
| No. Used/Diameter | 3/28.00 | | | | 3/28.00 | | | |
| Drive Type/No. Speeds | Direct/1 | | | | Direct/1 | | | |
| CFM | 24,800 | | | | 24,800 | | | |
| No. Motors/HP/RPM | 3/1.10/1125 | | | | 3/1.10/1125 | | | |
| Indoor Fan Type | FC | | | | FC | | | |
| No. Used | 1 | | | | 1 | | | |
| Diameter/Width (in) | 22.38/22.00 | | | | 22.38/22.00 | | | |
| Drive Type/No. Speeds | Belt/1 | | | | Belt/1 | | | |
| No. Motors/HP | 1/7.50/10.00 | | | | 1/7.50/10.00 | | | |
| Motor RPM | 1760 | | | | 1760 | | | |
| Motor Frame Size | 213/215T | | | | 213/215T | | | |

Table 1. (continued) General Data — 27½ - 30 Tons (60 Hz)

| | 27½ Ton | 30 Ton |
|---|----------------|----------------|
| Exhaust Fan Type | Propeller | Propeller |
| Diameter (in) | 26.00 | 26.00 |
| Drive Type/No. Speeds/Motor Frame Size | Direct/1/56 | Direct/1/56 |
| Motor HP/RPM | 1.0/1140 | 1.0/1140 |
| Filters - Type Furnished | Throwaway | Throwaway |
| No./ Recommended Size (in) ⁵ | 16/16 x 20 x 2 | 16/16 x 20 x 2 |
| Min. Outside Air Temp for Mechanical Cooling | 0°F | 0°F |

Notes:

1. Cooling Performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F entering wet bulb. Gross capacity does not include the effect of fan motor heat. Rated and tested in accordance with the Unitary Large Equipment certification program, which is based on ARI Standard 340/360-93.
2. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using American National Standards Institute standards. Ratings shown are for elevations up to 4,500 feet.
3. Steady State Efficiency is rated in accordance with DOE test procedures.
4. Maximum KW @ 208V = 41, @ 240V = 54. For Electric heat KW range per specific voltage, see [Table 28, p. 57](#).
5. Filter dimensions listed are nominal. For actual filter and rack sizes see the Unit Installation, Operation, Maintenance Guide.
6. Standard gas furnaces: Second Stage is total heating capacity—Second Stage/First Stage; Modulating gas furnaces: High Fire is total heating capacity—High Fire/Low Fire

Table 2. General Data — 35 - 40 Tons (60 Hz)

| | 35 Ton | | | | 40 Ton | | | |
|---|---------------------|---------|-------------------|---------|---------------------|---------|-------------------|---------|
| Cooling Performance¹ | | | | | | | | |
| Standard Efficiency Nominal Gross Capacity (R-22) | 417,000 | | | | 513,000 | | | |
| High Efficiency Nominal Gross Capacity (R-22) | 426,000 | | | | 530,000 | | | |
| Nominal Gross Capacity (R-407C) | 425,000 | | | | 527,000 | | | |
| Natural Gas Heat^{2,6} | Two Stage | | Modulating | | Two Stage | | Modulating | |
| | Low | High | Low | High | Low | High | Low | High |
| Heating Input (BTUH) | 350,000 | 600,000 | 350,000 | 600,000 | 400,000 | 800,000 | 350,000 | 750,000 |
| First Stage/Low Fire | 250,000 | 425,000 | 70,000 | 70,000 | 300,000 | 600,000 | 70,000 | 70,000 |
| Heating Output (BTUH) | 283,500 | 486,000 | 283,500 | 486,000 | 324,000 | 648,000 | 283,500 | 607,500 |
| First Stage/Low Fire | 202,500 | 344,500 | 56,700 | 56,700 | 243,000 | 486,000 | 56,700 | 56,700 |
| Steady State Efficiency (%) ³ | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 |
| No. Burners | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| No. Stages/Turn Down Rate | 2 | 2 | 5:1 | 8:1 | 2 | 2 | 5:1 | 10:1 |
| Gas Supply Pressure (in. w.c.) | | | | | | | | |
| Natural or LP (Two Stage only) (min/max) | 2.5/14.0 | | | | 2.5/14.0 | | | |
| Gas Connection Pipe Size (in.) | 3/4 | 1 | 3/4 | 1 | 3/4 | 1 | 3/4 | 1 |
| Electric Heat | | | | | | | | |
| kW Range ⁵ | 27-90 ⁵ | | | | 41-108 ⁵ | | | |
| Capacity Steps: | 2 | | | | 2 | | | |
| Compressor | | | | | | | | |
| Number/Type | 2/Scroll | | | | 3/Scroll | | | |
| Size (nominal) | 15 | | | | 15/15/10 | | | |
| Unit Capacity Steps (%) | 100/50 | | | | 100/60/40 | | | |
| Motor RPM | 3450 | | | | 3450 | | | |
| Outdoor Coil | Standard Efficiency | | High Efficiency | | Standard Efficiency | | High Efficiency | |
| Type | Lanced | | Lanced | | Lanced | | Lanced | |
| Tube Size (in.) OD | 3/8 | | 3/8 | | 3/8 | | 3/8 | |
| Face Area | 51.33 | | 51.33 | | 69.79 | | 75.00 | |
| Rows/Fins Per Inch | 2/16 | | 3/16 | | 2/16 | | 3/16 | |
| Indoor Coil - Type | Hi-Performance | | | | Hi-Performance | | | |
| Tube Size (in.) OD | 1/2 | | | | 1/2 | | | |
| Face Area (sq. ft.) | 31.67 | | | | 37.50 | | | |
| Rows/Fins Per Foot | 3/180 | | | | 3/180 | | | |
| Refrigerant Control | TXV | | | | TXV | | | |
| No. of Circuits | 1 | | | | 2 | | | |
| Drain Connection No./Size (in) | 1/1.25 | | | | 1/1.25 | | | |
| Type | PVC | | | | PVC | | | |
| Outdoor Fan Type | Propeller | | | | Propeller | | | |
| No. Used/Diameter | 3/28.00 | | | | 4/28.00 | | | |
| Drive Type/No. Speeds | Direct/1 | | | | Direct/1 | | | |
| CFM | 24,800 | | | | 31,700 | | | |
| No. Motors/HP/RPM | 3/1.10/1125 | | | | 4/1.10/1125 | | | |
| Indoor Fan Type | FC | | | | FC | | | |
| No. Used | 1 | | | | 1 | | | |
| Diameter/Width (in) | 22.38/22.00 | | | | 25.00/25.00 | | | |
| Drive Type/No. Speeds | Belt/1 | | | | Belt/1 | | | |
| No. Motors/HP | 1/7.50/10.00/15.00 | | | | 1/10.00/15.00 | | | |
| Motor RPM | 1760 | | | | 1760 | | | |
| Motor Frame Size | 213/215/254T | | | | 215/254T | | | |

Table 2. (continued) General Data — 35 - 40 Tons (60 Hz)

| | 35 Ton | 40 Ton |
|---|----------------|----------------|
| Exhaust Fan Type | Propeller | Propeller |
| Diameter (in) | 26.00 | 28.00 |
| Drive Type/No. Speeds/Motor Frame Size | Direct/1/56 | Direct/1/56 |
| Motor HP/RPM | 1.0/1140 | 1.5/1140 |
| Filters - Type Furnished | Throwaway | Throwaway |
| No./Recommended Size (in) ⁵ | 16/16 x 20 x 2 | 17/16 x 20 x 2 |
| Min. Outside Air Temp for Mechanical Cooling | 0°F | 0°F |

Notes:

1. Cooling Performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F entering wet bulb. Gross capacity does not include the effect of fan motor heat. Rated and tested in accordance with the Unitary Large Equipment certification program, which is based on ARI Standard 340/360-93.
2. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using American National Standards Institute standards. Ratings shown are for elevations up to 4,500 feet.
3. Steady State Efficiency is rated in accordance with DOE test procedures.
4. Maximum KW @ 208V = 41, @ 240V = 54. For Electric heat KW range per specific voltage, see [Table 28, p. 57](#).
5. Filter dimensions listed are nominal. For actual filter and rack sizes see the Unit Installation, Operation, Maintenance Guide.
6. Standard gas furnaces: Second Stage is total heating capacity—Second Stage/First Stage; Modulating gas furnaces: High Fire is total heating capacity—High Fire/Low Fire

Table 3. General Data — 50 Tons (60 Hz)

| | 50 Ton | | | |
|---|---------------------|----------|-----------------|----------|
| | Two Stage | | Modulating | |
| | Low | High | Low | High |
| Cooling Performance¹ | | | | |
| Standard Efficiency Nominal Gross Capacity (R-22) | 616,000 | | | |
| High Efficiency Nominal Gross Capacity (R-22) | 631,000 | | | |
| Nominal Gross Capacity (R-407C) | 638,000 | | | |
| Natural Gas Heat^{2,6} | | | | |
| Heating Input (BTUH) | 400,000 | 800,000 | 350,000 | 750,000 |
| First Stage/Low Fire | 300,000 | 600,000 | 70,000 | 70,000 |
| Heating Output (BTUH) | 324,000 | 648,000 | 283,500 | 607,500 |
| First Stage/Low Fire | 243,000 | 486,000 | 56,700 | 56,700 |
| Steady State Efficiency (%) ³ | 81.00 | 81.00 | 81.00 | 81.00 |
| No. Burners | 1 | 2 | 1 | 2 |
| No. Stages/Turn Down Rate | 2 | 2 | 5:1 | 10:1 |
| Gas Supply Pressure (in. w.c.) | | | | |
| Natural or LP (Two Stage only) (min/max) | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 |
| Gas Connection Pipe Size (in.) | 3/4 | 1 | 3/4 | 1 |
| Electric Heat | | | | |
| kW Range ⁵ | 41-108 ⁵ | | | |
| Capacity Steps: | 2 | | | |
| Compressor | | | | |
| Number/Type | 3/Scroll | | | |
| Size (nominal) | 14 | | | |
| Unit Capacity Steps (%) | 100/67/33 | | | |
| Motor RPM | 3450 | | | |
| Outdoor Coil | Standard Efficiency | | High Efficiency | |
| Type | Lanced | | Lanced | |
| Tube Size (in.) OD | 3/8 | | 3/8 | |
| Face Area | 69.79 | | 75.00 | |
| Rows/Fins Per Inch | 2/16 | | 3/16 | |
| Indoor Coil - Type | Hi-Performance | | | |
| Tube Size (in.) OD | 1/2 | | | |
| Face Area (sq. ft.) | 37.50 | | | |
| Rows/Fins Per Foot | 4/164 | | | |
| Refrigerant Control | TXV | | | |
| No. of Circuits | 2 | | | |
| Drain Connection No./Size (in) | 1/1.25 | | | |
| Type | PVC | | | |
| Outdoor Fan Type | Propeller | | | |
| No. Used/Diameter | 4/28.00 | | | |
| Drive Type/No. Speeds | Direct/1 | | | |
| CFM | 31,700 | | | |
| No. Motors/HP/RPM | 4/1.10/1125 | | | |
| Indoor Fan Type | FC | | | |
| No. Used | 1 | | | |
| Diameter/Width (in) | 25.00/25.00 | | | |
| Drive Type/No. Speeds | Belt/1 | | | |
| No. Motors/HP | 1/10.00/15.00/20.00 | | | |
| Motor RPM | 1760 | | | |
| Motor Frame Size | 215/254/256T | | | |

Table 3. (continued) General Data — 50 Tons (60 Hz)

| | |
|---|----------------|
| | 50 Ton |
| Exhaust Fan Type | Propeller |
| Diameter (in) | 28.00 |
| Drive Type/No. Speeds/Motor Frame Size | Direct/1/56 |
| Motor HP/RPM | 1.5/1140 |
| Filters - Type Furnished | Throwaway |
| No./Recommended Size (in) ⁵ | 17/16 x 20 x 2 |
| Min. Outside Air Temp for Mechanical Cooling | 0°F |

Notes:

1. Cooling Performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F entering wet bulb. Gross capacity does not include the effect of fan motor heat. Rated and tested in accordance with the Unitary Large Equipment certification program, which is based on ARI Standard 340/360-93.
2. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using American National Standards Institute standards. Ratings shown are for elevations up to 4,500 feet.
3. Steady State Efficiency is rated in accordance with DOE test procedures.
4. Maximum KW @ 208V = 41, @ 240V = 54. For Electric heat KW range per specific voltage, see [Table 28, p. 57](#).
5. Filter dimensions listed are nominal. For actual filter and rack sizes see the Unit Installation, Operation, Maintenance Guide.
6. Standard gas furnaces: Second Stage is total heating capacity—Second Stage/First Stage; Modulating gas furnaces: High Fire is total heating capacity—High Fire/Low Fire

Table 4. Economizer Outdoor Air Damper Leakage (of Rated Airflow) (60 Hz)

| | ΔP Across Dampers (in. WC) | |
|----------------------------|------------------------------------|-----------|
| | 0.5 (In.) | 1.0 (In.) |
| Standard | 1.5 % | 2.5 % |
| Optional "Low Leak" | 0.5 % | 1.0 % |

Notes:

1. Above data based on tests completed in accordance with AMCA Standard 500.

Table 5. General Data — 22.9-25.4 Tons (50 Hz)

| | TC/YC/TE*275 (22.9 Tons) | | TC/YC/TE*305 (25.4 Tons) | |
|---|--------------------------|------------------|--------------------------|------------------|
| Cooling Performance¹ | | | | |
| Standard Efficiency Nominal Gross Capacity (R-22) | 277,000 (81.1) | | 303,000 (88.7) | |
| High Efficiency Nominal Gross Capacity (R-22) | 280,000 (81.7) | | 315,000 (92.2) | |
| Nominal Gross Capacity (R-407C) | 274,000 (80.2) | | 310,000 (90.8) | |
| System Power | | | | |
| Standard Efficiency System Power (R-22) | 24.9 | | 28.6 | |
| High Efficiency System Power (R-22) | 24.4 | | 27.9 | |
| Nominal Gross System Power (R-407C) | 26.0 | | 29.8 | |
| Compressor | | | | |
| Number/Type | 2/Scroll | | 2/Scroll | |
| Size (Nominal Tons) | 10/15 | | 15/15 | |
| Unit Capacity Steps (%) | 100/40 | | 100/50 | |
| Motor RPM | 2875 | | 2875 | |
| Natural Gas Heat² | | | | |
| | Low | High | Low | High |
| Heating Input - Btu (kW) | 290,000 (85.0) | 500,000 (147) | 290,000 (85.0) | 500,000 (147) |
| First Stage | 250,000 (73.3 kW) | 425,000 (125 kW) | 250,000 (73.3 kW) | 425,000 (125 kW) |
| Heating Output - Btu (kW) | 243,000 (69.0) | 405,000 (119) | 243,000 (69.0) | 405,000 (119) |
| First Stage | 202,500 (59.4 kW) | 344,250 (101 kW) | 202,500 (59.4 kW) | 344,250 (101 kW) |
| Steady State Efficiency(%) ³ | 81 | | 81 | |
| No. Burners/No. Stages | 1/2 | | 1/2 | |
| Gas Connect Pipe Size - in. (mm) | 0.75 (19) | | 0.75 (19) | |
| Outdoor Coil | | | | |
| | Standard Efficiency | High Efficiency | Standard Efficiency | High Efficiency |
| Type | Lanced | Lanced | Lanced | Lanced |
| Tube Size OD - in. (mm) | 0.375 (10) | 0.375 (10) | 0.375 (10) | 0.375 (10) |
| Face Area - sq ft (sq m) | 51.3 (4.8) | 51.3 (4.8) | 51.3 (4.8) | 51.3 (4.8) |
| Rows/Fins Per Inch | 2/16 | 3/16 | 2/16 | 3/16 |
| Indoor Coil - Type | | | | |
| | Hi Performance | | Hi Performance | |
| Tube Size OD - in. (mm) | 0.500 (13) | | 0.500 (13) | |
| Face Area - sq ft (sq m) | 31.7 (2.9) | | 31.7 (2.9) | |
| Rows/Fins Per Foot | 2/180 | | 2/180 | |
| Refrigerant Control | TXV | | TXV | |
| PVC Drain Connect No./Size - in. (mm) | 1/1.25 (1/32) | | 1/1.25 (1/32) | |
| Outdoor Fan Type | | | | |
| | Propeller | | Propeller | |
| No. Used | 3 | | 3 | |
| Diameter - in. (mm) | 28.0 (711) | | 28.0 (711) | |
| Drive Type/No. Speeds | Direct/1 | | Direct/1 | |
| cfm (L/s) | 20,450 (9650) | | 20,450 (9650) | |
| No. Motors (rpm) | 3 (940) | | 3 (940) | |
| Motor- hp (kW) | 0.75 (0.56) | | 0.75 (0.56) | |
| Indoor Fan Type/No. Used | | | | |
| | FC/1 | | FC/1 | |
| Diameter - in. (mm) | 22.4 (568) | | 22.4 (568) | |
| Width - in. (mm) | 22.0 (559) | | 22.0 (559) | |
| Drive Type | Belt | | Belt | |
| No. Speeds/No. Motors | 1/1 | | 1/1 | |
| Motor - hp (kW) | 7.5 (5.6) | | 7.5 (5.6) | |
| Motor rpm/Frame Size | 1460/213T | | 1460/213T | |
| Exhaust Fan Type | | | | |
| | Propeller | | Propeller | |
| Diameter-in(mm) | 26.00(660) | | 26.00(660) | |
| Drive Type/No. Speeds/Motor Frame Size | Direct/1/56 | | Direct/1/56 | |
| Motor-HP(kW)/RPM | .75(.56)/950 | | 75(.56)/950 | |

Table 5. (continued)General Data — 22.9-25.4 Tons (50 Hz)

| | TC/YC/TE*275 (22.9 Tons) | TC/YC/TE*305 (25.4 Tons) |
|-----------------------------|---------------------------------|---------------------------------|
| Filters - Type | Throwaway | Throwaway |
| Furnished/No. | Yes/16 | Yes/16 |
| Recommended Size - in. (mm) | 16X 20 X2 (406X 508 X51) | 16X 20 X2 (406X 508 X51) |

Notes:

1. Cooling Performance is rated at 95°F (35°C) ambient, 80°F (27°C) entering dry bulb, 67°F (19°C) entering wet bulb. Gross capacity does not include the effect of fan motor heat.
2. Heating Performance Limit settings and ratings data were established and approved under laboratory test conditions using American National Standards.
3. Steady State Efficiency is rated in accordance with DOE test procedures.
4. Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

Table 6. General Data — 29.2-33.3 Tons (50 Hz)

| | TC/YC/TE*350 (29.2 Tons) | | TC/YC/TE*400 (33.3 Tons) | |
|---|--------------------------|------------------|--------------------------|------------------|
| Cooling Performance¹ | | | | |
| Standard Efficiency Nominal Gross Capacity (R-22) | 353,000 (103.4) | | 435,000 (127.4) | |
| High Efficiency Nominal Gross Capacity (R-22) | 359,000 (105.1) | | 448,000 (131.2) | |
| Nominal Gross Capacity (R-407C) | 356,000 (104.2) | | 443,000 (129.7) | |
| System Power | | | | |
| Standard Efficiency System Power (R-22) | 32.6 | | 42.6 | |
| High Efficiency System Power (R-22) | 31.7 | | 40.5 | |
| Nominal Gross System Power (R-407C) | 33.9 | | 43.2 | |
| Compressor | | | | |
| Number/Type | 2/Scroll | | 3/Scroll | |
| Size (Nominal Tons) | 15/15 | | 15/15/10 | |
| Unit Capacity Steps (%) | 100/50 | | 100/60/40 | |
| Motor RPM | 2875 | | 2875 | |
| Natural Gas Heat² | | | | |
| | Low | High | Low | High |
| Heating Input - Btu (kW) | 290,000 (85.0) | 500,000 (147) | 335,000 (98.2) | 670,000 (196) |
| First Stage | 250,000 (73.3 kW) | 425,000 (125 kW) | 300,000 (87.9 kW) | 600,000 (176 kW) |
| Heating Output - Btu (kW) | 243,000 (69.0) | 405,000 (119) | 271,350 (80.0) | 542,700 (159) |
| First Stage | 202,500 (59.4 kW) | 344,250 (101 kW) | 243,500 (71.4 kW) | 486,000 (166 kW) |
| Steady State Efficiency(%) ³ | 81 | | 81 | |
| No. Burners/No. Stages | 1/2 | | 1/2 | |
| Gas Connect Pipe Size - in. (mm) | 0.75 (19) | | 0.75 (19) | |
| Outdoor Coil | | | | |
| | Standard Efficiency | High Efficiency | Standard Efficiency | High Efficiency |
| Type | Lanced | Lanced | Lanced | Lanced |
| Tube Size OD - in. (mm) | 0.375 (10) | 0.375 (10) | 0.375 (10) | 0.375 (10) |
| Face Area - sq ft (sq m) | 51.3 (4.8) | 51.3 (4.8) | 69.8 (6.5) | 75.0 (7.0) |
| Rows/Fins Per Inch | 2/16 | 3/16 | 2/16 | 3/16 |
| Indoor Coil - Type | | | | |
| | Hi Performance | | Hi Performance | |
| Tube Size OD - in. (mm) | 0.500 (13) | | 0.500 (13) | |
| Face Area - sq ft (sq m) | 31.7 (2.9) | | 37.5 (3.5) | |
| Rows/Fins Per Foot | 2/180 | | 3/180 | |
| Refrigerant Control | TXV | | TXV | |
| PVC Drain Connect No./Size - in. (mm) | 1/1.25 (1/32) | | 1/1.25 (1/32) | |
| Outdoor Fan Type | | | | |
| | Propeller | | Propeller | |
| No. Used | 3 | | 4 | |
| Diameter - in. (mm) | 28.0 (711) | | 28.0 (711) | |
| Drive Type/No. Speeds | Direct/1 | | Direct/1 | |
| cfm (L/s) | 20,400 (9650) | | 26,200 (12,400) | |
| No. Motors (rpm) | 3 (940) | | 4 (940) | |
| Motor- hp (kW) | 0.75 (0.56) | | 0.75 (0.56) | |
| Indoor Fan Type/No. Used | | | | |
| | FC/1 | | FC/1 | |
| Diameter - in. (mm) | 22.4 (568) | | 25.0 (635) | |
| Width - in. (mm) | 22.0 (559) | | 22.0 (559) | |
| Drive Type | Belt | | Belt | |
| No. Speeds/No. Motors | 1/1 | | 1/1 | |
| Motor - hp (kW) | 7.5 (5.6) | | 10.0 (7.5) | |
| Motor rpm/Frame Size | 1460/213T | | 1460/213T | |
| Exhaust Fan Type | | | | |
| | Propeller | | Propeller | |
| Diameter-in(mm) | 26.00(660) | | 28.00(711) | |
| Drive Type/No. Speeds/Motor Frame Size | Direct/1/56 | | Direct/1/56 | |
| Motor-HP(kW)/RPM | .75(.56)/950 | | 1.0(.75)/950 | |

Table 6. (continued) General Data — 29.2-33.3 Tons (50 Hz)

| | TC/YC/TE*350 (29.2 Tons) | TC/YC/TE*400 (33.3 Tons) |
|-----------------------------|---------------------------------|---------------------------------|
| Filters - Type | Throwaway | Throwaway |
| Furnished/No. | Yes/16 | Yes/17 |
| Recommended Size - in. (mm) | 16X 20 X2 (406X 508 X51) | 16X 20 X2 (406X 508 X51) |

Notes:

1. Cooling Performance is rated at 95°F (35°C) ambient, 80°F (27°C) entering dry bulb, 67°F (19°C) entering wet bulb. Gross capacity does not include the effect of fan motor heat.
2. Heating Performance Limit settings and ratings data were established and approved under laboratory test conditions using American National Standards.
3. Steady State Efficiency is rated in accordance with DOE test procedures.
4. Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

Table 7. General Data — 41.7 Tons (50 Hz)

| | TC/YC/TE*500 (41.7 Tons) | |
|---|--------------------------|------------------|
| Cooling Performance¹ | | |
| Standard Efficiency Nominal Gross Capacity (R-22) | 520,000 (152) | |
| High Efficiency Nominal Gross Capacity (R-22) | 533,000 (156.1) | |
| Nominal Gross Capacity (R-407C) | 535,000 (156.7) | |
| System Power | | |
| Standard Efficiency System Power (R-22) | 50.9 | |
| High Efficiency System Power (R-22) | 49.9 | |
| Nominal Gross System Power (R-407C) | 53.6 | |
| Compressor | | |
| Number/Type | 3/Scroll | |
| Size (Nominal Tons) | 15/15/15 | |
| Unit Capacity Steps (%) | 100/67/33 | |
| Motor RPM | 2875 | |
| Natural Gas Heat² | | |
| | Low | High |
| Heating Input - Btu (kW) | 335,000 (98.2) | 670,000 (196) |
| First Stage | 300,000 (87.9 kW) | 600,000 (176 kW) |
| Heating Output - Btu (kW) | 271,350 (79.5) | 542,700 (159) |
| First Stage | 243,500 (71.4 kW) | 486,000 (166 kW) |
| Steady State Efficiency(%) ³ | 81 | |
| No. Burners/No. Stages | 1/2 | |
| Gas Connect Pipe Size - in. (mm) | 0.75 (19) | |
| Outdoor Coil | | |
| | Standard Efficiency | High Efficiency |
| Type | Lanced | Lanced |
| Tube Size OD - in. (mm) | 0.375 (10) | 0.375 (10) |
| Face Area - sq ft (sq m) | 69.8 (6.5) | 75.0 (7.0) |
| Rows/Fins Per Inch | 2/16 | 3/16 |
| Indoor Coil - Type | | |
| | Hi Performance | |
| Tube Size OD - in. (mm) | 0.500 (13) | |
| Face Area - sq ft (sq m) | 37.5 (3.5) | |
| Rows/Fins Per Foot | 4/164 | |
| Refrigerant Control | TXV | |
| PVC Drain Connect No./Size - in. (mm) | 1/1.25 (1/32) | |
| Outdoor Fan Type | | |
| | Propeller | |
| No. Used | 4 | |
| Diameter - in. (mm) | 28.0 (711) | |
| Drive Type/No. Speeds | Direct/1 | |
| cfm (L/s) | 26,200 (12,400) | |
| No. Motors (rpm) | 4 (940) | |
| Motor- hp (kW) | 0.75 (0.56) | |
| Indoor Fan Type/No. Used | | |
| | FC/1 | |
| Diameter - in. (mm) | 25.0 (635) | |
| Width - in. (mm) | 25.0 (635) | |
| Drive Type | Belt | |
| No. Speeds/No. Motors | 1/1 | |
| Motor - hp (kW) | 10.0 (7.5 kW) | |
| Motor rpm/Frame Size | 1460/215T | |
| Exhaust Fan Type | | |
| | Propeller | |
| Diameter-in(mm) | 28.00(711) | |
| Drive Type/No. Speeds/Motor Frame Size | Direct/1/56 | |
| Motor-HP(kW)/RPM | 1.0(.75)/950 | |

Table 7. General Data — 41.7 Tons (50 Hz)

| | TC/YC/TE*500 (41.7 Tons) |
|-----------------------------|---------------------------------|
| Filters - Type | Throwaway |
| Furnished/No. | Yes/17 |
| Recommended Size - in. (mm) | 16X 20 X2 (406X 508 X51) |

Notes:

1. Cooling Performance is rated at 95°F (35°C) ambient, 80°F (27°C) entering dry bulb, 67°F (19°C) entering wet bulb. Gross capacity does not include the effect of fan motor heat.
2. Heating Performance Limit settings and ratings data were established and approved under laboratory test conditions using American National Standards.
3. Steady State Efficiency is rated in accordance with DOE test procedures.
4. Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

Table 8. Economizer Outdoor Air Damper Leakage (of Rated Airflow) (50 Hz)

| | ΔP Across Dampers (In. WC) (Pa) | |
|---------------------|--|---------------------------|
| | 0.5 (In.) (124.5 Pa) | 1.0 (In.) (249 Pa) |
| Standard | 1.5 % | 2.5 % |
| Optional "Low Leak" | 0.5 % | 1.0 % |

Notes:

1. Above data based on tests completed in accordance with AMCA Standard 500.



Performance Adjustment Factors

Table 9. Enthalpy of Saturated Air

| Wet Bulb Temperature | | Btu Per lb |
|----------------------|------|------------|
| °F | °C | |
| 40 | 4.4 | 15.23 |
| 41 | 5.0 | 15.70 |
| 42 | 5.5 | 16.17 |
| 43 | 6.1 | 16.66 |
| 44 | 6.7 | 17.15 |
| 45 | 7.2 | 17.65 |
| 46 | 7.8 | 18.16 |
| 47 | 8.3 | 18.68 |
| 48 | 8.9 | 19.21 |
| 49 | 9.4 | 19.75 |
| 50 | 10.0 | 20.30 |
| 51 | 10.6 | 20.86 |
| 52 | 11.1 | 21.44 |
| 53 | 11.7 | 22.02 |
| 54 | 12.2 | 22.62 |
| 55 | 12.8 | 23.22 |
| 56 | 13.3 | 23.84 |
| 57 | 13.9 | 24.48 |
| 58 | 14.4 | 25.12 |
| 59 | 15.0 | 25.78 |
| 60 | 15.6 | 26.46 |
| 61 | 16.1 | 27.15 |
| 62 | 16.7 | 27.85 |
| 63 | 17.2 | 28.57 |
| 64 | 17.8 | 29.31 |
| 65 | 18.3 | 30.06 |
| 66 | 18.9 | 30.83 |
| 67 | 19.4 | 31.62 |
| 68 | 20.0 | 32.42 |
| 69 | 20.6 | 33.25 |
| 70 | 21.1 | 34.09 |
| 71 | 21.7 | 34.95 |
| 72 | 22.2 | 35.83 |
| 73 | 22.8 | 36.74 |
| 74 | 23.3 | 37.66 |
| 75 | 23.9 | 38.61 |

Figure 5. Air Density Ratios

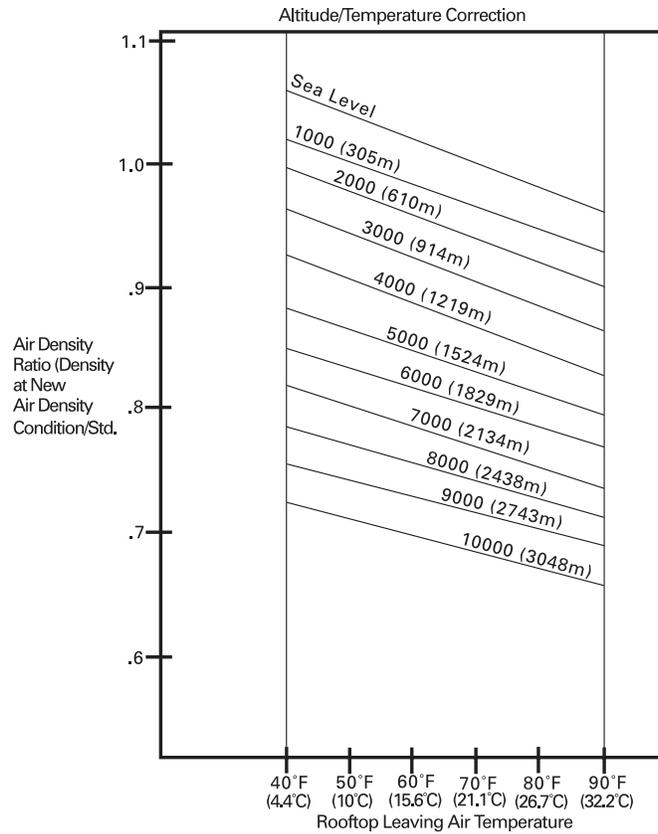


Table 10. Cooling Capacity Altitude Correction Factors

| | Altitude ft. (m) | | | | | | | |
|--|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | Sea Level | 1000 (304.8) | 2000 (609.6) | 3000 (914.4) | 4000 (1219.2) | 5000 (1524.0) | 6000 (1828.8) | 7000 (2133.6) |
| Cooling Capacity Multiplier | 1.00 | 0.99 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 |
| KW Correction Multiplier (Compressors) | 1.00 | 1.01 | 1.02 | 1.03 | 1.04 | 1.05 | 1.06 | 1.07 |
| SHR Correction Multiplier | 1.00 | .98 | .95 | .93 | .91 | .89 | .87 | .85 |
| Maximum Condenser Ambient | 115°F (46.1°C) | 114°F (45.6°C) | 113°F (45.0°C) | 112°F (44.4°C) | 111°F (43.9°C) | 110°F (43.3°C) | 109°F (42.8°C) | 108°F (42.2°C) |

Notes: SHR = Sensible Heat Ratio

Table 11. Gas Heating Capacity Altitude Correction Factors

| | Altitude ft. (m) | | | | | | |
|---------------------|--|-------------------------------|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| | Sea Level To 2000 (Sea Level To 609.6) | 2000 To 2500 (609.9 To 762.0) | 2501 To 3500 (762.3 To 1066.8) | 3501 To 4500 (1067.1 To 1674.4) | 4501 To 5500 (1371.9 To 1675.4) | 5501 To 6500 (1676.7 To 1981.2) | 6501 To 7500 (1981.5 To 2286.0) |
| Capacity Multiplier | 1.00 | .92 | .88 | .84 | .80 | .76 | .72 |

Notes: Correction factors are per AGA Std 221.30 – 1964, Part VI, 6.12. Local codes may supersede.



Performance Data (60 Hz)

Table 12. 27½ Ton Gross Cooling Capacities (MBh)—Standard 2-Row Condenser Coil—60 Hz R-22 Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 8000 | 75 | 291 | 228 | 323 | 185 | 358 | 130 | 278 | 221 | 309 | 174 | 343 | 123 | 265 | 213 | 295 | 167 | 327 | 116 |
| | 80 | 294 | 268 | 324 | 220 | 359 | 171 | 281 | 261 | 310 | 212 | 343 | 164 | 268 | 253 | 296 | 205 | 327 | 157 |
| | 85 | 301 | 301 | 325 | 258 | 360 | 210 | 290 | 290 | 311 | 251 | 344 | 203 | 278 | 278 | 297 | 243 | 329 | 196 |
| | 90 | 317 | 317 | 328 | 297 | 361 | 248 | 306 | 306 | 315 | 290 | 345 | 241 | 294 | 294 | 301 | 283 | 330 | 234 |
| 9000 | 75 | 299 | 242 | 331 | 189 | 367 | 133 | 285 | 235 | 316 | 182 | 351 | 126 | 272 | 227 | 301 | 175 | 334 | 119 |
| | 80 | 302 | 286 | 332 | 232 | 367 | 178 | 290 | 279 | 318 | 225 | 351 | 171 | 276 | 272 | 303 | 217 | 335 | 164 |
| | 85 | 314 | 314 | 334 | 275 | 368 | 221 | 302 | 302 | 319 | 268 | 352 | 215 | 290 | 290 | 305 | 260 | 336 | 208 |
| | 90 | 331 | 331 | 338 | 319 | 369 | 264 | 319 | 319 | 324 | 312 | 354 | 256 | 306 | 306 | 310 | 304 | 337 | 249 |
| 10000 | 75 | 305 | 255 | 337 | 197 | 373 | 136 | 292 | 248 | 322 | 190 | 357 | 129 | 277 | 240 | 307 | 183 | 339 | 122 |
| | 80 | 310 | 304 | 339 | 244 | 374 | 185 | 297 | 297 | 324 | 237 | 358 | 178 | 283 | 283 | 308 | 229 | 341 | 171 |
| | 85 | 325 | 325 | 341 | 291 | 375 | 233 | 313 | 313 | 326 | 284 | 359 | 226 | 300 | 300 | 311 | 276 | 342 | 219 |
| | 90 | 343 | 343 | 346 | 340 | 376 | 279 | 330 | 330 | 332 | 332 | 360 | 271 | 317 | 317 | 317 | 317 | 343 | 264 |
| 11000 | 75 | 311 | 268 | 343 | 205 | 379 | 139 | 297 | 260 | 327 | 198 | 362 | 132 | 282 | 253 | 311 | 191 | 344 | 125 |
| | 80 | 316 | 316 | 344 | 255 | 380 | 192 | 304 | 304 | 329 | 248 | 363 | 185 | 291 | 291 | 313 | 240 | 345 | 178 |
| | 85 | 335 | 335 | 347 | 307 | 381 | 245 | 322 | 322 | 332 | 300 | 364 | 237 | 309 | 309 | 317 | 292 | 347 | 230 |
| | 90 | 353 | 353 | 353 | 353 | 383 | 293 | 340 | 340 | 340 | 340 | 366 | 286 | 327 | 327 | 327 | 327 | 349 | 278 |
| 12100 | 75 | 316 | 281 | 348 | 223 | 384 | 142 | 302 | 274 | 332 | 216 | 366 | 135 | 287 | 266 | 316 | 208 | 348 | 128 |
| | 80 | 325 | 325 | 349 | 268 | 385 | 199 | 312 | 312 | 334 | 260 | 368 | 192 | 299 | 299 | 318 | 252 | 350 | 185 |
| | 85 | 344 | 344 | 353 | 324 | 387 | 254 | 331 | 331 | 338 | 317 | 369 | 246 | 317 | 317 | 322 | 309 | 352 | 239 |
| | 90 | 364 | 364 | 363 | 363 | 388 | 309 | 350 | 350 | 350 | 350 | 372 | 301 | 336 | 336 | 336 | 336 | 354 | 294 |

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|
| | | 115 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | |
| | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | | |
| 8000 | 75 | 251 | 206 | 279 | 159 | 310 | 109 |
| | 80 | 255 | 246 | 280 | 197 | 311 | 149 |
| | 85 | 266 | 266 | 282 | 236 | 312 | 188 |
| | 90 | 282 | 282 | 286 | 275 | 313 | 226 |
| 9000 | 75 | 257 | 219 | 286 | 168 | 316 | 112 |
| | 80 | 261 | 261 | 287 | 209 | 317 | 157 |
| | 85 | 277 | 277 | 289 | 252 | 319 | 201 |
| | 90 | 293 | 293 | 293 | 293 | 320 | 241 |
| 10000 | 75 | 263 | 232 | 291 | 176 | 322 | 115 |
| | 80 | 270 | 270 | 292 | 221 | 323 | 164 |
| | 85 | 287 | 287 | 295 | 268 | 324 | 212 |
| | 90 | 304 | 304 | 303 | 303 | 326 | 256 |
| 11000 | 75 | 268 | 245 | 295 | 183 | 326 | 117 |
| | 80 | 278 | 278 | 297 | 232 | 327 | 170 |
| | 85 | 295 | 295 | 301 | 284 | 329 | 220 |
| | 90 | 313 | 313 | 312 | 312 | 331 | 270 |
| 12100 | 75 | 272 | 258 | 299 | 200 | 330 | 121 |
| | 80 | 285 | 285 | 301 | 244 | 331 | 176 |
| | 85 | 303 | 303 | 306 | 301 | 333 | 231 |
| | 90 | 321 | 321 | 321 | 321 | 336 | 286 |

Notes:
1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.

Table 13. 30 Ton Gross Cooling Capacities (Mbh)—Standard 2-Row Condenser Coil—60 Hz R-22 Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 9000 | 75 | 323 | 255 | 358 | 207 | 397 | 144 | 309 | 247 | 343 | 194 | 380 | 137 | 295 | 239 | 327 | 186 | 362 | 129 |
| | 80 | 326 | 299 | 359 | 245 | 398 | 190 | 313 | 291 | 344 | 237 | 381 | 182 | 298 | 283 | 328 | 229 | 363 | 175 |
| | 85 | 335 | 335 | 361 | 288 | 399 | 234 | 323 | 323 | 346 | 280 | 382 | 227 | 310 | 310 | 330 | 272 | 364 | 219 |
| | 90 | 352 | 352 | 364 | 332 | 400 | 276 | 340 | 340 | 349 | 324 | 383 | 269 | 327 | 327 | 334 | 316 | 365 | 261 |
| 10000 | 75 | 331 | 268 | 366 | 210 | 405 | 147 | 316 | 260 | 350 | 202 | 387 | 140 | 301 | 252 | 333 | 194 | 369 | 132 |
| | 80 | 335 | 317 | 367 | 257 | 406 | 197 | 321 | 309 | 351 | 249 | 388 | 189 | 306 | 301 | 335 | 241 | 370 | 182 |
| | 85 | 347 | 347 | 369 | 304 | 407 | 246 | 334 | 334 | 353 | 296 | 389 | 238 | 321 | 321 | 337 | 288 | 371 | 230 |
| | 90 | 366 | 366 | 374 | 353 | 408 | 292 | 353 | 353 | 358 | 345 | 391 | 284 | 339 | 339 | 342 | 337 | 372 | 276 |
| 11000 | 75 | 337 | 281 | 372 | 218 | 411 | 150 | 322 | 273 | 356 | 210 | 393 | 143 | 307 | 265 | 339 | 202 | 374 | 135 |
| | 80 | 343 | 335 | 374 | 269 | 412 | 204 | 328 | 327 | 357 | 261 | 394 | 196 | 312 | 312 | 340 | 252 | 375 | 188 |
| | 85 | 358 | 358 | 376 | 321 | 413 | 257 | 345 | 345 | 360 | 312 | 395 | 249 | 331 | 331 | 343 | 304 | 377 | 241 |
| | 90 | 378 | 378 | 382 | 374 | 415 | 306 | 364 | 364 | 367 | 366 | 397 | 298 | 350 | 350 | 349 | 349 | 378 | 290 |
| 12000 | 75 | 343 | 294 | 378 | 225 | 417 | 153 | 328 | 285 | 361 | 218 | 398 | 145 | 312 | 277 | 343 | 210 | 379 | 138 |
| | 80 | 348 | 348 | 379 | 280 | 418 | 210 | 334 | 334 | 362 | 272 | 399 | 203 | 321 | 321 | 345 | 263 | 380 | 195 |
| | 85 | 368 | 368 | 382 | 336 | 419 | 268 | 354 | 354 | 366 | 328 | 401 | 260 | 340 | 340 | 349 | 320 | 382 | 252 |
| | 90 | 388 | 388 | 388 | 388 | 421 | 321 | 374 | 374 | 374 | 374 | 402 | 313 | 359 | 359 | 359 | 359 | 383 | 304 |
| 13200 | 75 | 349 | 308 | 383 | 246 | 422 | 156 | 333 | 300 | 366 | 238 | 403 | 149 | 317 | 291 | 348 | 229 | 383 | 141 |
| | 80 | 357 | 357 | 385 | 293 | 423 | 218 | 343 | 343 | 368 | 285 | 405 | 210 | 329 | 329 | 350 | 276 | 385 | 202 |
| | 85 | 378 | 378 | 389 | 354 | 425 | 278 | 364 | 364 | 372 | 346 | 406 | 270 | 349 | 349 | 355 | 338 | 387 | 261 |
| | 90 | 399 | 399 | 399 | 399 | 427 | 337 | 384 | 384 | 384 | 384 | 408 | 329 | 369 | 369 | 369 | 369 | 389 | 321 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 9000 | 75 | 279 | 230 | 310 | 178 | 344 | 122 | | | | | | | | | | | | |
| | 80 | 284 | 275 | 311 | 221 | 345 | 167 | | | | | | | | | | | | |
| | 85 | 297 | 297 | 313 | 264 | 345 | 210 | | | | | | | | | | | | |
| | 90 | 313 | 313 | 318 | 308 | 347 | 252 | | | | | | | | | | | | |
| 10000 | 75 | 286 | 243 | 316 | 186 | 350 | 125 | | | | | | | | | | | | |
| | 80 | 290 | 290 | 318 | 232 | 351 | 174 | | | | | | | | | | | | |
| | 85 | 307 | 307 | 320 | 280 | 352 | 222 | | | | | | | | | | | | |
| | 90 | 325 | 325 | 324 | 324 | 353 | 267 | | | | | | | | | | | | |
| 11000 | 75 | 291 | 256 | 321 | 194 | 355 | 127 | | | | | | | | | | | | |
| | 80 | 298 | 298 | 323 | 244 | 356 | 180 | | | | | | | | | | | | |
| | 85 | 316 | 316 | 326 | 296 | 357 | 233 | | | | | | | | | | | | |
| | 90 | 335 | 335 | 334 | 334 | 359 | 282 | | | | | | | | | | | | |
| 12000 | 75 | 295 | 268 | 325 | 201 | 359 | 129 | | | | | | | | | | | | |
| | 80 | 306 | 306 | 327 | 255 | 360 | 187 | | | | | | | | | | | | |
| | 85 | 325 | 325 | 331 | 311 | 362 | 244 | | | | | | | | | | | | |
| | 90 | 343 | 343 | 343 | 343 | 364 | 296 | | | | | | | | | | | | |
| 13200 | 75 | 300 | 283 | 329 | 221 | 363 | 133 | | | | | | | | | | | | |
| | 80 | 314 | 314 | 332 | 268 | 365 | 194 | | | | | | | | | | | | |
| | 85 | 333 | 333 | 337 | 329 | 366 | 253 | | | | | | | | | | | | |
| | 90 | 353 | 353 | 352 | 352 | 369 | 312 | | | | | | | | | | | | |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 14. 35 Ton Gross Cooling Capacities (Mbh)—Standard 2-Row Condenser Coil—60 Hz R-22 Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 10500 | 75 | 377 | 310 | 416 | 240 | 459 | 166 | 361 | 301 | 398 | 231 | 438 | 158 | 343 | 291 | 379 | 223 | 417 | 150 |
| | 80 | 383 | 367 | 417 | 296 | 460 | 224 | 366 | 359 | 399 | 287 | 439 | 216 | 350 | 349 | 380 | 278 | 418 | 207 |
| | 85 | 398 | 398 | 420 | 351 | 461 | 281 | 383 | 383 | 402 | 343 | 440 | 272 | 368 | 368 | 383 | 333 | 419 | 263 |
| | 90 | 419 | 419 | 426 | 409 | 462 | 336 | 404 | 404 | 408 | 400 | 442 | 327 | 388 | 388 | 388 | 388 | 421 | 317 |
| 12000 | 75 | 387 | 332 | 425 | 258 | 468 | 171 | 370 | 322 | 406 | 249 | 447 | 162 | 352 | 313 | 387 | 240 | 425 | 154 |
| | 80 | 393 | 393 | 427 | 315 | 469 | 236 | 378 | 378 | 408 | 306 | 448 | 227 | 362 | 362 | 388 | 297 | 426 | 218 |
| | 85 | 415 | 415 | 431 | 379 | 470 | 300 | 399 | 399 | 412 | 370 | 449 | 290 | 383 | 383 | 393 | 361 | 427 | 281 |
| | 90 | 437 | 437 | 437 | 437 | 472 | 361 | 421 | 421 | 421 | 421 | 451 | 352 | 404 | 404 | 404 | 404 | 430 | 342 |
| 13000 | 75 | 393 | 346 | 430 | 261 | 473 | 173 | 375 | 337 | 411 | 253 | 452 | 165 | 357 | 327 | 391 | 244 | 429 | 156 |
| | 80 | 402 | 402 | 432 | 328 | 475 | 243 | 387 | 387 | 413 | 319 | 453 | 234 | 370 | 370 | 393 | 310 | 430 | 225 |
| | 85 | 425 | 425 | 437 | 397 | 476 | 312 | 409 | 409 | 418 | 388 | 454 | 303 | 392 | 392 | 399 | 378 | 432 | 294 |
| | 90 | 448 | 448 | 448 | 448 | 478 | 377 | 431 | 431 | 431 | 431 | 457 | 368 | 413 | 413 | 413 | 413 | 435 | 359 |
| 14000 | 75 | 398 | 360 | 435 | 270 | 478 | 176 | 380 | 351 | 415 | 261 | 456 | 167 | 362 | 341 | 395 | 252 | 433 | 159 |
| | 80 | 410 | 410 | 437 | 341 | 479 | 250 | 394 | 394 | 417 | 332 | 457 | 241 | 378 | 378 | 397 | 322 | 434 | 232 |
| | 85 | 434 | 434 | 443 | 414 | 480 | 324 | 417 | 417 | 423 | 405 | 458 | 315 | 400 | 400 | 404 | 396 | 436 | 306 |
| | 90 | 458 | 458 | 457 | 457 | 484 | 393 | 440 | 440 | 440 | 440 | 462 | 384 | 422 | 422 | 422 | 422 | 440 | 375 |
| 14400 | 75 | 400 | 365 | 436 | 272 | 479 | 177 | 382 | 356 | 416 | 263 | 457 | 168 | 364 | 346 | 396 | 254 | 434 | 160 |
| | 80 | 413 | 413 | 439 | 346 | 481 | 253 | 397 | 397 | 419 | 336 | 459 | 244 | 380 | 380 | 399 | 327 | 436 | 235 |
| | 85 | 437 | 437 | 445 | 421 | 482 | 326 | 420 | 420 | 426 | 412 | 460 | 317 | 402 | 402 | 406 | 402 | 437 | 308 |
| | 90 | 461 | 461 | 461 | 461 | 486 | 400 | 443 | 443 | 443 | 443 | 464 | 390 | 425 | 425 | 425 | 425 | 442 | 381 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | | | | | | | | | | | | |
| TGC | SHC | TGC | SHC | TGC | SHC | | | | | | | | | | | | | | |
| 10500 | 75 | 325 | 282 | 359 | 214 | 396 | 141 | | | | | | | | | | | | |
| | 80 | 332 | 332 | 360 | 268 | 397 | 198 | | | | | | | | | | | | |
| | 85 | 352 | 352 | 364 | 324 | 397 | 254 | | | | | | | | | | | | |
| | 90 | 371 | 371 | 371 | 371 | 399 | 308 | | | | | | | | | | | | |
| 12000 | 75 | 334 | 303 | 366 | 231 | 403 | 145 | | | | | | | | | | | | |
| | 80 | 346 | 346 | 368 | 288 | 404 | 209 | | | | | | | | | | | | |
| | 85 | 366 | 366 | 373 | 351 | 405 | 271 | | | | | | | | | | | | |
| | 90 | 386 | 386 | 386 | 386 | 408 | 333 | | | | | | | | | | | | |
| 13000 | 75 | 339 | 317 | 370 | 234 | 406 | 147 | | | | | | | | | | | | |
| | 80 | 353 | 353 | 372 | 300 | 408 | 216 | | | | | | | | | | | | |
| | 85 | 374 | 374 | 379 | 369 | 409 | 285 | | | | | | | | | | | | |
| | 90 | 395 | 395 | 395 | 395 | 412 | 349 | | | | | | | | | | | | |
| 14000 | 75 | 343 | 331 | 373 | 243 | 410 | 150 | | | | | | | | | | | | |
| | 80 | 360 | 360 | 376 | 312 | 411 | 223 | | | | | | | | | | | | |
| | 85 | 381 | 381 | 381 | 381 | 413 | 297 | | | | | | | | | | | | |
| | 90 | 403 | 403 | 403 | 403 | 417 | 365 | | | | | | | | | | | | |
| 14400 | 75 | 345 | 337 | 375 | 244 | 411 | 151 | | | | | | | | | | | | |
| | 80 | 363 | 363 | 378 | 317 | 412 | 226 | | | | | | | | | | | | |
| | 85 | 384 | 384 | 384 | 384 | 414 | 298 | | | | | | | | | | | | |
| | 90 | 406 | 406 | 406 | 406 | 419 | 371 | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.

Table 15. 40 Ton Gross Cooling Capacities (Mbh)—Standard 2-Row Condenser Coil—60 Hz R-22 Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 12000 | 75 | 460 | 365 | 510 | 288 | 565 | 202 | 439 | 353 | 486 | 276 | 539 | 190 | 416 | 340 | 462 | 263 | 512 | 178 |
| | 80 | 466 | 432 | 511 | 351 | 566 | 269 | 445 | 419 | 487 | 338 | 540 | 257 | 423 | 406 | 463 | 325 | 513 | 244 |
| | 85 | 480 | 480 | 515 | 415 | 567 | 333 | 461 | 461 | 491 | 402 | 541 | 322 | 441 | 441 | 467 | 390 | 515 | 309 |
| | 90 | 506 | 506 | 521 | 480 | 568 | 398 | 487 | 487 | 498 | 468 | 543 | 385 | 467 | 467 | 475 | 455 | 517 | 373 |
| 14000 | 75 | 476 | 396 | 525 | 304 | 580 | 208 | 453 | 383 | 500 | 291 | 553 | 196 | 430 | 370 | 474 | 279 | 525 | 184 |
| | 80 | 484 | 473 | 526 | 378 | 581 | 284 | 463 | 461 | 502 | 365 | 554 | 272 | 438 | 438 | 477 | 352 | 526 | 260 |
| | 85 | 506 | 506 | 532 | 453 | 582 | 359 | 486 | 486 | 508 | 440 | 556 | 347 | 465 | 465 | 482 | 427 | 528 | 335 |
| | 90 | 535 | 535 | 541 | 529 | 585 | 432 | 514 | 514 | 518 | 517 | 559 | 420 | 492 | 492 | 492 | 492 | 531 | 407 |
| 15000 | 75 | 482 | 411 | 530 | 317 | 586 | 211 | 459 | 398 | 505 | 305 | 558 | 199 | 436 | 385 | 479 | 292 | 530 | 187 |
| | 80 | 489 | 489 | 533 | 391 | 587 | 292 | 469 | 469 | 508 | 379 | 560 | 280 | 448 | 448 | 482 | 366 | 531 | 268 |
| | 85 | 518 | 518 | 539 | 471 | 588 | 372 | 497 | 497 | 514 | 458 | 561 | 360 | 475 | 475 | 489 | 445 | 533 | 346 |
| | 90 | 547 | 547 | 546 | 546 | 591 | 449 | 525 | 525 | 525 | 525 | 565 | 437 | 503 | 503 | 503 | 503 | 537 | 424 |
| 16000 | 75 | 488 | 425 | 536 | 321 | 591 | 213 | 465 | 412 | 510 | 309 | 563 | 202 | 441 | 399 | 484 | 296 | 534 | 189 |
| | 80 | 499 | 499 | 539 | 405 | 592 | 299 | 478 | 478 | 513 | 392 | 565 | 287 | 457 | 457 | 487 | 379 | 536 | 275 |
| | 85 | 528 | 528 | 546 | 489 | 593 | 383 | 507 | 507 | 521 | 477 | 566 | 371 | 485 | 485 | 495 | 463 | 538 | 358 |
| | 90 | 558 | 558 | 558 | 558 | 597 | 466 | 536 | 536 | 536 | 536 | 571 | 453 | 513 | 513 | 513 | 513 | 543 | 440 |
| 17600 | 75 | 497 | 448 | 543 | 335 | 598 | 217 | 473 | 435 | 517 | 322 | 570 | 206 | 449 | 422 | 490 | 308 | 541 | 193 |
| | 80 | 513 | 513 | 547 | 425 | 599 | 311 | 491 | 491 | 521 | 412 | 572 | 299 | 469 | 469 | 495 | 399 | 543 | 286 |
| | 85 | 543 | 543 | 555 | 518 | 601 | 401 | 521 | 521 | 530 | 505 | 574 | 389 | 498 | 498 | 504 | 492 | 545 | 376 |
| | 90 | 574 | 574 | 574 | 574 | 606 | 492 | 551 | 551 | 551 | 551 | 579 | 479 | 527 | 527 | 527 | 527 | 551 | 466 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 12000 | 75 | 393 | 327 | 436 | 250 | 484 | 166 | | | | | | | | | | | | |
| | 80 | 401 | 393 | 438 | 312 | 486 | 232 | | | | | | | | | | | | |
| | 85 | 421 | 421 | 442 | 376 | 487 | 297 | | | | | | | | | | | | |
| | 90 | 445 | 445 | 450 | 442 | 489 | 360 | | | | | | | | | | | | |
| 14000 | 75 | 406 | 357 | 448 | 266 | 496 | 172 | | | | | | | | | | | | |
| | 80 | 417 | 417 | 450 | 339 | 497 | 248 | | | | | | | | | | | | |
| | 85 | 443 | 443 | 457 | 414 | 499 | 321 | | | | | | | | | | | | |
| | 90 | 470 | 470 | 469 | 469 | — | — | | | | | | | | | | | | |
| 15000 | 75 | 411 | 371 | 452 | 279 | — | — | | | | | | | | | | | | |
| | 80 | 426 | 426 | 456 | 352 | — | — | | | | | | | | | | | | |
| | 85 | 453 | 453 | 463 | 432 | — | — | | | | | | | | | | | | |
| | 90 | 480 | 480 | 480 | 480 | — | — | | | | | | | | | | | | |
| 16000 | 75 | 416 | 385 | 456 | 282 | — | — | | | | | | | | | | | | |
| | 80 | 434 | 434 | 460 | 365 | — | — | | | | | | | | | | | | |
| | 85 | 461 | 461 | 469 | 450 | — | — | | | | | | | | | | | | |
| | 90 | 489 | 489 | 489 | 489 | — | — | | | | | | | | | | | | |
| 17600 | 75 | 424 | 408 | 462 | 295 | — | — | | | | | | | | | | | | |
| | 80 | 446 | 446 | 467 | 385 | — | — | | | | | | | | | | | | |
| | 85 | 474 | 474 | 474 | 474 | — | — | | | | | | | | | | | | |
| | 90 | — | — | — | — | — | — | | | | | | | | | | | | |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 16. 50 Ton Gross Cooling Capacities (Mbh)—Standard 2-Row Condenser Coil—60 Hz R-22 Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 15000 | 75 | 556 | 459 | 614 | 356 | 679 | 244 | 529 | 444 | 585 | 342 | 647 | 230 | 502 | 429 | 555 | 327 | 614 | 216 |
| | 80 | 565 | 547 | 616 | 439 | 680 | 331 | 539 | 533 | 588 | 424 | 649 | 318 | 511 | 511 | 558 | 409 | 616 | 303 |
| | 85 | 590 | 590 | 622 | 524 | 682 | 417 | 567 | 567 | 593 | 509 | 651 | 403 | 542 | 542 | 564 | 494 | 618 | 389 |
| | 90 | 623 | 623 | 631 | 611 | 684 | 500 | 599 | 599 | 604 | 597 | 654 | 486 | 574 | 574 | 574 | 574 | 622 | 471 |
| 17000 | 75 | 570 | 491 | 627 | 373 | 691 | 250 | 543 | 476 | 597 | 359 | 659 | 236 | 515 | 460 | 566 | 344 | 625 | 222 |
| | 80 | 581 | 581 | 630 | 468 | 693 | 348 | 557 | 557 | 601 | 453 | 661 | 334 | 532 | 532 | 570 | 437 | 627 | 320 |
| | 85 | 615 | 615 | 637 | 564 | 694 | 443 | 590 | 590 | 608 | 549 | 662 | 429 | 565 | 565 | 578 | 534 | 629 | 414 |
| | 90 | 650 | 650 | 649 | 649 | 698 | 536 | 624 | 624 | 624 | 624 | 667 | 522 | 597 | 597 | 597 | 597 | 634 | 507 |
| 18000 | 75 | 576 | 506 | 633 | 386 | 696 | 252 | 548 | 491 | 602 | 371 | 663 | 239 | 520 | 476 | 570 | 356 | 629 | 224 |
| | 80 | 591 | 591 | 636 | 482 | 698 | 355 | 566 | 566 | 606 | 467 | 666 | 342 | 541 | 541 | 575 | 451 | 632 | 327 |
| | 85 | 626 | 626 | 644 | 583 | 699 | 455 | 601 | 601 | 615 | 568 | 668 | 441 | 574 | 574 | 584 | 553 | 634 | 426 |
| | 90 | 661 | 661 | 661 | 661 | 703 | 554 | 635 | 635 | 635 | 635 | 673 | 540 | 608 | 608 | 607 | 607 | 640 | 525 |
| 19000 | 75 | 581 | 522 | 638 | 391 | 701 | 255 | 554 | 507 | 607 | 377 | 668 | 241 | 525 | 491 | 575 | 362 | 633 | 227 |
| | 80 | 600 | 600 | 642 | 495 | 702 | 363 | 575 | 575 | 611 | 480 | 670 | 350 | 549 | 549 | 580 | 465 | 636 | 335 |
| | 85 | 636 | 636 | 651 | 602 | 704 | 467 | 610 | 610 | 621 | 587 | 673 | 453 | 583 | 583 | 590 | 572 | 639 | 438 |
| | 90 | 671 | 671 | 671 | 671 | 709 | 571 | 645 | 645 | 645 | 645 | 678 | 557 | 617 | 617 | 617 | 617 | 645 | 543 |
| 20000 | 75 | 587 | 537 | 642 | 400 | 705 | 257 | 559 | 522 | 611 | 386 | 672 | 244 | 530 | 506 | 579 | 371 | 637 | 230 |
| | 80 | 609 | 609 | 647 | 509 | 707 | 371 | 583 | 583 | 616 | 494 | 674 | 357 | 557 | 557 | 584 | 478 | 640 | 343 |
| | 85 | 645 | 645 | 657 | 621 | 708 | 479 | 619 | 619 | 627 | 606 | 677 | 465 | 591 | 591 | 596 | 591 | 643 | 450 |
| | 90 | 681 | 681 | 681 | 681 | 714 | 589 | 654 | 654 | 654 | 654 | 683 | 575 | 626 | 626 | 626 | 626 | 650 | 560 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 15000 | 75 | 475 | 414 | 524 | 312 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 487 | 487 | 527 | 394 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | 517 | 517 | 534 | 479 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | 547 | 547 | 547 | 547 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 17000 | 75 | 486 | 445 | 533 | 328 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 506 | 506 | 538 | 422 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | 538 | 538 | 547 | 518 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 18000 | 75 | 491 | 460 | 538 | 340 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 514 | 514 | 543 | 436 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | 547 | 547 | 553 | 537 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 19000 | 75 | 496 | 475 | 542 | 345 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 522 | 522 | 547 | 449 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | 555 | 555 | 559 | 556 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20000 | 75 | 501 | 490 | 545 | 353 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 529 | 529 | 551 | 463 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | 563 | 563 | 562 | 562 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 17. 27½ Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil—60 Hz R-22 Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 8000 | 75 | 293 | 229 | 325 | 187 | 361 | 131 | 280 | 222 | 311 | 180 | 346 | 124 | 267 | 214 | 297 | 173 | 330 | 117 |
| | 80 | 295 | 269 | 326 | 221 | 362 | 172 | 283 | 262 | 312 | 213 | 347 | 165 | 270 | 254 | 298 | 206 | 331 | 158 |
| | 85 | 302 | 302 | 327 | 259 | 363 | 211 | 291 | 291 | 314 | 252 | 348 | 204 | 280 | 280 | 299 | 244 | 332 | 197 |
| | 90 | 318 | 318 | 330 | 298 | 364 | 249 | 307 | 307 | 317 | 291 | 348 | 242 | 296 | 296 | 303 | 284 | 333 | 235 |
| 9000 | 75 | 300 | 243 | 333 | 197 | 370 | 134 | 287 | 235 | 319 | 190 | 354 | 127 | 273 | 228 | 304 | 183 | 337 | 121 |
| | 80 | 304 | 287 | 334 | 233 | 370 | 179 | 291 | 280 | 320 | 226 | 354 | 172 | 278 | 273 | 305 | 218 | 338 | 165 |
| | 85 | 315 | 315 | 336 | 276 | 371 | 223 | 304 | 304 | 322 | 269 | 355 | 216 | 292 | 292 | 307 | 261 | 339 | 208 |
| | 90 | 333 | 333 | 340 | 320 | 372 | 265 | 321 | 321 | 326 | 313 | 357 | 258 | 309 | 309 | 312 | 306 | 341 | 250 |
| 10000 | 75 | 307 | 256 | 340 | 207 | 376 | 137 | 293 | 249 | 325 | 200 | 360 | 130 | 279 | 241 | 309 | 193 | 343 | 124 |
| | 80 | 312 | 305 | 341 | 245 | 377 | 186 | 299 | 298 | 326 | 238 | 361 | 179 | 285 | 285 | 311 | 230 | 344 | 172 |
| | 85 | 327 | 327 | 343 | 293 | 378 | 234 | 315 | 315 | 329 | 285 | 362 | 226 | 302 | 302 | 314 | 278 | 345 | 219 |
| | 90 | 345 | 345 | 349 | 341 | 380 | 280 | 333 | 333 | 335 | 334 | 364 | 273 | 320 | 320 | 319 | 319 | 347 | 265 |
| 11000 | 75 | 313 | 269 | 345 | 216 | 382 | 140 | 299 | 261 | 330 | 207 | 365 | 133 | 285 | 254 | 314 | 200 | 348 | 126 |
| | 80 | 318 | 318 | 347 | 257 | 383 | 193 | 306 | 306 | 332 | 249 | 367 | 186 | 293 | 293 | 316 | 241 | 349 | 179 |
| | 85 | 337 | 337 | 350 | 308 | 384 | 244 | 324 | 324 | 335 | 301 | 368 | 237 | 311 | 311 | 320 | 293 | 351 | 229 |
| | 90 | 356 | 356 | 355 | 355 | 386 | 295 | 343 | 343 | 343 | 343 | 370 | 287 | 329 | 329 | 329 | 329 | 352 | 280 |
| 12100 | 75 | 318 | 282 | 351 | 224 | 387 | 143 | 304 | 275 | 335 | 217 | 370 | 136 | 290 | 267 | 319 | 209 | 352 | 129 |
| | 80 | 327 | 327 | 352 | 269 | 389 | 200 | 314 | 314 | 337 | 261 | 372 | 193 | 301 | 301 | 321 | 254 | 354 | 186 |
| | 85 | 346 | 346 | 356 | 326 | 390 | 255 | 333 | 333 | 341 | 318 | 373 | 248 | 320 | 320 | 325 | 310 | 355 | 240 |
| | 90 | 366 | 366 | 366 | 366 | 392 | 310 | 353 | 353 | 353 | 353 | 375 | 303 | 339 | 339 | 339 | 339 | 358 | 295 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 8000 | 75 | 253 | 207 | 282 | 166 | 313 | 111 | | | | | | | | | | | | |
| | 80 | 257 | 247 | 283 | 198 | 314 | 151 | | | | | | | | | | | | |
| | 85 | 268 | 268 | 284 | 237 | 315 | 190 | | | | | | | | | | | | |
| | 90 | 284 | 284 | 288 | 276 | 316 | 227 | | | | | | | | | | | | |
| 9000 | 75 | 259 | 220 | 288 | 176 | 320 | 114 | | | | | | | | | | | | |
| | 80 | 263 | 263 | 289 | 211 | 321 | 158 | | | | | | | | | | | | |
| | 85 | 279 | 279 | 292 | 254 | 322 | 201 | | | | | | | | | | | | |
| | 90 | 296 | 296 | 295 | 295 | 324 | 243 | | | | | | | | | | | | |
| 10000 | 75 | 265 | 233 | 293 | 184 | 325 | 116 | | | | | | | | | | | | |
| | 80 | 272 | 272 | 295 | 222 | 327 | 165 | | | | | | | | | | | | |
| | 85 | 289 | 289 | 298 | 270 | 328 | 211 | | | | | | | | | | | | |
| | 90 | 306 | 306 | 306 | 306 | 330 | 257 | | | | | | | | | | | | |
| 11000 | 75 | 270 | 246 | 298 | 192 | 330 | 119 | | | | | | | | | | | | |
| | 80 | 280 | 280 | 300 | 234 | 331 | 172 | | | | | | | | | | | | |
| | 85 | 298 | 298 | 304 | 285 | 333 | 221 | | | | | | | | | | | | |
| | 90 | 315 | 315 | 315 | 315 | 335 | 272 | | | | | | | | | | | | |
| 12100 | 75 | 274 | 259 | 302 | 202 | 334 | 122 | | | | | | | | | | | | |
| | 80 | 288 | 288 | 304 | 246 | 335 | 178 | | | | | | | | | | | | |
| | 85 | 306 | 306 | 309 | 302 | 337 | 232 | | | | | | | | | | | | |
| | 90 | 324 | 324 | 324 | 324 | 340 | 287 | | | | | | | | | | | | |

- Notes:
1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 18. 30 Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil—60 Hz R-22 Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 9000 | 75 | 332 | 261 | 368 | 213 | 409 | 148 | 318 | 253 | 353 | 205 | 392 | 141 | 303 | 244 | 336 | 198 | 374 | 134 |
| | 80 | 335 | 306 | 369 | 251 | 409 | 195 | 321 | 298 | 354 | 243 | 392 | 187 | 307 | 290 | 338 | 235 | 374 | 180 |
| | 85 | 343 | 343 | 371 | 295 | 410 | 240 | 331 | 331 | 355 | 287 | 393 | 233 | 318 | 318 | 339 | 279 | 376 | 225 |
| | 90 | 362 | 362 | 374 | 340 | 411 | 283 | 349 | 349 | 359 | 332 | 394 | 276 | 336 | 336 | 344 | 324 | 377 | 267 |
| 10000 | 75 | 340 | 275 | 376 | 223 | 417 | 151 | 325 | 266 | 360 | 216 | 399 | 144 | 309 | 258 | 343 | 208 | 380 | 137 |
| | 80 | 344 | 325 | 378 | 263 | 418 | 202 | 330 | 317 | 361 | 255 | 400 | 195 | 315 | 308 | 345 | 247 | 381 | 187 |
| | 85 | 356 | 356 | 379 | 312 | 418 | 252 | 343 | 343 | 364 | 304 | 401 | 244 | 330 | 330 | 347 | 295 | 382 | 235 |
| | 90 | 376 | 376 | 384 | 362 | 420 | 299 | 362 | 362 | 369 | 354 | 402 | 291 | 349 | 349 | 353 | 345 | 384 | 283 |
| 11000 | 75 | 346 | 288 | 383 | 233 | 424 | 155 | 331 | 280 | 366 | 226 | 405 | 147 | 315 | 271 | 349 | 218 | 386 | 139 |
| | 80 | 352 | 343 | 385 | 276 | 425 | 209 | 337 | 335 | 368 | 267 | 406 | 202 | 321 | 321 | 351 | 259 | 387 | 194 |
| | 85 | 367 | 367 | 387 | 328 | 425 | 262 | 354 | 354 | 371 | 320 | 407 | 254 | 340 | 340 | 354 | 312 | 388 | 246 |
| | 90 | 388 | 388 | 393 | 383 | 427 | 314 | 374 | 374 | 377 | 375 | 409 | 306 | 360 | 360 | 359 | 359 | 390 | 298 |
| 12000 | 75 | 352 | 301 | 389 | 243 | 429 | 157 | 337 | 292 | 371 | 233 | 411 | 150 | 321 | 284 | 354 | 225 | 391 | 142 |
| | 80 | 357 | 357 | 390 | 287 | 430 | 216 | 343 | 343 | 373 | 279 | 412 | 208 | 329 | 329 | 356 | 270 | 392 | 200 |
| | 85 | 378 | 378 | 393 | 344 | 432 | 273 | 364 | 364 | 377 | 336 | 413 | 265 | 349 | 349 | 360 | 328 | 394 | 256 |
| | 90 | 399 | 399 | 398 | 398 | 433 | 329 | 384 | 384 | 384 | 384 | 415 | 321 | 369 | 369 | 369 | 369 | 396 | 312 |
| 13200 | 75 | 358 | 316 | 394 | 252 | 435 | 161 | 342 | 307 | 377 | 244 | 416 | 153 | 326 | 298 | 359 | 236 | 396 | 145 |
| | 80 | 367 | 367 | 396 | 301 | 436 | 224 | 353 | 353 | 379 | 292 | 417 | 216 | 338 | 338 | 361 | 283 | 397 | 208 |
| | 85 | 388 | 388 | 400 | 363 | 438 | 285 | 374 | 374 | 384 | 355 | 419 | 277 | 359 | 359 | 366 | 346 | 399 | 268 |
| | 90 | 410 | 410 | 410 | 410 | 440 | 346 | 395 | 395 | 395 | 395 | 421 | 338 | 380 | 380 | 380 | 380 | 401 | 329 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 9000 | 75 | 287 | 236 | 319 | 190 | 355 | 126 | | | | | | | | | | | | |
| | 80 | 292 | 282 | 321 | 226 | 356 | 172 | | | | | | | | | | | | |
| | 85 | 305 | 305 | 323 | 270 | 356 | 216 | | | | | | | | | | | | |
| | 90 | 322 | 322 | 327 | 315 | 358 | 259 | | | | | | | | | | | | |
| 10000 | 75 | 294 | 249 | 326 | 200 | 361 | 129 | | | | | | | | | | | | |
| | 80 | 298 | 298 | 327 | 238 | 362 | 179 | | | | | | | | | | | | |
| | 85 | 316 | 316 | 330 | 287 | 363 | 227 | | | | | | | | | | | | |
| | 90 | 334 | 334 | 334 | 334 | 365 | 274 | | | | | | | | | | | | |
| 11000 | 75 | 299 | 262 | 331 | 208 | 366 | 132 | | | | | | | | | | | | |
| | 80 | 307 | 307 | 333 | 250 | 368 | 186 | | | | | | | | | | | | |
| | 85 | 325 | 325 | 336 | 303 | 369 | 237 | | | | | | | | | | | | |
| | 90 | 345 | 345 | 344 | 344 | 371 | 289 | | | | | | | | | | | | |
| 12000 | 75 | 304 | 275 | 335 | 216 | 371 | 134 | | | | | | | | | | | | |
| | 80 | 315 | 315 | 337 | 261 | 372 | 192 | | | | | | | | | | | | |
| | 85 | 334 | 334 | 342 | 319 | 374 | 248 | | | | | | | | | | | | |
| | 90 | 354 | 354 | 354 | 354 | 376 | 303 | | | | | | | | | | | | |
| 13200 | 75 | 309 | 289 | 340 | 227 | 375 | 137 | | | | | | | | | | | | |
| | 80 | 323 | 323 | 342 | 275 | 377 | 200 | | | | | | | | | | | | |
| | 85 | 343 | 343 | 348 | 337 | 379 | 259 | | | | | | | | | | | | |
| | 90 | 363 | 363 | 363 | 363 | 381 | 320 | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.

Table 19. 35 Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil—60 Hz R-22 Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 10500 | 75 | 383 | 314 | 424 | 247 | 468 | 170 | 366 | 305 | 405 | 239 | 447 | 161 | 349 | 295 | 386 | 230 | 426 | 153 |
| | 80 | 389 | 372 | 425 | 300 | 469 | 228 | 372 | 363 | 406 | 291 | 448 | 220 | 356 | 354 | 387 | 282 | 427 | 211 |
| | 85 | 404 | 404 | 428 | 356 | 470 | 285 | 389 | 389 | 409 | 347 | 449 | 277 | 374 | 374 | 390 | 338 | 428 | 268 |
| | 90 | 426 | 426 | 433 | 414 | 471 | 341 | 411 | 411 | 416 | 405 | 451 | 332 | 394 | 394 | 397 | 396 | 430 | 322 |
| 12000 | 75 | 393 | 336 | 433 | 262 | 478 | 174 | 376 | 327 | 414 | 254 | 457 | 166 | 358 | 317 | 394 | 245 | 434 | 157 |
| | 80 | 399 | 399 | 435 | 320 | 479 | 240 | 384 | 384 | 416 | 311 | 458 | 231 | 368 | 368 | 396 | 301 | 436 | 222 |
| | 85 | 422 | 422 | 439 | 384 | 480 | 304 | 406 | 406 | 420 | 375 | 458 | 295 | 390 | 390 | 400 | 366 | 437 | 285 |
| | 90 | 445 | 445 | 445 | 445 | 482 | 366 | 429 | 429 | 428 | 428 | 461 | 357 | 412 | 412 | 411 | 411 | 440 | 348 |
| 13000 | 75 | 399 | 350 | 439 | 272 | 483 | 177 | 382 | 341 | 419 | 263 | 461 | 168 | 363 | 331 | 398 | 254 | 439 | 160 |
| | 80 | 409 | 409 | 441 | 333 | 484 | 247 | 393 | 393 | 421 | 324 | 463 | 238 | 376 | 376 | 401 | 314 | 440 | 230 |
| | 85 | 432 | 432 | 446 | 402 | 485 | 315 | 416 | 416 | 426 | 393 | 464 | 306 | 399 | 399 | 406 | 383 | 442 | 297 |
| | 90 | 456 | 456 | 456 | 456 | 488 | 383 | 439 | 439 | 439 | 439 | 467 | 374 | 421 | 421 | 421 | 421 | 445 | 364 |
| 14000 | 75 | 405 | 365 | 443 | 282 | 488 | 180 | 387 | 355 | 423 | 273 | 466 | 171 | 368 | 345 | 402 | 264 | 443 | 162 |
| | 80 | 417 | 417 | 446 | 346 | 489 | 254 | 401 | 401 | 426 | 337 | 467 | 246 | 384 | 384 | 405 | 327 | 444 | 237 |
| | 85 | 441 | 441 | 452 | 420 | 490 | 327 | 425 | 425 | 432 | 411 | 468 | 318 | 407 | 407 | 412 | 401 | 446 | 308 |
| | 90 | 466 | 466 | 466 | 466 | 494 | 399 | 448 | 448 | 448 | 448 | 472 | 390 | 430 | 430 | 430 | 430 | 450 | 380 |
| 14400 | 75 | 407 | 370 | 445 | 286 | 489 | 181 | 389 | 361 | 425 | 277 | 467 | 172 | 370 | 351 | 404 | 268 | 444 | 163 |
| | 80 | 421 | 421 | 448 | 351 | 491 | 257 | 404 | 404 | 428 | 342 | 469 | 249 | 387 | 387 | 407 | 332 | 446 | 240 |
| | 85 | 445 | 445 | 454 | 427 | 492 | 331 | 428 | 428 | 434 | 418 | 470 | 322 | 410 | 410 | 414 | 408 | 447 | 313 |
| | 90 | 470 | 470 | 469 | 469 | 496 | 405 | 452 | 452 | 452 | 452 | 474 | 396 | 434 | 434 | 433 | 433 | 452 | 387 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 10500 | 75 | 331 | 286 | 365 | 221 | 404 | 144 | | | | | | | | | | | | |
| | 80 | 337 | 337 | 367 | 272 | 405 | 202 | | | | | | | | | | | | |
| | 85 | 357 | 357 | 371 | 328 | 406 | 259 | | | | | | | | | | | | |
| | 90 | 378 | 378 | 378 | 378 | 408 | 313 | | | | | | | | | | | | |
| 12000 | 75 | 339 | 307 | 373 | 235 | 411 | 148 | | | | | | | | | | | | |
| | 80 | 351 | 351 | 375 | 292 | 413 | 213 | | | | | | | | | | | | |
| | 85 | 372 | 372 | 380 | 356 | 414 | 276 | | | | | | | | | | | | |
| | 90 | 394 | 394 | 394 | 394 | 417 | 338 | | | | | | | | | | | | |
| 13000 | 75 | 344 | 322 | 377 | 245 | 416 | 151 | | | | | | | | | | | | |
| | 80 | 359 | 359 | 380 | 304 | 417 | 220 | | | | | | | | | | | | |
| | 85 | 381 | 381 | 386 | 374 | 418 | 287 | | | | | | | | | | | | |
| | 90 | 403 | 403 | 403 | 403 | 422 | 355 | | | | | | | | | | | | |
| 14000 | 75 | 349 | 335 | 380 | 252 | 419 | 153 | | | | | | | | | | | | |
| | 80 | 366 | 366 | 384 | 317 | 421 | 228 | | | | | | | | | | | | |
| | 85 | 389 | 389 | 391 | 391 | 422 | 298 | | | | | | | | | | | | |
| | 90 | 411 | 411 | 411 | 411 | 427 | 371 | | | | | | | | | | | | |
| 14400 | 75 | 351 | 341 | 382 | 256 | 420 | 154 | | | | | | | | | | | | |
| | 80 | 369 | 369 | 385 | 322 | 422 | 230 | | | | | | | | | | | | |
| | 85 | 392 | 392 | 391 | 391 | 424 | 303 | | | | | | | | | | | | |
| | 90 | 414 | 414 | 414 | 414 | 429 | 377 | | | | | | | | | | | | |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 20. 40 Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil—60 Hz R-22 Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 12000 | 75 | 473 | 375 | 525 | 295 | 582 | 208 | 452 | 362 | 501 | 283 | 556 | 197 | 429 | 349 | 476 | 271 | 529 | 185 |
| | 80 | 479 | 442 | 527 | 360 | 583 | 276 | 458 | 430 | 503 | 348 | 557 | 264 | 436 | 417 | 478 | 334 | 531 | 252 |
| | 85 | 493 | 493 | 530 | 425 | 585 | 343 | 474 | 474 | 506 | 413 | 559 | 331 | 454 | 454 | 482 | 400 | 532 | 318 |
| | 90 | 520 | 520 | 536 | 492 | 586 | 408 | 501 | 501 | 513 | 480 | 560 | 396 | 481 | 481 | 490 | 467 | 534 | 383 |
| 14000 | 75 | 489 | 406 | 540 | 316 | 598 | 215 | 467 | 393 | 515 | 304 | 571 | 203 | 443 | 380 | 490 | 291 | 543 | 191 |
| | 80 | 498 | 485 | 542 | 388 | 599 | 293 | 476 | 472 | 518 | 375 | 572 | 281 | 451 | 451 | 492 | 362 | 544 | 268 |
| | 85 | 520 | 520 | 548 | 464 | 601 | 369 | 500 | 500 | 523 | 451 | 574 | 357 | 479 | 479 | 498 | 438 | 546 | 344 |
| | 90 | 550 | 550 | 557 | 542 | 603 | 444 | 529 | 529 | 534 | 530 | 577 | 431 | 507 | 507 | 507 | 507 | 549 | 418 |
| 15000 | 75 | 496 | 421 | 546 | 326 | 604 | 218 | 473 | 408 | 521 | 314 | 577 | 206 | 449 | 395 | 495 | 301 | 548 | 194 |
| | 80 | 507 | 506 | 549 | 402 | 606 | 301 | 482 | 482 | 524 | 389 | 578 | 288 | 461 | 461 | 498 | 376 | 550 | 276 |
| | 85 | 532 | 532 | 555 | 483 | 607 | 382 | 512 | 512 | 531 | 470 | 580 | 370 | 490 | 490 | 505 | 457 | 551 | 356 |
| | 90 | 562 | 562 | 567 | 567 | 611 | 461 | 541 | 541 | 541 | 541 | 584 | 448 | 519 | 519 | 518 | 518 | 556 | 435 |
| 16000 | 75 | 502 | 436 | 552 | 336 | 610 | 220 | 479 | 423 | 526 | 323 | 582 | 209 | 455 | 409 | 500 | 311 | 553 | 196 |
| | 80 | 513 | 513 | 555 | 415 | 612 | 308 | 492 | 492 | 530 | 402 | 584 | 296 | 470 | 470 | 503 | 389 | 555 | 284 |
| | 85 | 543 | 543 | 562 | 502 | 613 | 395 | 522 | 522 | 537 | 489 | 585 | 381 | 500 | 500 | 511 | 475 | 557 | 368 |
| | 90 | 574 | 574 | 574 | 574 | 617 | 478 | 552 | 552 | 552 | 552 | 590 | 466 | 529 | 529 | 529 | 529 | 562 | 452 |
| 17600 | 75 | 511 | 459 | 560 | 351 | 618 | 225 | 488 | 446 | 533 | 339 | 589 | 213 | 463 | 433 | 506 | 326 | 560 | 200 |
| | 80 | 527 | 527 | 564 | 436 | 620 | 320 | 506 | 506 | 538 | 423 | 591 | 308 | 483 | 483 | 511 | 410 | 562 | 295 |
| | 85 | 559 | 559 | 573 | 531 | 621 | 413 | 537 | 537 | 547 | 518 | 593 | 400 | 514 | 514 | 521 | 504 | 564 | 387 |
| | 90 | 591 | 591 | 590 | 590 | 627 | 505 | 568 | 568 | 568 | 568 | 599 | 492 | 544 | 544 | 544 | 544 | 571 | 479 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | | | | | | | | | | | | |
| TGC | SHC | TGC | SHC | TGC | SHC | | | | | | | | | | | | | | |
| 12000 | 75 | 406 | 336 | 451 | 258 | 501 | 172 | | | | | | | | | | | | |
| | 80 | 413 | 404 | 453 | 321 | 503 | 240 | | | | | | | | | | | | |
| | 85 | 434 | 434 | 457 | 387 | 504 | 306 | | | | | | | | | | | | |
| | 90 | 460 | 460 | 465 | 454 | 507 | 370 | | | | | | | | | | | | |
| 14000 | 75 | 419 | 366 | 463 | 278 | 514 | 178 | | | | | | | | | | | | |
| | 80 | 430 | 430 | 466 | 349 | 515 | 256 | | | | | | | | | | | | |
| | 85 | 457 | 457 | 472 | 425 | 517 | 331 | | | | | | | | | | | | |
| | 90 | 485 | 485 | 484 | 484 | — | — | | | | | | | | | | | | |
| 15000 | 75 | 425 | 381 | 468 | 288 | — | — | | | | | | | | | | | | |
| | 80 | 439 | 439 | 471 | 362 | — | — | | | | | | | | | | | | |
| | 85 | 467 | 467 | 479 | 443 | — | — | | | | | | | | | | | | |
| | 90 | 495 | 495 | 495 | 495 | — | — | | | | | | | | | | | | |
| 16000 | 75 | 430 | 396 | 472 | 298 | — | — | | | | | | | | | | | | |
| | 80 | 448 | 448 | 476 | 375 | — | — | | | | | | | | | | | | |
| | 85 | 476 | 476 | 485 | 462 | — | — | | | | | | | | | | | | |
| | 90 | 505 | 505 | 505 | 505 | — | — | | | | | | | | | | | | |
| 17600 | 75 | 438 | 419 | 478 | 313 | — | — | | | | | | | | | | | | |
| | 80 | 460 | 460 | 483 | 396 | — | — | | | | | | | | | | | | |
| | 85 | 490 | 490 | 494 | 491 | — | — | | | | | | | | | | | | |
| | 90 | — | — | — | — | — | — | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.

Table 21. 50 Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil—60 Hz R-22 Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 15000 | 75 | 568 | 468 | 629 | 363 | 695 | 250 | 542 | 453 | 599 | 349 | 663 | 236 | 514 | 438 | 569 | 335 | 630 | 222 |
| | 80 | 577 | 557 | 630 | 448 | 697 | 339 | 552 | 543 | 602 | 433 | 665 | 325 | 523 | 523 | 572 | 418 | 632 | 311 |
| | 85 | 603 | 603 | 636 | 534 | 699 | 426 | 579 | 579 | 608 | 519 | 667 | 412 | 555 | 555 | 578 | 504 | 634 | 397 |
| | 90 | 637 | 637 | 646 | 623 | 701 | 511 | 613 | 612 | 618 | 608 | 670 | 496 | 587 | 587 | 587 | 587 | 638 | 481 |
| 17000 | 75 | 582 | 500 | 642 | 384 | 708 | 256 | 555 | 485 | 612 | 370 | 675 | 242 | 527 | 470 | 581 | 355 | 641 | 228 |
| | 80 | 593 | 593 | 645 | 477 | 710 | 356 | 569 | 569 | 615 | 462 | 678 | 341 | 544 | 544 | 584 | 447 | 644 | 327 |
| | 85 | 628 | 628 | 652 | 575 | 712 | 452 | 604 | 604 | 623 | 560 | 679 | 438 | 578 | 578 | 592 | 544 | 646 | 423 |
| | 90 | 664 | 664 | 664 | 664 | 716 | 548 | 638 | 638 | 638 | 638 | 685 | 533 | 612 | 612 | 611 | 611 | 651 | 518 |
| 18000 | 75 | 589 | 516 | 648 | 394 | 714 | 259 | 561 | 501 | 617 | 380 | 681 | 245 | 533 | 485 | 585 | 365 | 646 | 230 |
| | 80 | 604 | 604 | 651 | 491 | 716 | 364 | 579 | 579 | 621 | 476 | 683 | 350 | 553 | 553 | 590 | 461 | 649 | 335 |
| | 85 | 640 | 640 | 659 | 594 | 718 | 465 | 614 | 614 | 630 | 579 | 685 | 451 | 588 | 588 | 599 | 564 | 651 | 435 |
| | 90 | 676 | 676 | 676 | 676 | 723 | 566 | 650 | 650 | 649 | 649 | 691 | 551 | 622 | 622 | 622 | 622 | 657 | 536 |
| 19000 | 75 | 595 | 532 | 653 | 404 | 719 | 261 | 567 | 516 | 622 | 390 | 685 | 247 | 538 | 501 | 590 | 375 | 650 | 233 |
| | 80 | 613 | 613 | 657 | 505 | 721 | 372 | 588 | 588 | 626 | 490 | 688 | 357 | 562 | 562 | 595 | 475 | 653 | 343 |
| | 85 | 650 | 650 | 666 | 614 | 723 | 478 | 624 | 624 | 636 | 599 | 690 | 463 | 597 | 597 | 605 | 583 | 656 | 448 |
| | 90 | 687 | 687 | 687 | 687 | 729 | 584 | 660 | 660 | 660 | 660 | 696 | 569 | 632 | 632 | 632 | 632 | 663 | 554 |
| 20000 | 75 | 600 | 547 | 657 | 414 | 723 | 264 | 572 | 532 | 626 | 399 | 690 | 250 | 543 | 516 | 594 | 385 | 654 | 236 |
| | 80 | 622 | 622 | 662 | 519 | 726 | 379 | 597 | 597 | 631 | 504 | 692 | 365 | 570 | 570 | 599 | 488 | 657 | 351 |
| | 85 | 660 | 660 | 672 | 633 | 728 | 490 | 633 | 633 | 642 | 618 | 695 | 476 | 606 | 606 | 611 | 603 | 660 | 460 |
| | 90 | 697 | 697 | 697 | 697 | 734 | 601 | 670 | 670 | 670 | 670 | 702 | 587 | 641 | 641 | 641 | 641 | 668 | 571 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 15000 | 75 | 486 | 422 | 538 | 320 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 498 | 498 | 541 | 402 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | 530 | 530 | 547 | 489 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | 561 | 561 | 561 | 561 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 17000 | 75 | 498 | 454 | 548 | 340 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 518 | 518 | 553 | 431 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | 551 | 551 | 561 | 529 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 18000 | 75 | 504 | 470 | 553 | 350 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 527 | 527 | 558 | 445 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | 560 | 560 | 567 | 548 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 19000 | 75 | 509 | 485 | 557 | 360 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 535 | 535 | 562 | 459 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | 569 | 569 | 573 | 568 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20000 | 75 | 513 | 500 | 560 | 366 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 542 | 542 | 566 | 472 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | 577 | 577 | 577 | 577 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

Notes:
1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 22. 27½ Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil—60 Hz R-407C Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 8000 | 75 | 290.0 | 226.0 | 321.0 | 180.0 | 358.0 | 130.0 | 276.0 | 217.0 | 305.0 | 172.0 | 340.0 | 123.0 | 261.0 | 209.0 | 288.0 | 168.0 | 321.0 | 115.0 |
| | 80 | 294.0 | 266.0 | 324.0 | 218.0 | 358.0 | 171.0 | 281.0 | 258.0 | 308.0 | 210.0 | 340.0 | 163.0 | 266.0 | 249.0 | 291.0 | 201.0 | 321.0 | 156.0 |
| | 85 | 303.0 | 303.0 | 326.0 | 256.0 | 360.0 | 209.0 | 291.0 | 291.0 | 311.0 | 248.0 | 343.0 | 201.0 | 278.0 | 278.0 | 295.0 | 240.0 | 325.0 | 192.0 |
| | 90 | 320.0 | 320.0 | 331.0 | 296.0 | 363.0 | 247.0 | 308.0 | 308.0 | 316.0 | 288.0 | 346.0 | 239.0 | 294.0 | 294.0 | 300.0 | 279.0 | 327.0 | 230.0 |
| 9000 | 75 | 298.0 | 239.0 | 329.0 | 193.0 | 366.0 | 133.0 | 284.0 | 231.0 | 313.0 | 185.0 | 347.0 | 126.0 | 268.0 | 222.0 | 295.0 | 176.0 | 327.0 | 118.0 |
| | 80 | 304.0 | 284.0 | 332.0 | 230.0 | 366.0 | 179.0 | 290.0 | 276.0 | 316.0 | 222.0 | 347.0 | 171.0 | 275.0 | 267.0 | 299.0 | 213.0 | 328.0 | 162.0 |
| | 85 | 316.0 | 316.0 | 336.0 | 273.0 | 369.0 | 220.0 | 303.0 | 303.0 | 320.0 | 265.0 | 351.0 | 212.0 | 290.0 | 290.0 | 303.0 | 256.0 | 332.0 | 203.0 |
| | 90 | 334.0 | 334.0 | 342.0 | 317.0 | 372.0 | 262.0 | 321.0 | 321.0 | 326.0 | 309.0 | 354.0 | 254.0 | 307.0 | 307.0 | 310.0 | 300.0 | 335.0 | 245.0 |
| 10000 | 75 | 305.0 | 252.0 | 336.0 | 202.0 | 372.0 | 136.0 | 290.0 | 244.0 | 319.0 | 194.0 | 353.0 | 129.0 | 274.0 | 235.0 | 301.0 | 185.0 | 332.0 | 121.0 |
| | 80 | 312.0 | 302.0 | 339.0 | 241.0 | 373.0 | 185.0 | 298.0 | 293.0 | 322.0 | 233.0 | 354.0 | 177.0 | 282.0 | 282.0 | 305.0 | 224.0 | 334.0 | 168.0 |
| | 85 | 328.0 | 328.0 | 343.0 | 289.0 | 377.0 | 231.0 | 314.0 | 314.0 | 327.0 | 281.0 | 358.0 | 222.0 | 300.0 | 300.0 | 310.0 | 272.0 | 338.0 | 213.0 |
| | 90 | 347.0 | 347.0 | 351.0 | 338.0 | 380.0 | 277.0 | 333.0 | 333.0 | 335.0 | 330.0 | 361.0 | 268.0 | 318.0 | 318.0 | 317.0 | 317.0 | 342.0 | 259.0 |
| 11000 | 75 | 311.0 | 264.0 | 341.0 | 210.0 | 377.0 | 139.0 | 295.0 | 256.0 | 324.0 | 202.0 | 357.0 | 131.0 | 279.0 | 247.0 | 305.0 | 193.0 | 336.0 | 123.0 |
| | 80 | 320.0 | 319.0 | 345.0 | 253.0 | 379.0 | 191.0 | 304.0 | 304.0 | 328.0 | 244.0 | 360.0 | 183.0 | 290.0 | 290.0 | 309.0 | 235.0 | 339.0 | 173.0 |
| | 85 | 338.0 | 338.0 | 350.0 | 305.0 | 383.0 | 241.0 | 323.0 | 323.0 | 333.0 | 296.0 | 363.0 | 232.0 | 308.0 | 308.0 | 316.0 | 287.0 | 343.0 | 223.0 |
| | 90 | 357.0 | 357.0 | 360.0 | 358.0 | 386.0 | 291.0 | 343.0 | 343.0 | 343.0 | 343.0 | 367.0 | 282.0 | 327.0 | 327.0 | 327.0 | 327.0 | 348.0 | 273.0 |
| 12100 | 75 | 316.0 | 277.0 | 346.0 | 219.0 | 382.0 | 142.0 | 301.0 | 269.0 | 328.0 | 211.0 | 362.0 | 134.0 | 284.0 | 259.0 | 309.0 | 201.0 | 340.0 | 126.0 |
| | 80 | 327.0 | 327.0 | 350.0 | 264.0 | 384.0 | 197.0 | 313.0 | 313.0 | 333.0 | 256.0 | 365.0 | 189.0 | 297.0 | 297.0 | 314.0 | 246.0 | 344.0 | 179.0 |
| | 85 | 347.0 | 347.0 | 357.0 | 321.0 | 388.0 | 251.0 | 332.0 | 332.0 | 340.0 | 312.0 | 369.0 | 242.0 | 317.0 | 317.0 | 322.0 | 303.0 | 348.0 | 233.0 |
| | 90 | 368.0 | 368.0 | 368.0 | 368.0 | 393.0 | 306.0 | 353.0 | 353.0 | 352.0 | 352.0 | 373.0 | 298.0 | 336.0 | 336.0 | 336.0 | 336.0 | 353.0 | 288.0 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 8000 | 75 | 245.0 | 200.0 | 271.0 | 159.0 | 301.0 | 107.0 | | | | | | | | | | | | |
| | 80 | 251.0 | 240.0 | 274.0 | 192.0 | 301.0 | 147.0 | | | | | | | | | | | | |
| | 85 | 263.0 | 263.0 | 278.0 | 231.0 | 305.0 | 183.0 | | | | | | | | | | | | |
| | 90 | 280.0 | 280.0 | 284.0 | 270.0 | 308.0 | 221.0 | | | | | | | | | | | | |
| 9000 | 75 | 252.0 | 213.0 | 277.0 | 167.0 | 306.0 | 110.0 | | | | | | | | | | | | |
| | 80 | 260.0 | 258.0 | 281.0 | 204.0 | 308.0 | 153.0 | | | | | | | | | | | | |
| | 85 | 275.0 | 275.0 | 285.0 | 247.0 | 312.0 | 194.0 | | | | | | | | | | | | |
| | 90 | 292.0 | 292.0 | 293.0 | 291.0 | 315.0 | 236.0 | | | | | | | | | | | | |
| 10000 | 75 | 258.0 | 225.0 | 282.0 | 176.0 | 311.0 | 112.0 | | | | | | | | | | | | |
| | 80 | 267.0 | 267.0 | 286.0 | 215.0 | 313.0 | 159.0 | | | | | | | | | | | | |
| | 85 | 284.0 | 284.0 | 292.0 | 262.0 | 317.0 | 204.0 | | | | | | | | | | | | |
| | 90 | 301.0 | 301.0 | 301.0 | 301.0 | 321.0 | 250.0 | | | | | | | | | | | | |
| 11000 | 75 | 262.0 | 237.0 | 286.0 | 183.0 | 314.0 | 115.0 | | | | | | | | | | | | |
| | 80 | 274.0 | 274.0 | 290.0 | 225.0 | 317.0 | 164.0 | | | | | | | | | | | | |
| | 85 | 292.0 | 292.0 | 297.0 | 277.0 | 322.0 | 213.0 | | | | | | | | | | | | |
| | 90 | 310.0 | 310.0 | 310.0 | 310.0 | 327.0 | 264.0 | | | | | | | | | | | | |
| 12100 | 75 | 267.0 | 250.0 | 290.0 | 192.0 | 317.0 | 116.0 | | | | | | | | | | | | |
| | 80 | 281.0 | 281.0 | 295.0 | 236.0 | 321.0 | 170.0 | | | | | | | | | | | | |
| | 85 | 300.0 | 300.0 | 303.0 | 293.0 | 326.0 | 223.0 | | | | | | | | | | | | |
| | 90 | 318.0 | 318.0 | 318.0 | 318.0 | 332.0 | 278.0 | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 23. 30 Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil—60 Hz R-407C Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 9000 | 75 | 331.0 | 259.0 | 366.0 | 211.0 | 407.0 | 148.0 | 315.0 | 249.0 | 348.0 | 202.0 | 386.0 | 140.0 | 298.0 | 240.0 | 329.0 | 193.0 | 365.0 | 131.0 |
| | 80 | 336.0 | 304.0 | 369.0 | 249.0 | 407.0 | 195.0 | 320.0 | 295.0 | 351.0 | 240.0 | 387.0 | 187.0 | 304.0 | 286.0 | 332.0 | 230.0 | 365.0 | 178.0 |
| | 85 | 346.0 | 346.0 | 372.0 | 293.0 | 410.0 | 239.0 | 332.0 | 332.0 | 354.0 | 284.0 | 390.0 | 230.0 | 317.0 | 317.0 | 336.0 | 274.0 | 369.0 | 220.0 |
| | 90 | 365.0 | 365.0 | 377.0 | 339.0 | 412.0 | 282.0 | 351.0 | 351.0 | 360.0 | 330.0 | 393.0 | 273.0 | 336.0 | 336.0 | 342.0 | 320.0 | 372.0 | 263.0 |
| 10000 | 75 | 339.0 | 272.0 | 373.0 | 220.0 | 414.0 | 151.0 | 322.0 | 263.0 | 355.0 | 211.0 | 393.0 | 143.0 | 305.0 | 253.0 | 335.0 | 201.0 | 371.0 | 134.0 |
| | 80 | 345.0 | 323.0 | 377.0 | 261.0 | 415.0 | 203.0 | 329.0 | 314.0 | 358.0 | 252.0 | 394.0 | 194.0 | 313.0 | 304.0 | 339.0 | 242.0 | 372.0 | 184.0 |
| | 85 | 359.0 | 359.0 | 381.0 | 310.0 | 418.0 | 250.0 | 344.0 | 344.0 | 362.0 | 301.0 | 398.0 | 240.0 | 329.0 | 329.0 | 343.0 | 291.0 | 376.0 | 231.0 |
| | 90 | 379.0 | 379.0 | 387.0 | 360.0 | 421.0 | 298.0 | 364.0 | 364.0 | 370.0 | 351.0 | 401.0 | 288.0 | 348.0 | 348.0 | 351.0 | 341.0 | 379.0 | 278.0 |
| 11000 | 75 | 346.0 | 285.0 | 380.0 | 229.0 | 421.0 | 154.0 | 329.0 | 275.0 | 361.0 | 220.0 | 399.0 | 146.0 | 311.0 | 265.0 | 341.0 | 210.0 | 376.0 | 137.0 |
| | 80 | 353.0 | 341.0 | 384.0 | 273.0 | 421.0 | 209.0 | 337.0 | 331.0 | 365.0 | 263.0 | 400.0 | 200.0 | 319.0 | 319.0 | 345.0 | 253.0 | 378.0 | 190.0 |
| | 85 | 370.0 | 370.0 | 388.0 | 326.0 | 425.0 | 260.0 | 355.0 | 355.0 | 370.0 | 317.0 | 404.0 | 251.0 | 339.0 | 339.0 | 350.0 | 307.0 | 382.0 | 241.0 |
| | 90 | 391.0 | 391.0 | 397.0 | 381.0 | 429.0 | 312.0 | 376.0 | 376.0 | 379.0 | 372.0 | 408.0 | 303.0 | 359.0 | 359.0 | 358.0 | 358.0 | 386.0 | 293.0 |
| 12000 | 75 | 352.0 | 297.0 | 386.0 | 238.0 | 426.0 | 157.0 | 334.0 | 288.0 | 366.0 | 228.0 | 404.0 | 148.0 | 316.0 | 278.0 | 345.0 | 218.0 | 380.0 | 139.0 |
| | 80 | 361.0 | 358.0 | 390.0 | 284.0 | 427.0 | 215.0 | 343.0 | 343.0 | 370.0 | 274.0 | 406.0 | 206.0 | 327.0 | 327.0 | 350.0 | 264.0 | 382.0 | 196.0 |
| | 85 | 380.0 | 380.0 | 395.0 | 342.0 | 432.0 | 271.0 | 364.0 | 364.0 | 376.0 | 332.0 | 410.0 | 261.0 | 347.0 | 347.0 | 356.0 | 322.0 | 387.0 | 250.0 |
| | 90 | 402.0 | 402.0 | 405.0 | 402.0 | 435.0 | 327.0 | 386.0 | 386.0 | 386.0 | 386.0 | 414.0 | 317.0 | 368.0 | 368.0 | 368.0 | 368.0 | 391.0 | 307.0 |
| 13200 | 75 | 358.0 | 312.0 | 392.0 | 248.0 | 432.0 | 160.0 | 340.0 | 302.0 | 371.0 | 238.0 | 408.0 | 152.0 | 322.0 | 292.0 | 350.0 | 228.0 | 384.0 | 142.0 |
| | 80 | 369.0 | 369.0 | 396.0 | 297.0 | 435.0 | 221.0 | 352.0 | 352.0 | 376.0 | 287.0 | 411.0 | 213.0 | 335.0 | 335.0 | 355.0 | 277.0 | 388.0 | 202.0 |
| | 85 | 391.0 | 391.0 | 403.0 | 360.0 | 438.0 | 282.0 | 374.0 | 374.0 | 383.0 | 350.0 | 415.0 | 272.0 | 357.0 | 357.0 | 363.0 | 340.0 | 392.0 | 262.0 |
| | 90 | 414.0 | 414.0 | 414.0 | 414.0 | 442.0 | 343.0 | 397.0 | 397.0 | 396.0 | 396.0 | 420.0 | 333.0 | 378.0 | 378.0 | 378.0 | 378.0 | 397.0 | 323.0 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| 9000 | 75 | 280.0 | 230.0 | 309.0 | 183.0 | 342.0 | 122.0 | | | | | | | | | | | | |
| | 80 | 287.0 | 276.0 | 312.0 | 220.0 | 342.0 | 168.0 | | | | | | | | | | | | |
| | 85 | 301.0 | 301.0 | 316.0 | 264.0 | 347.0 | 210.0 | | | | | | | | | | | | |
| | 90 | 319.0 | 319.0 | 323.0 | 310.0 | 350.0 | 253.0 | | | | | | | | | | | | |
| 10000 | 75 | 287.0 | 243.0 | 314.0 | 191.0 | 347.0 | 125.0 | | | | | | | | | | | | |
| | 80 | 295.0 | 294.0 | 318.0 | 232.0 | 349.0 | 174.0 | | | | | | | | | | | | |
| | 85 | 312.0 | 312.0 | 323.0 | 280.0 | 353.0 | 220.0 | | | | | | | | | | | | |
| | 90 | 330.0 | 330.0 | 332.0 | 331.0 | — | — | | | | | | | | | | | | |
| 11000 | 75 | 292.0 | 255.0 | 319.0 | 200.0 | 351.0 | 128.0 | | | | | | | | | | | | |
| | 80 | 302.0 | 302.0 | 324.0 | 243.0 | — | — | | | | | | | | | | | | |
| | 85 | 321.0 | 321.0 | 330.0 | 296.0 | — | — | | | | | | | | | | | | |
| | 90 | 340.0 | 340.0 | 340.0 | 340.0 | — | — | | | | | | | | | | | | |
| 12000 | 75 | 297.0 | 267.0 | 323.0 | 208.0 | — | — | | | | | | | | | | | | |
| | 80 | 309.0 | 309.0 | 328.0 | 253.0 | — | — | | | | | | | | | | | | |
| | 85 | 329.0 | 329.0 | 335.0 | 311.0 | — | — | | | | | | | | | | | | |
| | 90 | 349.0 | 349.0 | 349.0 | 349.0 | — | — | | | | | | | | | | | | |
| 13200 | 75 | 302.0 | 281.0 | 328.0 | 217.0 | — | — | | | | | | | | | | | | |
| | 80 | 317.0 | 317.0 | 333.0 | 266.0 | — | — | | | | | | | | | | | | |
| | 85 | 338.0 | 338.0 | 342.0 | 329.0 | — | — | | | | | | | | | | | | |
| | 90 | 358.0 | 358.0 | 358.0 | 358.0 | — | — | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 24. 35 Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil—60 Hz R-407C Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 10500 | 75 | 384.0 | 311.0 | 423.0 | 246.0 | 468.0 | 171.0 | 365.0 | 301.0 | 401.0 | 232.0 | 443.0 | 161.0 | 345.0 | 289.0 | 378.0 | 221.0 | 416.0 | 151.0 |
| | 80 | 392.0 | 370.0 | 427.0 | 298.0 | 468.0 | 229.0 | 373.0 | 360.0 | 405.0 | 287.0 | 443.0 | 219.0 | 354.0 | 348.0 | 382.0 | 276.0 | 417.0 | 208.0 |
| | 85 | 409.0 | 409.0 | 431.0 | 355.0 | 472.0 | 284.0 | 392.0 | 392.0 | 410.0 | 344.0 | 448.0 | 273.0 | 374.0 | 374.0 | 388.0 | 333.0 | 422.0 | 262.0 |
| | 90 | 432.0 | 432.0 | 439.0 | 413.0 | 475.0 | 339.0 | 414.0 | 414.0 | 418.0 | 402.0 | 451.0 | 329.0 | 395.0 | 395.0 | 397.0 | 391.0 | 426.0 | 317.0 |
| 12000 | 75 | 395.0 | 333.0 | 433.0 | 255.0 | 477.0 | 175.0 | 375.0 | 322.0 | 410.0 | 244.0 | 451.0 | 165.0 | 354.0 | 310.0 | 386.0 | 237.0 | 423.0 | 154.0 |
| | 80 | 405.0 | 400.0 | 437.0 | 318.0 | 478.0 | 239.0 | 386.0 | 386.0 | 415.0 | 307.0 | 452.0 | 229.0 | 367.0 | 367.0 | 391.0 | 295.0 | 426.0 | 217.0 |
| | 85 | 427.0 | 427.0 | 443.0 | 382.0 | 482.0 | 302.0 | 409.0 | 409.0 | 421.0 | 371.0 | 457.0 | 291.0 | 389.0 | 389.0 | 398.0 | 359.0 | 431.0 | 279.0 |
| | 90 | 451.0 | 451.0 | 453.0 | 448.0 | 486.0 | 364.0 | 432.0 | 432.0 | 432.0 | 432.0 | 462.0 | 353.0 | 412.0 | 412.0 | 411.0 | 411.0 | 436.0 | 342.0 |
| 13000 | 75 | 401.0 | 347.0 | 438.0 | 268.0 | 482.0 | 177.0 | 381.0 | 336.0 | 415.0 | 257.0 | 455.0 | 167.0 | 359.0 | 324.0 | 390.0 | 245.0 | 426.0 | 157.0 |
| | 80 | 413.0 | 413.0 | 443.0 | 330.0 | 483.0 | 247.0 | 395.0 | 395.0 | 420.0 | 319.0 | 457.0 | 236.0 | 375.0 | 375.0 | 396.0 | 307.0 | 430.0 | 224.0 |
| | 85 | 438.0 | 438.0 | 450.0 | 400.0 | 488.0 | 313.0 | 418.0 | 418.0 | 427.0 | 388.0 | 462.0 | 302.0 | 398.0 | 398.0 | 404.0 | 377.0 | 436.0 | 290.0 |
| | 90 | 462.0 | 462.0 | 462.0 | 462.0 | 493.0 | 380.0 | 442.0 | 442.0 | 442.0 | 442.0 | 468.0 | 369.0 | 421.0 | 421.0 | 421.0 | 421.0 | 441.0 | 357.0 |
| 14000 | 75 | 407.0 | 361.0 | 443.0 | 277.0 | 486.0 | 180.0 | 386.0 | 349.0 | 419.0 | 265.0 | 458.0 | 170.0 | 364.0 | 337.0 | 394.0 | 253.0 | 429.0 | 159.0 |
| | 80 | 422.0 | 422.0 | 448.0 | 343.0 | 488.0 | 253.0 | 403.0 | 403.0 | 425.0 | 331.0 | 462.0 | 242.0 | 382.0 | 382.0 | 400.0 | 319.0 | 434.0 | 230.0 |
| | 85 | 447.0 | 447.0 | 456.0 | 417.0 | 493.0 | 324.0 | 427.0 | 427.0 | 433.0 | 406.0 | 467.0 | 313.0 | 406.0 | 406.0 | 410.0 | 394.0 | 440.0 | 301.0 |
| | 90 | 472.0 | 472.0 | 472.0 | 472.0 | 499.0 | 396.0 | 452.0 | 452.0 | 451.0 | 451.0 | 473.0 | 385.0 | 429.0 | 429.0 | 429.0 | 429.0 | 446.0 | 373.0 |
| 14400 | 75 | 409.0 | 366.0 | 445.0 | 280.0 | 487.0 | 181.0 | 388.0 | 355.0 | 421.0 | 269.0 | 460.0 | 171.0 | 366.0 | 343.0 | 395.0 | 257.0 | 430.0 | 160.0 |
| | 80 | 425.0 | 425.0 | 450.0 | 347.0 | 490.0 | 256.0 | 406.0 | 406.0 | 426.0 | 336.0 | 463.0 | 244.0 | 385.0 | 385.0 | 402.0 | 324.0 | 436.0 | 232.0 |
| | 85 | 450.0 | 450.0 | 458.0 | 424.0 | 495.0 | 328.0 | 430.0 | 430.0 | 436.0 | 412.0 | 469.0 | 317.0 | 409.0 | 409.0 | 412.0 | 400.0 | 441.0 | 305.0 |
| | 90 | 476.0 | 476.0 | 476.0 | 476.0 | 501.0 | 403.0 | 455.0 | 455.0 | 455.0 | 455.0 | 475.0 | 391.0 | 433.0 | 433.0 | 432.0 | 432.0 | 448.0 | 379.0 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| 10500 | 75 | 324.0 | 278.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 334.0 | 334.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 12000 | 75 | 332.0 | 298.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | 347.0 | 347.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 13000 | 75 | 337.0 | 312.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 14000 | 75 | 342.0 | 325.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 14400 | 75 | 343.0 | 330.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 80 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 25. 40 Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil—60Hz R-407C Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 12000 | 75 | 474.0 | 371.0 | 524.0 | 289.0 | 582.0 | 209.0 | 449.0 | 357.0 | 497.0 | 276.0 | 551.0 | 196.0 | 423.0 | 342.0 | 468.0 | 260.0 | 518.0 | 182.0 |
| | 80 | 481.0 | 439.0 | 527.0 | 357.0 | 582.0 | 277.0 | 457.0 | 425.0 | 500.0 | 343.0 | 552.0 | 264.0 | 432.0 | 410.0 | 472.0 | 328.0 | 519.0 | 250.0 |
| | 85 | 498.0 | 498.0 | 532.0 | 423.0 | 585.0 | 342.0 | 476.0 | 476.0 | 506.0 | 408.0 | 555.0 | 328.0 | 454.0 | 454.0 | 477.0 | 393.0 | 524.0 | 312.0 |
| | 90 | 526.0 | 526.0 | 540.0 | 489.0 | 589.0 | 406.0 | 504.0 | 504.0 | 514.0 | 475.0 | 560.0 | 391.0 | 480.0 | 480.0 | 487.0 | 460.0 | 528.0 | 376.0 |
| 14000 | 75 | 490.0 | 402.0 | 539.0 | 310.0 | 597.0 | 215.0 | 464.0 | 387.0 | 509.0 | 295.0 | 564.0 | 202.0 | 437.0 | 371.0 | 478.0 | 280.0 | 530.0 | 187.0 |
| | 80 | 500.0 | 480.0 | 544.0 | 384.0 | 597.0 | 294.0 | 476.0 | 466.0 | 515.0 | 370.0 | 565.0 | 280.0 | 449.0 | 449.0 | 485.0 | 354.0 | 531.0 | 264.0 |
| | 85 | 525.0 | 525.0 | 550.0 | 460.0 | 602.0 | 367.0 | 502.0 | 502.0 | 522.0 | 445.0 | 571.0 | 352.0 | 478.0 | 478.0 | 493.0 | 430.0 | 538.0 | 336.0 |
| | 90 | 555.0 | 555.0 | 561.0 | 538.0 | 607.0 | 441.0 | 531.0 | 531.0 | 535.0 | 524.0 | 576.0 | 426.0 | 506.0 | 506.0 | 506.0 | 506.0 | 544.0 | 410.0 |
| 15000 | 75 | 497.0 | 416.0 | 545.0 | 323.0 | 603.0 | 218.0 | 470.0 | 401.0 | 516.0 | 304.0 | 570.0 | 204.0 | 443.0 | 386.0 | 485.0 | 292.0 | 534.0 | 190.0 |
| | 80 | 509.0 | 501.0 | 550.0 | 398.0 | 604.0 | 301.0 | 483.0 | 483.0 | 521.0 | 383.0 | 572.0 | 286.0 | 459.0 | 459.0 | 491.0 | 367.0 | 537.0 | 271.0 |
| | 85 | 537.0 | 537.0 | 558.0 | 479.0 | 609.0 | 378.0 | 513.0 | 513.0 | 530.0 | 464.0 | 577.0 | 363.0 | 488.0 | 488.0 | 500.0 | 448.0 | 543.0 | 348.0 |
| | 90 | 568.0 | 568.0 | 571.0 | 562.0 | 615.0 | 457.0 | 543.0 | 543.0 | 543.0 | 543.0 | 583.0 | 442.0 | 517.0 | 517.0 | 517.0 | 517.0 | 550.0 | 427.0 |
| 16000 | 75 | 503.0 | 431.0 | 551.0 | 331.0 | 608.0 | 221.0 | 476.0 | 415.0 | 521.0 | 316.0 | 574.0 | 207.0 | 449.0 | 400.0 | 490.0 | 296.0 | 538.0 | 192.0 |
| | 80 | 517.0 | 517.0 | 556.0 | 411.0 | 610.0 | 307.0 | 493.0 | 493.0 | 527.0 | 395.0 | 577.0 | 293.0 | 468.0 | 468.0 | 496.0 | 380.0 | 542.0 | 277.0 |
| | 85 | 548.0 | 548.0 | 565.0 | 497.0 | 615.0 | 390.0 | 523.0 | 523.0 | 536.0 | 482.0 | 583.0 | 375.0 | 497.0 | 497.0 | 506.0 | 466.0 | 549.0 | 359.0 |
| | 90 | 580.0 | 580.0 | 579.0 | 579.0 | 621.0 | 474.0 | 554.0 | 554.0 | 554.0 | 554.0 | 589.0 | 459.0 | 527.0 | 527.0 | 527.0 | 527.0 | 556.0 | 443.0 |
| 17600 | 75 | 512.0 | 453.0 | 558.0 | 345.0 | 615.0 | 225.0 | 485.0 | 438.0 | 528.0 | 330.0 | 580.0 | 211.0 | 457.0 | 422.0 | 496.0 | 314.0 | 544.0 | 196.0 |
| | 80 | 531.0 | 531.0 | 565.0 | 431.0 | 618.0 | 318.0 | 506.0 | 506.0 | 535.0 | 415.0 | 584.0 | 303.0 | 480.0 | 480.0 | 504.0 | 399.0 | 549.0 | 287.0 |
| | 85 | 564.0 | 564.0 | 576.0 | 525.0 | 624.0 | 408.0 | 538.0 | 538.0 | 546.0 | 510.0 | 591.0 | 393.0 | 511.0 | 511.0 | 516.0 | 494.0 | 556.0 | 377.0 |
| | 90 | 597.0 | 597.0 | 596.0 | 596.0 | 631.0 | 500.0 | 570.0 | 570.0 | 570.0 | 570.0 | 598.0 | 485.0 | 542.0 | 542.0 | 541.0 | 541.0 | 564.0 | 469.0 |
| 12000 | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| 12000 | 75 | 397.0 | 326.0 | 438.0 | 248.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 80 | 406.0 | 394.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 85 | 429.0 | 429.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 14000 | 75 | 409.0 | 355.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 80 | 424.0 | 424.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 15000 | 75 | 415.0 | 369.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 80 | 433.0 | 433.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 16000 | 75 | 420.0 | 383.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 80 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 17600 | 75 | 427.0 | 405.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 80 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 26. 50 Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil—60Hz R-407C Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 85 | | | | 95 | | | | 105 | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 15000 | 75 | 578.0 | 470.0 | 635.0 | 365.0 | 703.0 | 254.0 | 547.0 | 452.0 | 601.0 | 346.0 | 663.0 | 238.0 | 515.0 | 434.0 | 564.0 | 328.0 | 621.0 | 221.0 |
| | 80 | 591.0 | 561.0 | 642.0 | 450.0 | 705.0 | 345.0 | 561.0 | 544.0 | 608.0 | 432.0 | 665.0 | 327.0 | 531.0 | 526.0 | 572.0 | 414.0 | 625.0 | 308.0 |
| | 85 | 620.0 | 620.0 | 650.0 | 538.0 | 711.0 | 429.0 | 592.0 | 592.0 | 617.0 | 520.0 | 673.0 | 411.0 | 563.0 | 563.0 | 582.0 | 502.0 | 633.0 | 392.0 |
| | 90 | 656.0 | 656.0 | 664.0 | 628.0 | 717.0 | 514.0 | 627.0 | 627.0 | 631.0 | 611.0 | 680.0 | 497.0 | 596.0 | 596.0 | 598.0 | 592.0 | 640.0 | 478.0 |
| 17000 | 75 | 593.0 | 501.0 | 649.0 | 384.0 | 714.0 | 260.0 | 561.0 | 483.0 | 613.0 | 366.0 | 673.0 | 243.0 | 528.0 | 464.0 | 575.0 | 347.0 | 629.0 | 226.0 |
| | 80 | 610.0 | 605.0 | 657.0 | 478.0 | 716.0 | 359.0 | 580.0 | 580.0 | 622.0 | 460.0 | 678.0 | 341.0 | 550.0 | 550.0 | 584.0 | 441.0 | 636.0 | 322.0 |
| | 85 | 646.0 | 646.0 | 667.0 | 578.0 | 725.0 | 454.0 | 616.0 | 616.0 | 633.0 | 560.0 | 686.0 | 436.0 | 585.0 | 585.0 | 597.0 | 541.0 | 645.0 | 417.0 |
| | 90 | 683.0 | 683.0 | 685.0 | 680.0 | 733.0 | 551.0 | 652.0 | 652.0 | 652.0 | 652.0 | 694.0 | 533.0 | 620.0 | 620.0 | 620.0 | 620.0 | 651.0 | 514.0 |
| 18000 | 75 | 599.0 | 517.0 | 655.0 | 390.0 | 719.0 | 263.0 | 567.0 | 499.0 | 618.0 | 372.0 | 677.0 | 246.0 | 534.0 | 480.0 | 580.0 | 356.0 | 632.0 | 228.0 |
| | 80 | 619.0 | 619.0 | 663.0 | 492.0 | 724.0 | 367.0 | 590.0 | 590.0 | 627.0 | 474.0 | 683.0 | 348.0 | 559.0 | 559.0 | 590.0 | 455.0 | 641.0 | 329.0 |
| | 85 | 657.0 | 657.0 | 675.0 | 597.0 | 732.0 | 466.0 | 627.0 | 627.0 | 640.0 | 579.0 | 692.0 | 448.0 | 595.0 | 595.0 | 603.0 | 560.0 | 650.0 | 429.0 |
| | 90 | 695.0 | 695.0 | 695.0 | 695.0 | 740.0 | 569.0 | 664.0 | 664.0 | 664.0 | 664.0 | 701.0 | 550.0 | 630.0 | 630.0 | 630.0 | 630.0 | 660.0 | 531.0 |
| 19000 | 75 | 606.0 | 532.0 | 660.0 | 402.0 | 723.0 | 265.0 | 573.0 | 514.0 | 623.0 | 383.0 | 681.0 | 248.0 | 539.0 | 494.0 | 584.0 | 364.0 | 635.0 | 231.0 |
| | 80 | 629.0 | 629.0 | 669.0 | 506.0 | 729.0 | 374.0 | 599.0 | 599.0 | 633.0 | 487.0 | 688.0 | 353.0 | 567.0 | 567.0 | 595.0 | 468.0 | 645.0 | 336.0 |
| | 85 | 668.0 | 668.0 | 682.0 | 606.0 | 737.0 | 479.0 | 637.0 | 637.0 | 646.0 | 598.0 | 697.0 | 460.0 | 604.0 | 604.0 | 610.0 | 579.0 | 654.0 | 441.0 |
| | 90 | 707.0 | 707.0 | 707.0 | 707.0 | 747.0 | 586.0 | 674.0 | 674.0 | 674.0 | 674.0 | 707.0 | 568.0 | 639.0 | 639.0 | 639.0 | 639.0 | 665.0 | 548.0 |
| 20000 | 75 | 611.0 | 547.0 | 665.0 | 411.0 | 727.0 | 268.0 | 579.0 | 528.0 | 627.0 | 392.0 | 684.0 | 251.0 | 544.0 | 509.0 | 588.0 | 373.0 | 638.0 | 233.0 |
| | 80 | 638.0 | 638.0 | 674.0 | 519.0 | 734.0 | 378.0 | 607.0 | 607.0 | 638.0 | 501.0 | 692.0 | 362.0 | 575.0 | 575.0 | 599.0 | 481.0 | 649.0 | 342.0 |
| | 85 | 678.0 | 678.0 | 689.0 | 635.0 | 742.0 | 491.0 | 646.0 | 646.0 | 653.0 | 617.0 | 702.0 | 472.0 | 612.0 | 612.0 | 616.0 | 597.0 | 659.0 | 453.0 |
| | 90 | 717.0 | 717.0 | 717.0 | 717.0 | 753.0 | 604.0 | 684.0 | 684.0 | 684.0 | 684.0 | 712.0 | 585.0 | 648.0 | 648.0 | 648.0 | 648.0 | 670.0 | 566.0 |
| 15000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 17000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 18000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 19000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 20000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.

Table 27. Electric Heat Air Temperature Rise—60 Hz

| KW Input | Total MBH | CFM | | | | | | | | | | | | |
|----------|-----------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 8000 | 9000 | 10000 | 11000 | 12000 | 13000 | 14000 | 15000 | 16000 | 17000 | 18000 | 19000 | 20000 |
| 36 | 123 | 14.2 | 12.6 | 11.3 | 10.3 | 9.4 | 8.7 | 8.1 | 7.6 | — | — | — | — | — |
| 54 | 184 | 21.2 | 18.9 | 17.0 | 15.4 | 14.2 | 13.1 | 12.1 | 11.3 | 10.6 | 10.0 | 9.4 | 8.9 | 8.5 |
| 72 | 246 | 28.3 | 25.2 | 22.6 | 20.6 | 18.9 | 17.4 | 16.2 | 15.1 | 14.2 | 13.3 | 12.6 | 11.9 | 11.3 |
| 90 | 307 | 35.4 | 31.5 | 28.3 | 25.7 | 23.6 | 21.8 | 20.2 | 18.9 | 17.7 | 16.7 | 15.7 | 14.9 | 14.2 |
| 108 | 369 | — | — | — | — | 28.3 | 26.1 | 24.3 | 22.6 | 21.2 | 20.0 | 18.9 | 17.9 | 17.0 |

Table 28. Available Electric Heat KW Ranges—60 Hz

| Nominal Unit Size Tons | Nominal Voltage | | | |
|------------------------|-----------------|-------|--------|--------|
| | 208 | 240 | 480 | 600 |
| 27½ | 27-41 | 36-54 | 36-90 | 54-90 |
| 30.0 | 27-41 | 36-54 | 36-90 | 54-90 |
| 35.0 | 27-41 | 36-54 | 36-90 | 54-90 |
| 40.0 | 41 | 54 | 54-108 | 54-108 |
| 50.0 | 41 | 54 | 54-108 | 54-108 |

Notes:

1. kW ranges in this table are based on heater operating at 208, 240, 480, and 600 volts.
2. For other than rated voltage, kW = (Applied Voltage/Rate Voltage)² x Rated kW.
3. Electric heaters up to 54 kW are single element heaters, those above 54 kW are dual element heaters.

Table 29. Natural Gas Heating Capacities—60 Hz

| Tons | Unit Model No. | Heat Input MBH ¹ | Heating Output MBH ¹ | Air Temp Rise, °F |
|--------|---|-----------------------------|---------------------------------|-------------------|
| 27½-35 | YCD/YCH330**L YCD/YCH360**L YCD/YCH420**L | 350,000/250,000 | 283,500/202,500 | 10-40 |
| 27½-35 | YCD/YCH330**H YCD/YCH360**H YCD/YCH420**H | 600,000/425,000 | 486,000/344,500 | 25-55 |
| 40-50 | YCD/YCH480**L YCD/YCH600**L | 400,000/300,000 | 324,000/243,000 | 5-35 |
| 40-50 | YCD/YCH480**H YCD/YCH600**H | 800,000/600,000 | 648,000/486,000 | 20-50 |

Notes:

1. Second stage is total heating capacity. Second Stage/First Stage.



Table 30. Supply Fan Performance—27½-35 Ton—60 Hz

| CFM Std. Air | Total Static Pressure (in. wg) ¹ | | | | | | | | | | | | | | | | | |
|--------------|---|-------|------|-------|------|-------|------|------|------|------|------|------|------|------|------|-------|------|-------|
| | 0.25 | | 0.50 | | 0.75 | | 1.00 | | 1.25 | | 1.50 | | 1.75 | | 2.00 | | 2.25 | |
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 8000 | 308 | 1.17 | 372 | 1.62 | 427 | 2.09 | 475 | 2.55 | 525 | 3.11 | 574 | 3.75 | 620 | 4.42 | 661 | 5.09 | 701 | 5.77 |
| 8500 | 317 | 1.33 | 381 | 1.82 | 436 | 2.33 | 480 | 2.77 | 528 | 3.34 | 574 | 3.97 | 620 | 4.66 | 662 | 5.36 | 702 | 6.08 |
| 9000 | 326 | 1.51 | 391 | 2.04 | 443 | 2.55 | 489 | 3.08 | 532 | 3.58 | 577 | 4.22 | 620 | 4.91 | 663 | 5.64 | 703 | 6.40 |
| 9500 | 337 | 1.72 | 401 | 2.28 | 451 | 2.80 | 498 | 3.39 | 537 | 3.87 | 580 | 4.50 | 621 | 5.18 | 663 | 5.93 | 703 | 6.70 |
| 10000 | 349 | 1.96 | 411 | 2.54 | 459 | 3.09 | 506 | 3.69 | 545 | 4.25 | 584 | 4.81 | 624 | 5.48 | 664 | 6.23 | 703 | 7.02 |
| 10500 | 363 | 2.22 | 421 | 2.82 | 468 | 3.40 | 513 | 3.98 | 555 | 4.65 | 589 | 5.17 | 628 | 5.84 | 666 | 6.56 | 703 | 7.34 |
| 11000 | 376 | 2.52 | 430 | 3.11 | 479 | 3.74 | 521 | 4.33 | 563 | 5.03 | 598 | 5.63 | 633 | 6.22 | 670 | 6.95 | 706 | 7.73 |
| 11500 | 390 | 2.83 | 438 | 3.41 | 489 | 4.10 | 530 | 4.72 | 570 | 5.38 | 607 | 6.11 | 639 | 6.68 | 674 | 7.37 | 709 | 8.14 |
| 12000 | 404 | 3.18 | 447 | 3.74 | 499 | 4.48 | 538 | 5.13 | 578 | 5.79 | 615 | 6.56 | 648 | 7.22 | 679 | 7.83 | 713 | 8.59 |
| 12500 | 417 | 3.55 | 457 | 4.10 | 509 | 4.88 | 549 | 5.58 | 586 | 6.24 | 623 | 7.00 | 657 | 7.78 | 687 | 8.42 | 718 | 9.10 |
| 13000 | 431 | 3.95 | 468 | 4.50 | 518 | 5.30 | 559 | 6.04 | 594 | 6.73 | 630 | 7.45 | 665 | 8.30 | 696 | 9.04 | 724 | 9.69 |
| 13500 | 445 | 4.39 | 479 | 4.92 | 526 | 5.73 | 569 | 6.53 | 604 | 7.26 | 638 | 7.98 | 673 | 8.82 | 705 | 9.68 | 733 | 10.38 |
| 14000 | 459 | 4.85 | 490 | 5.39 | 535 | 6.19 | 579 | 7.04 | 614 | 7.81 | 647 | 8.56 | 680 | 9.35 | 713 | 10.26 | 742 | 11.09 |
| 14500 | 473 | 5.35 | 503 | 5.90 | 544 | 6.68 | 588 | 7.59 | 624 | 8.40 | 656 | 9.18 | 688 | 9.96 | 720 | 10.86 | 751 | 11.78 |
| CFM Std. Air | Total Static Pressure (in. wg) ¹ | | | | | | | | | | | | | | | | | |
| | 2.50 | | 2.75 | | 3.00 | | | | | | | | | | | | | |
| | RPM | BHP | RPM | BHP | RPM | BHP | | | | | | | | | | | | |
| 8000 | 738 | 6.48 | 773 | 7.18 | 805 | 7.88 | | | | | | | | | | | | |
| 8500 | 739 | 6.82 | 774 | 7.54 | 807 | 8.28 | | | | | | | | | | | | |
| 9000 | 740 | 7.16 | 775 | 7.92 | 809 | 8.70 | | | | | | | | | | | | |
| 9500 | 740 | 7.48 | 776 | 8.30 | 810 | 9.12 | | | | | | | | | | | | |
| 10000 | 742 | 7.86 | 777 | 8.68 | 812 | 9.54 | | | | | | | | | | | | |
| 10500 | 742 | 8.20 | 777 | 9.05 | 812 | 9.94 | | | | | | | | | | | | |
| 11000 | 741 | 8.56 | 777 | 9.43 | 812 | 10.35 | | | | | | | | | | | | |
| 11500 | 743 | 8.95 | 777 | 9.83 | 812 | 10.78 | | | | | | | | | | | | |
| 12000 | 747 | 9.43 | 780 | 10.30 | 812 | 11.21 | | | | | | | | | | | | |
| 12500 | 750 | 9.90 | 783 | 10.79 | 814 | 11.70 | | | | | | | | | | | | |
| 13000 | 755 | 10.45 | 786 | 11.30 | 817 | 12.22 | | | | | | | | | | | | |
| 13500 | 760 | 11.04 | 790 | 11.88 | 821 | 12.81 | | | | | | | | | | | | |
| 14000 | 768 | 11.79 | 795 | 12.52 | 824 | 13.39 | | | | | | | | | | | | |
| 14500 | 778 | 12.59 | 803 | 13.30 | 829 | 14.10 | | | | | | | | | | | | |

Notes:

1. Supply fan performance table includes internal resistance of rooftop. For total static pressure determination, system external static must be added to appropriate component static pressure drops, (evaporator coil, filters, optional economizer, optional heating system, optional roof curb).
2. The pressure drop from the supply fan to the space cannot exceed 2.25".
3. Maximum air flow for 27½ ton — 12,100 cfm, 30 ton — 13,200 cfm, 35 ton — 14,400 cfm.
4. Maximum motor horsepower for 27½ ton — 10 hp, 30 ton — 10 hp, 35 ton — 15 hp.

Table 31. Supply Fan Performance—40 and 50 Ton—60 Hz

| CFM Std. Air | Total Static Pressure (in. wg) ¹ | | | | | | | | | | | | | | | | | |
|-----------------|---|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| | 0.25 | | 0.50 | | 0.75 | | 1.00 | | 1.25 | | 1.50 | | 1.75 | | 2.00 | | 2.25 | |
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 12000 | 307 | 2.29 | 353 | 2.86 | 394 | 3.45 | 436 | 4.11 | 471 | 4.75 | 509 | 5.43 | 543 | 6.14 | 575 | 6.89 | 606 | 7.63 |
| 13000 | 324 | 2.79 | 368 | 3.40 | 407 | 4.06 | 446 | 4.73 | 482 | 5.43 | 515 | 6.13 | 550 | 6.87 | 582 | 7.65 | 612 | 8.44 |
| 14000 | 341 | 3.35 | 384 | 4.03 | 422 | 4.74 | 457 | 5.42 | 494 | 6.19 | 525 | 6.93 | 556 | 7.69 | 589 | 8.49 | 619 | 9.32 |
| 15000 | 359 | 3.99 | 401 | 4.77 | 437 | 5.48 | 471 | 6.24 | 504 | 6.99 | 537 | 7.82 | 566 | 8.62 | 595 | 9.42 | 625 | 10.27 |
| 16000 | 376 | 4.72 | 418 | 5.60 | 452 | 6.32 | 485 | 7.14 | 515 | 7.92 | 548 | 8.77 | 578 | 9.65 | 604 | 10.49 | 632 | 11.36 |
| 17000 | 394 | 5.53 | 434 | 6.50 | 468 | 7.26 | 500 | 8.12 | 529 | 8.97 | 558 | 9.79 | 589 | 10.73 | 616 | 11.65 | 641 | 12.54 |
| 18000 | 413 | 6.42 | 451 | 7.48 | 485 | 8.34 | 515 | 9.18 | 544 | 10.11 | 571 | 10.99 | 598 | 11.89 | 628 | 12.88 | 654 | 13.87 |
| 19000 | 431 | 7.42 | 469 | 8.55 | 501 | 9.53 | 530 | 10.37 | 559 | 11.34 | 585 | 12.29 | 611 | 13.22 | 637 | 14.17 | 665 | 15.24 |
| 20000 | 449 | 8.52 | 486 | 9.72 | 518 | 10.83 | 547 | 11.69 | 573 | 12.66 | 600 | 13.69 | 625 | 14.70 | 648 | 15.64 | 675 | 16.71 |
| CFM Std. Air | Total Static Pressure (in. wg) ¹ | | | | | | | | | | | | | | | | | |
| | 2.50 | | 2.75 | | 3.00 | | 3.25 | | 3.50 | | | | | | | | | |
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | | | | | | | | |
| 12000 | 640 | 8.45 | 670 | 9.25 | 700 | 10.03 | 727 | 10.81 | 755 | 11.61 | | | | | | | | |
| 13000 | 640 | 9.23 | 671 | 10.12 | 701 | 10.98 | 729 | 11.85 | 756 | 12.69 | | | | | | | | |
| 14000 | 647 | 10.16 | 674 | 11.04 | 700 | 11.89 | 729 | 12.85 | 757 | 13.79 | | | | | | | | |
| 15000 | 653 | 11.14 | 680 | 12.05 | 706 | 12.97 | 731 | 13.89 | 757 | 14.86 | | | | | | | | |
| 16000 | 659 | 12.23 | 687 | 13.16 | 713 | 14.14 | 738 | 15.10 | 762 | 16.10 | | | | | | | | |
| 17000 | 666 | 13.45 | 694 | 14.42 | 719 | 15.37 | 744 | 16.39 | 768 | 17.39 | | | | | | | | |
| 18000 | 677 | 14.81 | 700 | 15.76 | 726 | 16.78 | 751 | 17.77 | 774 | 18.81 | | | | | | | | |
| 19000 | 690 | 16.29 | 711 | 17.27 | 734 | 18.29 | 758 | 19.34 | 782 | 20.41 | | | | | | | | |
| 20000 | 701 | 17.83 | 724 | 18.91 | 745 | 19.94 | 765 | 20.99 | 788 | 22.12 | | | | | | | | |

Notes:

1. Supply fan performance table includes internal resistance of rooftop. For total static pressure determination, system external static must be added to appropriate component static pressure drops, (evaporator coil, filters, optional economizer, optional heating system, optional roof curb).
2. The pressure drop from the supply fan to the space cannot exceed 2.50".
3. Maximum air flow for 40 ton — 17,600 cfm, 50 ton — 20,000 cfm.
4. Maximum motor horsepower for 40 ton — 15 hp, 50 ton — 20 hp.

Figure 6. Supply Fan Performance—27½-35 Ton—60 Hz

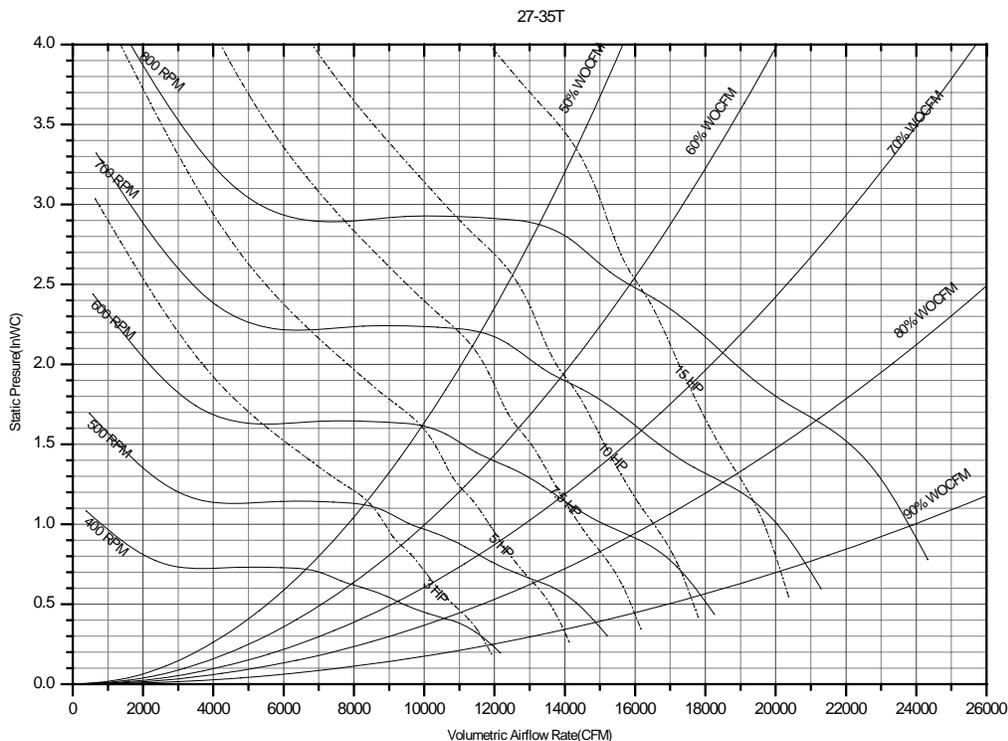


Figure 7. Supply Fan Performance — 40 and 50 Ton—60 Hz

Supply Fan Performance 40 and 50 Ton

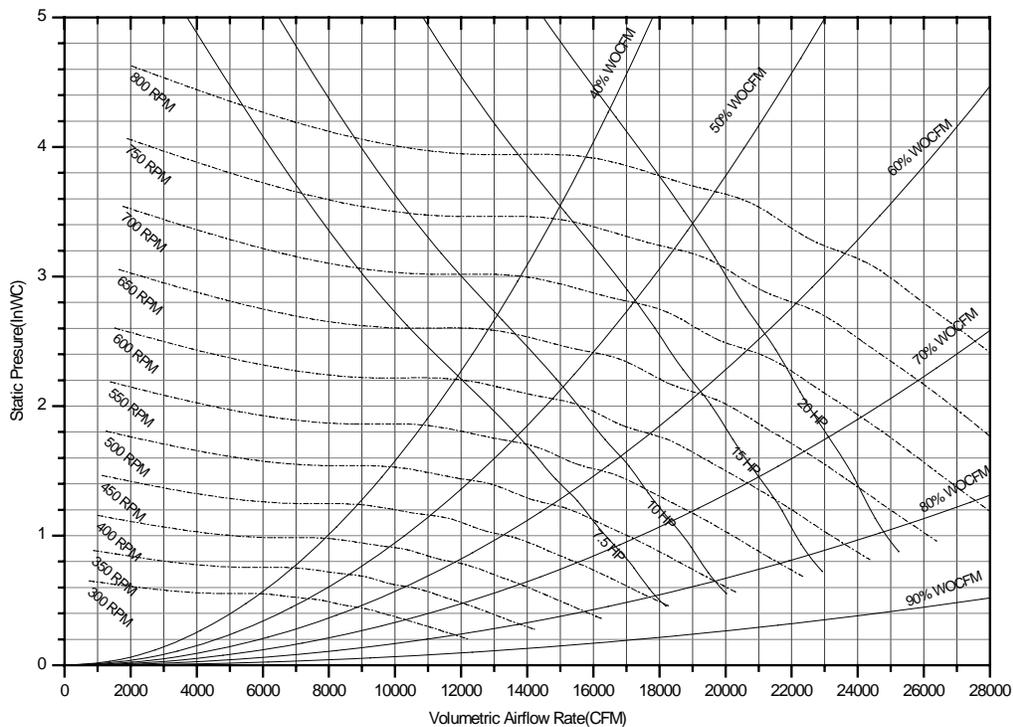


Table 32. Component Static Pressure Drops (in. W.G.)¹—60 Hz

| Nominal Tons | CFM Std Air | Heating System | | | | | | Filters ² | | | Inlet Guide Vanes | Economizer |
|--------------|-------------|----------------|------|----------------------------|-----------|---------|------|----------------------|-------------------|------|-------------------|------------|
| | | Gas Heat | | Electric Heat ³ | | ID Coil | | Throw-away | High Eff. Filters | | | |
| | | Low | High | 1 Element | 2 Element | Dry | Wet | | 2" | 2" | | |
| 27½ | 8000 | 0.08 | 0.06 | 0.05 | 0.06 | 0.09 | 0.11 | 0.08 | 0.12 | 0.11 | 0.05 | 0.04 |
| | 9000 | 0.1 | 0.08 | 0.07 | 0.07 | 0.11 | 0.14 | 0.09 | 0.14 | 0.13 | 0.07 | 0.04 |
| | 10000 | 0.13 | 0.1 | 0.08 | 0.09 | 0.13 | 0.17 | 0.1 | 0.16 | 0.15 | 0.08 | 0.05 |
| | 11000 | 0.15 | 0.12 | 0.1 | 0.11 | 0.16 | 0.19 | 0.12 | 0.2 | 0.17 | 0.1 | 0.06 |
| | 12000 | 0.18 | 0.14 | 0.12 | 0.13 | 0.18 | 0.22 | 0.13 | 0.21 | 0.2 | 0.12 | 0.07 |
| 30 | 9000 | 0.1 | 0.08 | 0.07 | 0.07 | 0.11 | 0.14 | 0.09 | 0.14 | 0.13 | 0.07 | 0.04 |
| | 10000 | 0.13 | 0.1 | 0.08 | 0.09 | 0.13 | 0.17 | 0.1 | 0.16 | 0.15 | 0.08 | 0.05 |
| | 11000 | 0.15 | 0.12 | 0.1 | 0.11 | 0.16 | 0.19 | 0.12 | 0.2 | 0.17 | 0.1 | 0.06 |
| | 12000 | 0.18 | 0.14 | 0.12 | 0.13 | 0.18 | 0.22 | 0.14 | 0.23 | 0.21 | 0.12 | 0.07 |
| | 13000 | 0.21 | 0.16 | 0.14 | 0.15 | 0.2 | 0.25 | 0.15 | 0.26 | 0.23 | 0.14 | 0.09 |
| 35 | 10500 | 0.14 | 0.11 | 0.09 | 0.1 | 0.22 | 0.27 | 0.11 | 0.18 | 0.16 | 0.09 | 0.06 |
| | 11500 | 0.17 | 0.13 | 0.11 | 0.12 | 0.25 | 0.31 | 0.13 | 0.21 | 0.19 | 0.11 | 0.07 |
| | 12500 | 0.2 | 0.15 | 0.13 | 0.14 | 0.29 | 0.35 | 0.14 | 0.24 | 0.21 | 0.13 | 0.08 |
| | 13500 | 0.23 | 0.18 | 0.15 | 0.16 | 0.32 | 0.4 | 0.15 | 0.26 | 0.23 | 0.15 | 0.1 |
| | 14500 | 0.26 | 0.2 | 0.18 | 0.19 | 0.36 | 0.45 | 0.17 | 0.3 | 0.27 | 0.18 | 0.11 |
| 40 | 12000 | 0.01 | 0.03 | 0.08 | 0.13 | 0.2 | 0.25 | 0.1 | 0.19 | 0.17 | 0.04 | 0.07 |
| | 13000 | 0.01 | 0.04 | 0.1 | 0.15 | 0.23 | 0.29 | 0.12 | 0.23 | 0.2 | 0.05 | 0.08 |
| | 14000 | 0.02 | 0.05 | 0.11 | 0.18 | 0.26 | 0.33 | 0.13 | 0.25 | 0.22 | 0.05 | 0.09 |
| | 15000 | 0.02 | 0.05 | 0.13 | 0.2 | 0.29 | 0.36 | 0.14 | 0.28 | 0.24 | 0.06 | 0.1 |
| | 16000 | 0.02 | 0.06 | 0.15 | 0.23 | 0.32 | 0.4 | 0.15 | 0.31 | 0.27 | 0.07 | 0.11 |
| | 17000 | 0.02 | 0.07 | 0.17 | 0.26 | 0.36 | 0.44 | 0.17 | 0.35 | 0.3 | 0.08 | 0.12 |
| 50 | 15000 | 0.02 | 0.05 | 0.13 | 0.2 | 0.39 | 0.48 | 0.14 | 0.28 | 0.24 | 0.06 | 0.1 |
| | 16000 | 0.02 | 0.06 | 0.15 | 0.23 | 0.43 | 0.54 | 0.15 | 0.31 | 0.27 | 0.07 | 0.11 |
| | 17000 | 0.02 | 0.07 | 0.17 | 0.26 | 0.48 | 0.59 | 0.17 | 0.35 | 0.3 | 0.08 | 0.12 |
| | 18000 | 0.03 | 0.08 | 0.19 | 0.29 | 0.52 | 0.65 | 0.18 | 0.38 | 0.33 | 0.09 | 0.14 |
| | 19000 | 0.03 | 0.08 | 0.21 | 0.32 | 0.57 | 0.74 | 0.19 | 0.42 | 0.35 | 0.1 | 0.16 |
| | 20000 | 0.03 | 0.09 | 0.23 | 0.36 | 0.62 | 0.77 | 0.2 | 0.45 | 0.38 | 0.11 | 0.18 |

Notes:

1. Static pressure drops of accessory components must be added to external static pressure to enter fan selection tables.
2. Throwaway filter option limited to 300 ft/min face velocity.
3. Electric Heaters 36-54 KW contain 1 element; 72-108 KW 2 elements.

Table 33. Supply Air Fan Drive Selections—60 Hz

| Nominal Tons | 7.5 HP | | 10 HP | | 15 HP | | 20 HP | |
|--------------|--------|-----------|------------------|-----------|------------------|-----------|-------|-----------|
| | RPM | Drive No. | RPM | Drive No. | RPM | Drive No. | RPM | Drive No. |
| 27½ | 550 | A | | | | | | |
| | 600 | B | | | | | | |
| | 650 | C | | | | | | |
| | 700 | | 700 | D | | | | |
| | 750 | | 750 ¹ | E | | | | |
| 30 | 550 | A | | | | | | |
| | 600 | B | | | | | | |
| | 650 | C | | | | | | |
| | 700 | | 700 | D | | | | |
| | 750 | | 750 | E | | | | |
| 35 | 600 | B | | | | | | |
| | 650 | | 650 | C | | | | |
| | 700 | | 700 | D | | | | |
| | 790 | | | | 790 ² | F | | |
| | 800 | | | | 800 ¹ | G | | |
| 40 | 500 | | 500 | H | | | | |
| | 525 | | 525 | J | | | | |
| | 575 | | 575 | K | | | | |
| | 625 | | | | 625 | L | | |
| | 675 | | | | 675 | M | | |
| | 725 | | | | 725 | N | | |
| 50 | 525 | | 525 | J | | | | |
| | 575 | | 575 | K | | | | |
| | 625 | | | | 625 | L | | |
| | 675 | | | | 675 | M | | |
| | 725 | | | | | | 725 | N |

Notes:

1. For YC gas/electrics only.
2. For TC and TE Cooling only and with electric heat units only.

Table 34. Power Exhaust Fan Performance—27.5-35 Ton—60 Hz

| | Power Exhaust Selection | | | |
|-----------------------------|---------------------------------|------|------|-------|
| | 50% | | 100% | |
| | Damper Blade Open Distance (in) | | | |
| | 1.5 | 4.0 | 1.5 | 4.0 |
| Return Duct Static (in. wc) | CFM | | | |
| 0.0 | 3812 | 6866 | 7624 | 13742 |
| 0.1 | 3497 | 5296 | 6995 | 10591 |
| 0.2 | 3190 | 4458 | 6325 | 9000 |
| 0.3 | 2884 | 3812 | 5768 | 7635 |
| 0.4 | 2621 | 3359 | 5241 | 6719 |
| 0.5 | 2342 | 2885 | 4683 | 5771 |

Table 35. Power Exhaust Fan Performance—40-50 Ton—60 Hz

| | Power Exhaust Selection | | | |
|-----------------------------|---------------------------------|------|------|-------|
| | 50% | | 100% | |
| | Damper Blade Open Distance (in) | | | |
| | 1.5 | 4.0 | 1.5 | 4.0 |
| Return Duct Static (in. wc) | CFM | | | |
| 0.0 | 4854 | 8035 | 9708 | 16069 |
| 0.1 | 4575 | 7410 | 9151 | 14820 |
| 0.2 | 4262 | 6450 | 8552 | 13496 |
| 0.3 | 4011 | 6027 | 8021 | 12054 |
| 0.4 | 3718 | 5526 | 7436 | 11051 |
| 0.5 | 3467 | 5186 | 6933 | 10373 |



Performance Data (50 Hz)

Table 36. 22.9 Ton Gross Cooling Capacities (MBh)—Standard Efficiency 2-Row Condenser Coil (I-P)—50 Hz R-22 Refrigerant

| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-----------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | | 115 | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 6900 | 75 | 247 | 195 | 274 | 158 | 304 | 110 | 235 | 188 | 262 | 152 | 290 | 104 | 224 | 182 | 249 | 146 | 276 | 98 | 211 | 175 | 235 | 139 | 261 | 91 |
| | 80 | 249 | 229 | 275 | 187 | 304 | 145 | 238 | 223 | 263 | 181 | 291 | 139 | 227 | 216 | 250 | 174 | 277 | 133 | 214 | 209 | 236 | 167 | 262 | 126 |
| | 85 | 256 | 256 | 276 | 221 | 305 | 179 | 247 | 247 | 264 | 215 | 292 | 173 | 236 | 236 | 251 | 208 | 278 | 167 | 225 | 225 | 237 | 201 | 263 | 160 |
| | 90 | 270 | 270 | 279 | 255 | 306 | 212 | 260 | 260 | 267 | 249 | 293 | 206 | 250 | 250 | 254 | 242 | 279 | 199 | 239 | 239 | 241 | 235 | 264 | 193 |
| 7500 | 75 | 251 | 203 | 279 | 164 | 309 | 112 | 240 | 197 | 266 | 158 | 295 | 106 | 228 | 190 | 253 | 152 | 280 | 100 | 215 | 183 | 239 | 145 | 265 | 93 |
| | 80 | 254 | 241 | 280 | 195 | 310 | 150 | 243 | 235 | 267 | 189 | 296 | 144 | 232 | 228 | 254 | 182 | 281 | 137 | 218 | 218 | 240 | 175 | 266 | 131 |
| | 85 | 264 | 264 | 281 | 231 | 310 | 186 | 254 | 254 | 269 | 225 | 297 | 180 | 243 | 243 | 256 | 218 | 282 | 173 | 232 | 232 | 242 | 211 | 267 | 166 |
| | 90 | 279 | 279 | 284 | 269 | 311 | 222 | 268 | 268 | 272 | 262 | 298 | 216 | 257 | 257 | 260 | 255 | 283 | 209 | 246 | 246 | 246 | 246 | 268 | 202 |
| 8000 | 75 | 255 | 210 | 282 | 168 | 313 | 113 | 243 | 204 | 269 | 162 | 298 | 107 | 231 | 197 | 256 | 155 | 283 | 101 | 218 | 190 | 241 | 149 | 267 | 95 |
| | 80 | 259 | 250 | 283 | 201 | 313 | 153 | 247 | 244 | 271 | 195 | 299 | 147 | 235 | 235 | 257 | 188 | 284 | 141 | 223 | 223 | 243 | 181 | 269 | 134 |
| | 85 | 270 | 270 | 285 | 240 | 314 | 192 | 260 | 260 | 272 | 233 | 300 | 186 | 249 | 249 | 259 | 227 | 285 | 179 | 237 | 237 | 245 | 219 | 270 | 172 |
| | 90 | 285 | 285 | 289 | 279 | 315 | 230 | 274 | 274 | 277 | 273 | 301 | 223 | 263 | 263 | 263 | 263 | 287 | 217 | 251 | 251 | 251 | 251 | 271 | 210 |
| 9000 | 75 | 261 | 224 | 288 | 171 | 319 | 116 | 249 | 217 | 275 | 165 | 304 | 110 | 236 | 210 | 261 | 159 | 289 | 104 | 223 | 203 | 246 | 152 | 272 | 97 |
| | 80 | 265 | 265 | 289 | 213 | 320 | 161 | 255 | 255 | 276 | 207 | 305 | 154 | 243 | 243 | 262 | 200 | 290 | 148 | 231 | 231 | 247 | 193 | 274 | 141 |
| | 85 | 281 | 281 | 292 | 257 | 321 | 203 | 270 | 270 | 279 | 250 | 306 | 198 | 258 | 258 | 265 | 243 | 291 | 192 | 246 | 246 | 251 | 236 | 275 | 182 |
| | 90 | 297 | 297 | 296 | 296 | 322 | 245 | 285 | 285 | 285 | 285 | 308 | 238 | 274 | 274 | 273 | 273 | 293 | 232 | 261 | 261 | 261 | 261 | 277 | 225 |
| 10000 | 75 | 266 | 236 | 293 | 179 | 324 | 119 | 254 | 230 | 280 | 173 | 309 | 113 | 241 | 223 | 265 | 166 | 293 | 106 | 227 | 215 | 250 | 159 | 276 | 99 |
| | 80 | 274 | 274 | 295 | 225 | 325 | 167 | 263 | 263 | 281 | 218 | 310 | 161 | 251 | 251 | 267 | 211 | 294 | 155 | 239 | 239 | 252 | 204 | 278 | 148 |
| | 85 | 290 | 290 | 298 | 273 | 326 | 216 | 279 | 279 | 285 | 266 | 311 | 207 | 267 | 267 | 271 | 259 | 296 | 200 | 254 | 254 | 256 | 252 | 279 | 193 |
| | 90 | 307 | 307 | 306 | 306 | 328 | 260 | 295 | 295 | 295 | 295 | 313 | 253 | 282 | 282 | 282 | 282 | 298 | 246 | 269 | 269 | 269 | 269 | 281 | 239 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 37. 82 kW (22.9 Tons) Gross Cooling Capacities—Standard Efficiency 2-Row Condenser Coil (SI)—50 Hz R-22 Refrigerant

| L/s | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 29.4 | | | | 35.0 | | | | 40.6 | | | | 46.1 | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 | | | | | | | | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | | | |
| 3260 | 23.9 | 72.4 | 57.1 | 80.3 | 46.3 | 89.1 | 32.2 | 68.9 | 55.1 | 76.8 | 44.5 | 85.0 | 30.5 | 65.6 | 53.3 | 73.0 | 42.8 | 80.9 | 28.6 | 61.8 | 51.3 | 68.9 | 40.7 | 76.5 | 26.8 |
| | 26.7 | 73.0 | 67.1 | 80.6 | 54.8 | 89.1 | 42.5 | 69.8 | 65.4 | 77.1 | 53.0 | 85.3 | 40.7 | 66.5 | 63.3 | 73.3 | 51.0 | 81.2 | 39.0 | 62.7 | 61.3 | 69.2 | 48.9 | 76.8 | 36.9 |
| | 29.4 | 75.0 | 75.0 | 80.9 | 64.8 | 89.4 | 52.5 | 72.4 | 72.4 | 77.4 | 63.0 | 85.6 | 50.7 | 69.2 | 69.2 | 73.6 | 61.0 | 81.5 | 48.9 | 65.9 | 65.9 | 69.5 | 58.9 | 77.1 | 46.9 |
| | 32.2 | 79.1 | 79.1 | 81.8 | 74.7 | 89.7 | 62.1 | 76.2 | 76.2 | 78.2 | 73.0 | 85.9 | 60.4 | 73.3 | 73.3 | 74.4 | 70.9 | 81.8 | 58.3 | 70.0 | 70.0 | 70.6 | 68.9 | 77.4 | 56.6 |
| 3540 | 23.9 | 73.6 | 59.5 | 81.8 | 48.1 | 90.6 | 32.8 | 70.3 | 57.7 | 78.0 | 46.3 | 86.5 | 31.1 | 66.8 | 55.7 | 74.1 | 44.5 | 82.1 | 29.2 | 63.0 | 53.6 | 70.0 | 42.5 | 77.7 | 27.3 |
| | 26.7 | 74.4 | 70.6 | 82.1 | 57.1 | 90.9 | 44.0 | 71.2 | 68.9 | 78.2 | 55.4 | 86.7 | 42.2 | 68.0 | 66.8 | 74.4 | 53.3 | 82.4 | 40.2 | 63.9 | 63.9 | 70.3 | 51.3 | 78.0 | 38.4 |
| | 29.4 | 77.4 | 77.4 | 82.4 | 67.7 | 90.9 | 54.5 | 74.4 | 74.4 | 78.8 | 65.9 | 87.0 | 52.8 | 71.2 | 71.2 | 75.0 | 63.9 | 82.6 | 50.7 | 68.0 | 68.0 | 70.9 | 61.8 | 78.2 | 48.6 |
| | 32.2 | 81.8 | 81.8 | 83.2 | 78.8 | 91.1 | 65.1 | 78.5 | 78.5 | 79.7 | 76.8 | 87.3 | 63.3 | 75.3 | 75.3 | 76.2 | 74.7 | 82.9 | 61.3 | 72.1 | 72.1 | 72.1 | 72.1 | 78.5 | 59.2 |
| 3780 | 23.9 | 74.7 | 61.5 | 82.6 | 49.2 | 91.7 | 33.1 | 71.2 | 59.8 | 78.8 | 47.5 | 87.3 | 31.4 | 67.7 | 57.7 | 75.0 | 45.4 | 82.9 | 29.6 | 63.9 | 55.7 | 70.6 | 43.7 | 78.2 | 27.7 |
| | 26.7 | 75.9 | 73.3 | 82.9 | 58.9 | 91.7 | 44.8 | 72.4 | 71.5 | 79.4 | 57.1 | 87.6 | 43.1 | 68.9 | 68.9 | 75.3 | 55.1 | 83.2 | 41.3 | 65.4 | 65.4 | 71.2 | 53.0 | 78.8 | 39.3 |
| | 29.4 | 79.1 | 79.1 | 83.5 | 70.3 | 92.0 | 56.3 | 76.2 | 76.2 | 79.7 | 68.3 | 87.9 | 54.5 | 73.0 | 73.0 | 75.9 | 66.5 | 83.5 | 52.5 | 69.5 | 69.5 | 71.8 | 64.2 | 79.1 | 50.4 |
| | 32.2 | 83.5 | 83.5 | 84.7 | 81.8 | 92.3 | 67.4 | 80.3 | 80.3 | 81.2 | 80.0 | 88.2 | 65.4 | 77.1 | 77.1 | 77.1 | 77.1 | 84.1 | 63.6 | 73.6 | 73.6 | 73.6 | 73.6 | 79.4 | 61.5 |
| 4250 | 23.9 | 76.5 | 65.6 | 84.4 | 50.1 | 93.5 | 34.0 | 73.0 | 63.6 | 80.6 | 48.4 | 89.1 | 32.2 | 69.2 | 61.5 | 76.5 | 46.6 | 84.7 | 30.5 | 65.4 | 59.5 | 72.1 | 44.5 | 79.7 | 28.5 |
| | 26.7 | 77.7 | 77.7 | 84.7 | 62.4 | 93.8 | 47.2 | 74.7 | 74.7 | 80.9 | 60.7 | 89.4 | 45.1 | 71.2 | 71.2 | 76.8 | 58.6 | 85.0 | 43.4 | 67.7 | 67.7 | 72.4 | 56.6 | 80.3 | 41.3 |
| | 29.4 | 82.4 | 82.4 | 85.6 | 75.3 | 94.1 | 59.5 | 79.1 | 79.1 | 81.8 | 73.3 | 89.7 | 58.0 | 75.6 | 75.6 | 77.7 | 71.2 | 85.3 | 56.3 | 72.1 | 72.1 | 73.6 | 69.2 | 80.6 | 53.3 |
| | 32.2 | 87.0 | 87.0 | 86.7 | 86.7 | 94.4 | 71.8 | 83.5 | 83.5 | 83.5 | 83.5 | 90.3 | 69.8 | 80.3 | 80.3 | 80.3 | 80.3 | 85.9 | 68.0 | 76.5 | 76.5 | 76.5 | 76.5 | 81.2 | 65.9 |
| 4720 | 23.9 | 78.0 | 69.2 | 85.9 | 52.5 | 95.0 | 34.9 | 74.4 | 67.4 | 82.1 | 50.7 | 90.6 | 33.1 | 70.6 | 65.4 | 77.7 | 48.6 | 85.9 | 31.1 | 66.5 | 63.0 | 73.3 | 46.6 | 80.9 | 29.1 |
| | 26.7 | 80.3 | 80.3 | 86.5 | 65.9 | 95.2 | 48.9 | 77.1 | 77.1 | 82.4 | 63.9 | 90.9 | 47.2 | 73.6 | 73.6 | 78.2 | 61.8 | 86.2 | 45.4 | 70.0 | 70.0 | 73.9 | 59.8 | 81.5 | 43.4 |
| | 29.4 | 85.0 | 85.0 | 87.3 | 80.0 | 95.5 | 63.3 | 81.8 | 81.8 | 83.5 | 78.0 | 91.1 | 60.7 | 78.2 | 78.2 | 79.4 | 75.9 | 86.7 | 58.6 | 74.4 | 74.4 | 75.0 | 73.9 | 81.8 | 56.6 |
| | 32.2 | 90.0 | 90.0 | 89.7 | 89.7 | 96.1 | 76.2 | 86.5 | 86.5 | 86.5 | 86.5 | 91.7 | 74.1 | 82.6 | 82.6 | 82.6 | 82.6 | 87.3 | 72.1 | 78.8 | 78.8 | 78.8 | 78.8 | 82.4 | 70.0 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 38. 25.4 Ton Gross Cooling Capacities (MBh)—Standard Efficiency 2-Row Condenser Coil (I-P)—50 Hz R-22 Refrigerant

| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-----------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | 95 | | | | 105 | | | | 115 | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | | | | | | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | |
| 7500 | 75 | 270 | 212 | 300 | 172 | 332 | 120 | 258 | 205 | 286 | 166 | 318 | 114 | 245 | 198 | 272 | 159 | 302 | 107 | 231 | 190 | 257 | 152 | 285 | 100 |
| | 80 | 273 | 249 | 301 | 204 | 333 | 158 | 261 | 243 | 287 | 197 | 318 | 152 | 248 | 235 | 273 | 190 | 303 | 145 | 235 | 228 | 258 | 183 | 286 | 138 |
| | 85 | 280 | 280 | 302 | 240 | 334 | 195 | 269 | 269 | 289 | 233 | 319 | 189 | 258 | 258 | 275 | 226 | 304 | 182 | 246 | 246 | 260 | 218 | 287 | 174 |
| | 90 | 295 | 295 | 304 | 277 | 335 | 231 | 284 | 284 | 292 | 270 | 320 | 224 | 272 | 272 | 278 | 263 | 305 | 217 | 260 | 260 | 264 | 255 | 288 | 209 |
| 8000 | 75 | 274 | 219 | 304 | 177 | 336 | 122 | 262 | 212 | 290 | 171 | 321 | 115 | 248 | 205 | 276 | 164 | 305 | 109 | 234 | 197 | 260 | 157 | 289 | 102 |
| | 80 | 277 | 259 | 305 | 210 | 337 | 162 | 265 | 252 | 291 | 203 | 322 | 155 | 252 | 245 | 277 | 196 | 306 | 149 | 239 | 237 | 261 | 189 | 289 | 141 |
| | 85 | 286 | 286 | 306 | 249 | 338 | 201 | 275 | 275 | 293 | 242 | 323 | 194 | 264 | 264 | 278 | 234 | 307 | 187 | 251 | 251 | 263 | 227 | 290 | 179 |
| | 90 | 302 | 302 | 309 | 288 | 339 | 239 | 291 | 291 | 296 | 281 | 324 | 232 | 279 | 279 | 282 | 274 | 308 | 224 | 266 | 266 | 268 | 266 | 292 | 217 |
| 9000 | 75 | 281 | 233 | 311 | 187 | 344 | 125 | 268 | 226 | 297 | 181 | 328 | 118 | 254 | 218 | 281 | 174 | 311 | 112 | 240 | 210 | 266 | 167 | 294 | 105 |
| | 80 | 285 | 277 | 312 | 223 | 344 | 169 | 273 | 270 | 298 | 216 | 329 | 163 | 259 | 259 | 283 | 208 | 312 | 156 | 246 | 246 | 267 | 200 | 295 | 148 |
| | 85 | 298 | 298 | 314 | 265 | 345 | 212 | 287 | 287 | 300 | 258 | 330 | 205 | 274 | 274 | 285 | 251 | 314 | 198 | 261 | 261 | 270 | 243 | 296 | 190 |
| | 90 | 314 | 314 | 318 | 309 | 347 | 254 | 303 | 303 | 305 | 302 | 331 | 247 | 290 | 290 | 290 | 290 | 315 | 240 | 277 | 277 | 277 | 277 | 298 | 232 |
| 10000 | 75 | 287 | 246 | 316 | 197 | 349 | 128 | 274 | 238 | 302 | 189 | 333 | 121 | 260 | 231 | 286 | 181 | 316 | 114 | 245 | 223 | 270 | 174 | 298 | 107 |
| | 80 | 291 | 291 | 318 | 234 | 350 | 176 | 280 | 280 | 303 | 227 | 334 | 169 | 267 | 267 | 288 | 220 | 318 | 162 | 254 | 254 | 272 | 212 | 300 | 155 |
| | 85 | 308 | 308 | 320 | 281 | 351 | 223 | 296 | 296 | 306 | 274 | 336 | 216 | 283 | 283 | 291 | 267 | 319 | 208 | 270 | 270 | 275 | 259 | 301 | 200 |
| | 90 | 325 | 325 | 325 | 325 | 353 | 269 | 313 | 313 | 313 | 313 | 337 | 262 | 300 | 300 | 300 | 300 | 321 | 254 | 286 | 286 | 286 | 286 | 303 | 246 |
| 11000 | 75 | 292 | 258 | 321 | 204 | 354 | 130 | 279 | 251 | 306 | 197 | 338 | 124 | 264 | 243 | 290 | 190 | 320 | 117 | 249 | 235 | 274 | 182 | 302 | 110 |
| | 80 | 300 | 300 | 323 | 246 | 355 | 183 | 288 | 288 | 308 | 238 | 339 | 176 | 275 | 275 | 292 | 231 | 322 | 169 | 261 | 261 | 276 | 223 | 303 | 161 |
| | 85 | 317 | 317 | 326 | 297 | 357 | 233 | 305 | 305 | 312 | 290 | 340 | 226 | 291 | 291 | 296 | 282 | 323 | 218 | 277 | 277 | 280 | 275 | 305 | 210 |
| | 90 | 335 | 335 | 335 | 335 | 358 | 283 | 322 | 322 | 322 | 322 | 342 | 276 | 309 | 309 | 308 | 308 | 325 | 268 | 294 | 294 | 294 | 294 | 308 | 261 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.

Table 39. 89 kw (25.4 Ton) Gross Cooling Capacities—Standard Efficiency 2-Row Condenser Coil (SI)—50 Hz R-22 Refrigerant

| L/s | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|------|------|------|-------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 29.4 | | | | 35.0 | | | | 40.6 | | | | 46.1 | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | | | | | | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | |
| 3540 | 23.9 | 79.1 | 62.1 | 87.9 | 50.4 | 97.3 | 35.2 | 75.6 | 60.1 | 83.8 | 48.6 | 93.2 | 33.4 | 71.8 | 58.0 | 79.7 | 46.6 | 88.5 | 31.4 | 67.7 | 55.7 | 75.3 | 44.5 | 83.5 | 29.3 |
| | 26.7 | 80.0 | 73.0 | 88.2 | 59.8 | 97.6 | 46.3 | 76.5 | 71.2 | 84.1 | 57.7 | 93.2 | 44.5 | 72.7 | 68.9 | 80.0 | 55.7 | 88.8 | 42.5 | 68.9 | 66.8 | 75.6 | 53.6 | 83.8 | 40.4 |
| | 29.4 | 82.1 | 82.1 | 88.5 | 70.3 | 97.9 | 57.1 | 78.8 | 78.8 | 84.7 | 68.3 | 93.5 | 55.4 | 75.6 | 75.6 | 80.6 | 66.2 | 89.1 | 53.3 | 72.1 | 72.1 | 76.2 | 63.9 | 84.1 | 51.0 |
| | 32.2 | 86.5 | 86.5 | 89.1 | 81.2 | 98.2 | 67.7 | 83.2 | 83.2 | 85.6 | 79.1 | 93.8 | 65.6 | 79.7 | 79.7 | 81.5 | 77.1 | 89.4 | 63.6 | 76.2 | 76.2 | 77.4 | 74.7 | 84.4 | 61.3 |
| 3780 | 23.9 | 80.3 | 64.2 | 89.1 | 51.9 | 98.5 | 35.8 | 76.8 | 62.1 | 85.0 | 50.1 | 94.1 | 33.7 | 72.7 | 60.1 | 80.9 | 48.1 | 89.4 | 31.9 | 68.6 | 57.7 | 76.2 | 46.0 | 84.7 | 29.9 |
| | 26.7 | 81.2 | 75.9 | 89.4 | 61.5 | 98.8 | 47.5 | 77.7 | 73.9 | 85.3 | 59.5 | 94.4 | 45.4 | 73.9 | 71.8 | 81.2 | 57.4 | 89.7 | 43.7 | 70.0 | 69.5 | 76.5 | 55.4 | 84.7 | 41.3 |
| | 29.4 | 83.8 | 83.8 | 89.7 | 73.0 | 99.1 | 58.9 | 80.6 | 80.6 | 85.9 | 70.9 | 94.7 | 56.9 | 77.4 | 77.4 | 81.5 | 68.6 | 90.0 | 54.8 | 73.6 | 73.6 | 77.1 | 66.5 | 85.0 | 52.5 |
| | 32.2 | 88.5 | 88.5 | 90.6 | 84.4 | 99.4 | 70.0 | 85.3 | 85.3 | 86.7 | 82.4 | 95.0 | 68.0 | 81.8 | 81.8 | 82.6 | 80.3 | 90.3 | 65.6 | 78.0 | 78.0 | 78.5 | 78.0 | 85.6 | 63.6 |
| 4250 | 23.9 | 82.4 | 68.3 | 91.1 | 54.8 | 100.8 | 36.6 | 78.5 | 66.2 | 87.0 | 53.0 | 96.1 | 34.6 | 74.4 | 63.9 | 82.4 | 51.0 | 91.1 | 32.8 | 70.3 | 61.5 | 78.0 | 48.9 | 86.2 | 30.8 |
| | 26.7 | 83.5 | 81.2 | 91.4 | 65.4 | 100.8 | 49.5 | 80.0 | 79.1 | 87.3 | 63.3 | 96.4 | 47.8 | 75.9 | 75.9 | 82.9 | 61.0 | 91.4 | 45.7 | 72.1 | 72.1 | 78.2 | 58.6 | 86.5 | 43.4 |
| | 29.4 | 87.3 | 87.3 | 92.0 | 77.7 | 101.1 | 62.1 | 84.1 | 84.1 | 87.9 | 75.6 | 96.7 | 60.1 | 80.3 | 80.3 | 83.5 | 73.6 | 92.0 | 58.0 | 76.5 | 76.5 | 79.1 | 71.2 | 86.7 | 55.7 |
| | 32.2 | 92.0 | 92.0 | 93.2 | 90.6 | 101.7 | 74.4 | 88.8 | 88.8 | 89.4 | 88.5 | 97.0 | 72.4 | 85.0 | 85.0 | 85.0 | 85.0 | 92.3 | 70.3 | 81.2 | 81.2 | 81.2 | 81.2 | 87.3 | 68.0 |
| 4720 | 23.9 | 84.1 | 72.1 | 92.6 | 57.7 | 102.3 | 37.5 | 80.3 | 69.8 | 88.5 | 55.4 | 97.6 | 35.5 | 76.2 | 67.7 | 83.8 | 53.0 | 92.6 | 33.4 | 71.8 | 65.4 | 79.1 | 51.0 | 87.3 | 31.4 |
| | 26.7 | 85.3 | 85.3 | 93.2 | 68.6 | 102.6 | 51.6 | 82.1 | 82.1 | 88.8 | 66.5 | 97.9 | 49.5 | 78.2 | 78.2 | 84.4 | 64.5 | 93.2 | 47.5 | 74.4 | 74.4 | 79.7 | 62.1 | 87.9 | 45.4 |
| | 29.4 | 90.3 | 90.3 | 93.8 | 82.4 | 102.9 | 65.4 | 86.7 | 86.7 | 89.7 | 80.3 | 98.5 | 63.3 | 82.9 | 82.9 | 85.3 | 78.2 | 93.5 | 61.0 | 79.1 | 79.1 | 80.6 | 75.9 | 88.2 | 58.6 |
| | 32.2 | 95.2 | 95.2 | 95.2 | 95.2 | 103.5 | 78.8 | 91.7 | 91.7 | 91.7 | 91.7 | 98.8 | 76.8 | 87.9 | 87.9 | 87.9 | 87.9 | 94.1 | 74.4 | 83.8 | 83.8 | 83.8 | 83.8 | 88.8 | 72.1 |
| 5190 | 23.9 | 85.6 | 75.6 | 94.1 | 59.8 | 103.7 | 38.1 | 81.8 | 73.6 | 89.7 | 57.7 | 99.1 | 36.3 | 77.4 | 71.2 | 85.0 | 55.7 | 93.8 | 34.3 | 73.0 | 68.9 | 80.3 | 53.3 | 88.5 | 32.2 |
| | 26.7 | 87.9 | 87.9 | 94.7 | 72.1 | 104.0 | 53.6 | 84.4 | 84.4 | 90.3 | 69.8 | 99.4 | 51.6 | 80.6 | 80.6 | 85.6 | 67.7 | 94.4 | 49.5 | 76.5 | 76.5 | 80.9 | 65.4 | 88.8 | 47.2 |
| | 29.4 | 92.9 | 92.9 | 95.5 | 87.0 | 104.6 | 68.3 | 89.4 | 89.4 | 91.4 | 85.0 | 99.6 | 66.2 | 85.3 | 85.3 | 86.7 | 82.6 | 94.7 | 63.9 | 81.2 | 81.2 | 82.1 | 80.6 | 89.4 | 61.5 |
| | 32.2 | 98.2 | 98.2 | 98.2 | 98.2 | 104.9 | 82.9 | 94.4 | 94.4 | 94.4 | 94.4 | 100.2 | 80.9 | 90.6 | 90.6 | 90.3 | 90.3 | 95.2 | 78.5 | 86.2 | 86.2 | 86.2 | 86.2 | 90.3 | 76.5 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 40. 29.2 Ton Gross Cooling Capacities (MBh)—Standard Efficiency 2-Row Condenser Coil (IP)—50 Hz R-22 Refrigerant

| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-----------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | 95 | | | | 105 | | | 115 | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | 67 | 73 | 61 | 67 | 73 | 61 | 67 | 73 | 61 | 67 | 73 | | | | | | | | | | | | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | | | |
| 8750 | 75 | 318 | 260 | 352 | 204 | 389 | 141 | 304 | 252 | 336 | 197 | 371 | 133 | 288 | 244 | 319 | 189 | 352 | 125 | 272 | 235 | 301 | 181 | 332 | 118 |
| | 80 | 323 | 309 | 353 | 249 | 389 | 189 | 309 | 301 | 337 | 241 | 372 | 182 | 294 | 293 | 320 | 233 | 353 | 174 | 278 | 278 | 302 | 224 | 333 | 166 |
| | 85 | 336 | 336 | 355 | 296 | 390 | 237 | 323 | 323 | 339 | 288 | 373 | 229 | 309 | 309 | 322 | 280 | 354 | 221 | 294 | 294 | 305 | 271 | 334 | 212 |
| | 90 | 353 | 353 | 359 | 344 | 391 | 283 | 340 | 340 | 344 | 336 | 374 | 275 | 326 | 326 | 328 | 328 | 355 | 267 | 311 | 311 | 311 | 311 | 336 | 258 |
| 9000 | 75 | 320 | 264 | 354 | 207 | 391 | 141 | 306 | 256 | 337 | 199 | 372 | 134 | 290 | 248 | 320 | 192 | 353 | 126 | 273 | 239 | 302 | 183 | 334 | 118 |
| | 80 | 325 | 314 | 354 | 252 | 391 | 191 | 311 | 306 | 338 | 244 | 373 | 184 | 295 | 295 | 321 | 236 | 354 | 176 | 280 | 280 | 303 | 227 | 335 | 168 |
| | 85 | 339 | 339 | 357 | 301 | 392 | 240 | 326 | 326 | 341 | 293 | 374 | 232 | 312 | 312 | 324 | 284 | 355 | 224 | 297 | 297 | 306 | 276 | 335 | 215 |
| | 90 | 357 | 357 | 362 | 350 | 393 | 287 | 344 | 344 | 346 | 342 | 376 | 279 | 329 | 329 | 329 | 329 | 357 | 271 | 314 | 314 | 314 | 314 | 337 | 262 |
| 10000 | 75 | 327 | 279 | 360 | 217 | 397 | 144 | 312 | 271 | 343 | 209 | 378 | 137 | 296 | 263 | 326 | 201 | 359 | 129 | 279 | 254 | 307 | 193 | 338 | 121 |
| | 80 | 332 | 332 | 361 | 266 | 398 | 199 | 319 | 319 | 345 | 258 | 380 | 191 | 304 | 304 | 327 | 249 | 360 | 183 | 289 | 289 | 309 | 241 | 340 | 175 |
| | 85 | 351 | 351 | 364 | 319 | 399 | 252 | 337 | 337 | 348 | 311 | 380 | 244 | 322 | 322 | 331 | 303 | 361 | 236 | 307 | 307 | 313 | 294 | 341 | 227 |
| | 90 | 370 | 370 | 370 | 370 | 401 | 305 | 356 | 356 | 355 | 355 | 382 | 296 | 340 | 340 | 340 | 340 | 363 | 288 | 325 | 325 | 324 | 324 | 343 | 279 |
| 11000 | 75 | 333 | 294 | 365 | 227 | 402 | 147 | 318 | 286 | 348 | 219 | 383 | 139 | 301 | 277 | 330 | 211 | 363 | 132 | 284 | 268 | 311 | 203 | 342 | 124 |
| | 80 | 341 | 341 | 367 | 279 | 404 | 207 | 328 | 328 | 350 | 271 | 385 | 199 | 313 | 313 | 332 | 262 | 365 | 191 | 297 | 297 | 313 | 254 | 344 | 183 |
| | 85 | 361 | 361 | 371 | 338 | 405 | 264 | 347 | 347 | 354 | 330 | 386 | 256 | 332 | 332 | 337 | 321 | 366 | 248 | 316 | 316 | 319 | 312 | 345 | 239 |
| | 90 | 381 | 381 | 381 | 381 | 407 | 321 | 366 | 366 | 366 | 366 | 388 | 313 | 350 | 350 | 350 | 350 | 369 | 305 | 334 | 334 | 334 | 334 | 348 | 296 |
| 12000 | 75 | 338 | 308 | 370 | 236 | 407 | 150 | 322 | 300 | 352 | 228 | 387 | 142 | 306 | 291 | 334 | 220 | 367 | 134 | 288 | 282 | 314 | 210 | 346 | 126 |
| | 80 | 350 | 350 | 372 | 292 | 408 | 214 | 336 | 336 | 354 | 284 | 389 | 206 | 320 | 320 | 336 | 275 | 369 | 198 | 304 | 304 | 317 | 266 | 347 | 190 |
| | 85 | 370 | 370 | 377 | 356 | 410 | 276 | 355 | 355 | 360 | 347 | 390 | 268 | 340 | 340 | 342 | 339 | 370 | 259 | 323 | 323 | 323 | 323 | 349 | 250 |
| | 90 | 391 | 391 | 391 | 391 | 413 | 338 | 376 | 376 | 375 | 375 | 394 | 330 | 359 | 359 | 359 | 359 | 374 | 321 | 342 | 342 | 342 | 342 | 353 | 312 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.

Table 41. 105 kw (29.2 Ton) Gross Cooling Capacities—Standard Efficiency 2-Row Condenser Coil (SI)—50 Hz R-22 Refrigerant

| L/s | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|------|------|-----|-----|------|-----|-----|------|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 | | | | | | | | | | | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | | | |
| 4130 | 23.9 | 93.2 | 76.2 | 103.2 | 59.8 | 114.0 | 41.3 | 89.1 | 73.9 | 98.5 | 57.7 | 108.7 | 39.0 | 84.4 | 71.5 | 93.5 | 55.4 | 103.2 | 36.6 | | | | | | | | | | | | | | | | | | |
| | 26.7 | 94.7 | 90.6 | 103.5 | 73.0 | 114.0 | 55.4 | 90.6 | 88.2 | 98.8 | 70.6 | 109.0 | 53.3 | 86.2 | 85.9 | 93.8 | 68.3 | 103.5 | 51.0 | | | | | | | | | | | | | | | | | | |
| | 29.4 | 98.5 | 98.5 | 104.0 | 86.7 | 114.3 | 69.5 | 94.7 | 94.7 | 99.4 | 84.4 | 109.3 | 67.1 | 90.6 | 90.6 | 94.4 | 82.1 | 103.7 | 64.8 | | | | | | | | | | | | | | | | | | |
| | 32.2 | 103.5 | 103.5 | 105.2 | 100.8 | 114.6 | 82.9 | 99.6 | 99.6 | 100.8 | 98.5 | 109.6 | 80.6 | 95.5 | 95.5 | 96.1 | 96.1 | 104.0 | 78.2 | | | | | | | | | | | | | | | | | | |
| 4250 | 23.9 | 93.8 | 77.4 | 103.7 | 60.7 | 114.6 | 41.3 | 89.7 | 75.0 | 98.8 | 58.3 | 109.0 | 39.3 | 85.0 | 72.7 | 93.8 | 56.3 | 103.5 | 36.9 | | | | | | | | | | | | | | | | | | |
| | 26.7 | 95.2 | 92.0 | 103.7 | 73.9 | 114.6 | 56.0 | 91.1 | 89.7 | 99.1 | 71.5 | 109.3 | 53.9 | 86.5 | 86.5 | 94.1 | 69.2 | 103.7 | 51.6 | | | | | | | | | | | | | | | | | | |
| | 29.4 | 99.4 | 99.4 | 104.6 | 88.2 | 114.9 | 70.3 | 95.5 | 95.5 | 99.9 | 85.9 | 109.6 | 68.0 | 91.4 | 91.4 | 95.0 | 83.2 | 104.0 | 65.6 | | | | | | | | | | | | | | | | | | |
| | 32.2 | 104.6 | 104.6 | 106.1 | 102.6 | 115.2 | 84.1 | 100.8 | 100.8 | 101.4 | 100.2 | 110.2 | 81.8 | 96.4 | 96.4 | 96.4 | 96.4 | 104.6 | 79.4 | | | | | | | | | | | | | | | | | | |
| 4720 | 23.9 | 95.8 | 81.8 | 105.5 | 63.6 | 116.3 | 42.2 | 91.4 | 79.4 | 100.5 | 61.3 | 110.8 | 40.2 | 86.7 | 77.1 | 95.5 | 58.9 | 105.2 | 37.8 | | | | | | | | | | | | | | | | | | |
| | 26.7 | 97.3 | 97.3 | 105.8 | 78.0 | 116.6 | 58.3 | 93.5 | 93.5 | 101.1 | 75.6 | 111.4 | 56.0 | 89.1 | 89.1 | 95.8 | 73.0 | 105.5 | 53.6 | | | | | | | | | | | | | | | | | | |
| | 29.4 | 102.9 | 102.9 | 106.7 | 93.5 | 116.9 | 73.9 | 98.8 | 98.8 | 102.0 | 91.1 | 111.4 | 71.5 | 94.4 | 94.4 | 97.0 | 88.8 | 105.8 | 69.2 | | | | | | | | | | | | | | | | | | |
| | 32.2 | 108.4 | 108.4 | 108.4 | 108.4 | 117.5 | 89.4 | 104.3 | 104.3 | 104.0 | 104.0 | 112.0 | 86.7 | 99.6 | 99.6 | 99.6 | 99.6 | 106.4 | 84.4 | | | | | | | | | | | | | | | | | | |
| 5190 | 23.9 | 97.6 | 86.2 | 107.0 | 66.5 | 117.8 | 43.1 | 93.2 | 83.8 | 102.0 | 64.2 | 112.2 | 40.7 | 88.2 | 81.2 | 96.7 | 61.8 | 106.4 | 38.7 | | | | | | | | | | | | | | | | | | |
| | 26.7 | 99.9 | 99.9 | 107.6 | 81.8 | 118.4 | 60.7 | 96.1 | 96.1 | 102.6 | 79.4 | 112.8 | 58.3 | 91.7 | 91.7 | 97.3 | 76.8 | 107.0 | 56.0 | | | | | | | | | | | | | | | | | | |
| | 29.4 | 105.8 | 105.8 | 108.7 | 99.1 | 118.7 | 77.4 | 101.7 | 101.7 | 103.7 | 96.7 | 113.1 | 75.0 | 97.3 | 97.3 | 98.8 | 94.1 | 107.3 | 72.7 | | | | | | | | | | | | | | | | | | |
| | 32.2 | 111.7 | 111.7 | 111.7 | 111.7 | 119.3 | 94.1 | 107.3 | 107.3 | 107.3 | 107.3 | 113.7 | 91.7 | 102.6 | 102.6 | 102.6 | 102.6 | 108.1 | 89.4 | | | | | | | | | | | | | | | | | | |
| 5660 | 23.9 | 99.1 | 90.3 | 108.4 | 69.2 | 119.3 | 44.0 | 94.4 | 87.9 | 103.2 | 66.8 | 113.4 | 41.6 | 89.7 | 85.3 | 97.9 | 64.5 | 107.6 | 39.3 | | | | | | | | | | | | | | | | | | |
| | 26.7 | 102.6 | 102.6 | 109.0 | 85.6 | 119.6 | 62.7 | 98.5 | 98.5 | 103.7 | 83.2 | 114.0 | 60.4 | 93.8 | 93.8 | 98.5 | 80.6 | 108.1 | 58.0 | | | | | | | | | | | | | | | | | | |
| | 29.4 | 108.4 | 108.4 | 110.5 | 104.3 | 120.2 | 80.9 | 104.0 | 104.0 | 105.5 | 101.7 | 114.3 | 78.5 | 99.6 | 99.6 | 100.2 | 99.4 | 108.4 | 75.9 | | | | | | | | | | | | | | | | | | |
| | 32.2 | 114.6 | 114.6 | 114.6 | 114.6 | 121.0 | 99.1 | 110.2 | 110.2 | 109.9 | 109.9 | 115.5 | 96.7 | 105.2 | 105.2 | 105.2 | 105.2 | 109.6 | 94.1 | | | | | | | | | | | | | | | | | | |
| L/s | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 | | | | | | | | | | | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | |
| 4130 | 23.9 | 79.7 | 68.9 | 88.2 | 53.0 | 97.3 | 34.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 26.7 | 81.5 | 81.5 | 88.5 | 65.6 | 97.6 | 48.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 29.4 | 86.2 | 86.2 | 89.4 | 79.4 | 97.9 | 62.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 32.2 | 91.1 | 91.1 | 91.1 | 91.1 | 98.5 | 75.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4250 | 23.9 | 80.0 | 70.0 | 88.5 | 53.6 | 97.9 | 34.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 26.7 | 82.1 | 82.1 | 88.8 | 66.5 | 98.2 | 49.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 29.4 | 87.0 | 87.0 | 89.7 | 80.9 | 98.2 | 63.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 32.2 | 92.0 | 92.0 | 92.0 | 92.0 | 98.8 | 76.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4720 | 23.9 | 81.8 | 74.4 | 90.0 | 56.6 | 99.1 | 35.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 26.7 | 84.7 | 84.7 | 90.6 | 70.6 | 99.6 | 51.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 29.4 | 90.0 | 90.0 | 91.7 | 86.2 | 99.9 | 66.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 32.2 | 95.2 | 95.2 | 95.0 | 95.0 | 100.5 | 81.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5190 | 23.9 | 83.2 | 78.5 | 91.1 | 59.5 | 100.2 | 36.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 26.7 | 87.0 | 87.0 | 91.7 | 74.4 | 100.8 | 53.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 29.4 | 92.6 | 92.6 | 93.5 | 91.4 | 101.1 | 70.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 32.2 | 97.9 | 97.9 | 97.9 | 97.9 | 102.0 | 86.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5660 | 23.9 | 84.4 | 82.6 | 92.0 | 61.5 | 101.4 | 36.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 26.7 | 89.1 | 89.1 | 92.9 | 78.0 | 101.7 | 55.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 29.4 | 94.7 | 94.7 | 94.7 | 94.7 | 102.3 | 73.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 32.2 | 100.2 | 100.2 | 100.2 | 100.2 | 103.5 | 91.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 42. 33.3 Ton Gross Cooling Capacities (MBh)—Standard Efficiency 2-Row Condenser Coil (I-P)—50 Hz R-22 Refrigerant

| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | |
|-------|-----------|------------------------------------|-----|-----|-----|-----|-----|------------------------------------|-----|-----|-----|-----|-----|------------------------------------|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | Entering Wet Bulb Temperature (°F) | | | | | | Entering Wet Bulb Temperature (°F) | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 10000 | 75 | 389 | 307 | 433 | 242 | 480 | 171 | 370 | 296 | 412 | 231 | 457 | 160 | 350 | 284 | 390 | 220 | 433 | 149 |
| | 80 | 394 | 362 | 434 | 295 | 481 | 227 | 375 | 351 | 413 | 284 | 458 | 216 | 355 | 339 | 391 | 272 | 434 | 205 |
| | 85 | 405 | 405 | 436 | 349 | 482 | 281 | 389 | 389 | 416 | 338 | 460 | 271 | 371 | 371 | 394 | 326 | 436 | 259 |
| | 90 | 428 | 428 | 441 | 404 | 483 | 335 | 411 | 411 | 421 | 393 | 461 | 324 | 393 | 393 | 400 | 381 | 437 | 312 |
| 11000 | 75 | 398 | 323 | 441 | 252 | 488 | 174 | 378 | 311 | 419 | 241 | 465 | 163 | 357 | 299 | 397 | 230 | 440 | 152 |
| | 80 | 404 | 384 | 442 | 309 | 490 | 235 | 384 | 372 | 421 | 298 | 466 | 224 | 364 | 361 | 398 | 286 | 441 | 213 |
| | 85 | 420 | 420 | 446 | 369 | 491 | 295 | 402 | 402 | 425 | 357 | 468 | 284 | 384 | 384 | 402 | 345 | 443 | 272 |
| | 90 | 444 | 444 | 452 | 429 | 492 | 353 | 426 | 426 | 431 | 418 | 469 | 342 | 407 | 407 | 410 | 406 | 445 | 330 |
| 12000 | 75 | 405 | 338 | 448 | 262 | 495 | 177 | 385 | 327 | 426 | 251 | 471 | 166 | 364 | 315 | 403 | 240 | 446 | 155 |
| | 80 | 413 | 405 | 450 | 323 | 497 | 243 | 391 | 391 | 428 | 312 | 473 | 232 | 372 | 372 | 405 | 300 | 448 | 221 |
| | 85 | 433 | 433 | 454 | 388 | 498 | 308 | 415 | 415 | 432 | 376 | 474 | 297 | 396 | 396 | 410 | 364 | 449 | 285 |
| | 90 | 457 | 457 | 462 | 454 | 500 | 370 | 439 | 439 | 439 | 439 | 477 | 359 | 419 | 419 | 419 | 419 | 452 | 347 |
| 13000 | 75 | 412 | 353 | 454 | 272 | 501 | 180 | 391 | 342 | 432 | 261 | 477 | 169 | 370 | 329 | 408 | 249 | 451 | 158 |
| | 80 | 419 | 419 | 456 | 337 | 503 | 251 | 401 | 401 | 434 | 325 | 479 | 240 | 382 | 382 | 410 | 313 | 453 | 228 |
| | 85 | 445 | 445 | 461 | 407 | 503 | 320 | 426 | 426 | 439 | 395 | 480 | 308 | 406 | 406 | 416 | 383 | 454 | 297 |
| | 90 | 470 | 470 | 470 | 470 | 507 | 387 | 450 | 450 | 450 | 450 | 483 | 376 | 430 | 430 | 430 | 430 | 458 | 364 |
| 14600 | 75 | 421 | 377 | 462 | 287 | 509 | 184 | 400 | 365 | 439 | 276 | 484 | 173 | 378 | 353 | 415 | 264 | 458 | 162 |
| | 80 | 434 | 434 | 465 | 358 | 510 | 263 | 415 | 415 | 442 | 346 | 486 | 252 | 395 | 395 | 418 | 334 | 460 | 240 |
| | 85 | 461 | 461 | 472 | 436 | 512 | 339 | 441 | 441 | 449 | 424 | 488 | 327 | 420 | 420 | 426 | 412 | 462 | 315 |
| | 90 | 487 | 487 | 487 | 487 | 516 | 414 | 467 | 467 | 467 | 467 | 492 | 403 | 445 | 445 | 445 | 445 | 466 | 391 |
| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 10000 | 75 | 328 | 272 | 366 | 208 | 407 | 138 | | | | | | | | | | | | |
| | 80 | 334 | 327 | 368 | 260 | 409 | 193 | | | | | | | | | | | | |
| | 85 | 352 | 352 | 371 | 314 | 410 | 248 | | | | | | | | | | | | |
| | 90 | 373 | 373 | 377 | 369 | 412 | 300 | | | | | | | | | | | | |
| 11000 | 75 | 335 | 287 | 373 | 218 | 414 | 141 | | | | | | | | | | | | |
| | 80 | 342 | 342 | 374 | 274 | 415 | 201 | | | | | | | | | | | | |
| | 85 | 364 | 364 | 379 | 333 | 417 | 261 | | | | | | | | | | | | |
| | 90 | 387 | 387 | 386 | 386 | 419 | 318 | | | | | | | | | | | | |
| 12000 | 75 | 341 | 302 | 378 | 228 | 419 | 144 | | | | | | | | | | | | |
| | 80 | 352 | 352 | 380 | 288 | 421 | 209 | | | | | | | | | | | | |
| | 85 | 375 | 375 | 386 | 352 | 422 | 272 | | | | | | | | | | | | |
| | 90 | 398 | 398 | 398 | 398 | 426 | 335 | | | | | | | | | | | | |
| 13000 | 75 | 347 | 317 | 383 | 237 | 424 | 146 | | | | | | | | | | | | |
| | 80 | 361 | 361 | 386 | 301 | 426 | 217 | | | | | | | | | | | | |
| | 85 | 385 | 385 | 392 | 370 | 428 | 284 | | | | | | | | | | | | |
| | 90 | 408 | 408 | 408 | 408 | 432 | 352 | | | | | | | | | | | | |
| 14600 | 75 | 355 | 340 | 389 | 252 | 430 | 150 | | | | | | | | | | | | |
| | 80 | 374 | 374 | 393 | 322 | 432 | 229 | | | | | | | | | | | | |
| | 85 | 398 | 398 | 401 | 399 | 434 | 303 | | | | | | | | | | | | |
| | 90 | 423 | 423 | 423 | 423 | 440 | 379 | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.

Table 43. 120 kW (33.3 Ton) Gross Cooling Capacities—Standard Efficiency 2-Row Condenser Coil (SI)—50 Hz R-22 Refrigerant

| L/s | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-----|-----|------|-----|-----|------|-----|-----|-----|-----|-----|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 | | | | | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 4720 | 23.9 | 114.0 | 90.0 | 126.9 | 70.9 | 140.7 | 50.1 | 108.4 | 86.7 | 120.7 | 67.7 | 133.9 | 46.9 | 102.6 | 83.2 | 114.3 | 64.5 | 126.9 | 43.7 | | | | | | | | | | | | |
| | 26.7 | 115.5 | 106.1 | 127.2 | 86.5 | 141.0 | 66.5 | 109.9 | 102.9 | 121.0 | 83.2 | 134.2 | 63.3 | 104.0 | 99.4 | 114.6 | 79.7 | 127.2 | 60.1 | | | | | | | | | | | | |
| | 29.4 | 118.7 | 118.7 | 127.8 | 102.3 | 141.3 | 82.4 | 114.0 | 114.0 | 121.9 | 99.1 | 134.8 | 79.4 | 108.7 | 108.7 | 115.5 | 95.5 | 127.8 | 75.9 | | | | | | | | | | | | |
| | 32.2 | 125.4 | 125.4 | 129.2 | 118.4 | 141.6 | 98.2 | 120.5 | 120.5 | 123.4 | 115.2 | 135.1 | 95.0 | 115.2 | 115.2 | 117.2 | 111.7 | 128.1 | 91.4 | | | | | | | | | | | | |
| 5190 | 23.9 | 116.6 | 94.7 | 129.2 | 73.9 | 143.0 | 51.0 | 110.8 | 91.1 | 122.8 | 70.6 | 136.3 | 47.8 | 104.6 | 87.6 | 116.3 | 67.4 | 129.0 | 44.5 | | | | | | | | | | | | |
| | 26.7 | 118.4 | 112.5 | 129.5 | 90.6 | 143.6 | 68.9 | 112.5 | 109.0 | 123.4 | 87.3 | 136.6 | 65.6 | 106.7 | 105.8 | 116.6 | 83.8 | 129.2 | 62.4 | | | | | | | | | | | | |
| | 29.4 | 123.1 | 123.1 | 130.7 | 108.1 | 143.9 | 86.5 | 117.8 | 117.8 | 124.6 | 104.6 | 137.2 | 83.2 | 112.5 | 112.5 | 117.8 | 101.1 | 129.8 | 79.7 | | | | | | | | | | | | |
| | 32.2 | 130.1 | 130.1 | 132.5 | 125.7 | 144.2 | 103.5 | 124.8 | 124.8 | 126.3 | 122.5 | 137.5 | 100.2 | 119.3 | 119.3 | 120.2 | 119.0 | 130.4 | 96.7 | | | | | | | | | | | | |
| 5660 | 23.9 | 118.7 | 99.1 | 131.3 | 76.8 | 145.1 | 51.9 | 112.8 | 95.8 | 124.8 | 73.6 | 138.0 | 48.6 | 106.7 | 92.3 | 118.1 | 70.3 | 130.7 | 45.4 | | | | | | | | | | | | |
| | 26.7 | 121.0 | 118.7 | 131.9 | 94.7 | 145.7 | 71.2 | 114.6 | 114.6 | 125.4 | 91.4 | 138.6 | 68.0 | 109.0 | 109.0 | 118.7 | 87.9 | 131.3 | 64.8 | | | | | | | | | | | | |
| | 29.4 | 126.9 | 126.9 | 133.1 | 113.7 | 145.9 | 90.3 | 121.6 | 121.6 | 126.6 | 110.2 | 138.9 | 87.0 | 116.1 | 116.1 | 120.2 | 106.7 | 131.6 | 83.5 | | | | | | | | | | | | |
| | 32.2 | 133.9 | 133.9 | 135.4 | 133.1 | 146.5 | 108.4 | 128.7 | 128.7 | 128.7 | 128.7 | 139.8 | 105.2 | 122.8 | 122.8 | 122.8 | 122.8 | 132.5 | 101.7 | | | | | | | | | | | | |
| 6140 | 23.9 | 120.7 | 103.5 | 133.1 | 79.7 | 146.8 | 52.8 | 114.6 | 100.2 | 126.6 | 76.5 | 139.8 | 49.5 | 108.4 | 96.4 | 119.6 | 73.0 | 132.2 | 46.3 | | | | | | | | | | | | |
| | 26.7 | 122.8 | 122.8 | 133.6 | 98.8 | 147.4 | 73.6 | 117.5 | 117.5 | 127.2 | 95.2 | 140.4 | 70.3 | 112.0 | 112.0 | 120.2 | 91.7 | 132.8 | 66.8 | | | | | | | | | | | | |
| | 29.4 | 130.4 | 130.4 | 135.1 | 119.3 | 147.4 | 93.8 | 124.8 | 124.8 | 128.7 | 115.8 | 140.7 | 90.3 | 119.0 | 119.0 | 121.9 | 112.2 | 133.1 | 87.0 | | | | | | | | | | | | |
| | 32.2 | 137.7 | 137.7 | 137.7 | 137.7 | 148.6 | 113.4 | 131.9 | 131.9 | 131.9 | 131.9 | 141.6 | 110.2 | 126.0 | 126.0 | 126.0 | 126.0 | 134.2 | 106.7 | | | | | | | | | | | | |
| 6890 | 23.9 | 123.4 | 110.5 | 135.4 | 84.1 | 149.2 | 53.9 | 117.2 | 107.0 | 128.7 | 80.9 | 141.8 | 50.7 | 110.8 | 103.5 | 121.6 | 77.4 | 134.2 | 47.5 | | | | | | | | | | | | |
| | 26.7 | 127.2 | 127.2 | 136.3 | 104.9 | 149.5 | 77.1 | 121.6 | 121.6 | 129.5 | 101.4 | 142.4 | 73.9 | 115.8 | 115.8 | 122.5 | 97.9 | 134.8 | 70.3 | | | | | | | | | | | | |
| | 29.4 | 135.1 | 135.1 | 138.3 | 127.8 | 150.1 | 99.4 | 129.2 | 129.2 | 131.6 | 124.3 | 143.0 | 95.8 | 123.1 | 123.1 | 124.8 | 120.7 | 135.4 | 92.3 | | | | | | | | | | | | |
| | 32.2 | 142.7 | 142.7 | 142.7 | 151.2 | 121.3 | 136.9 | 136.9 | 136.9 | 136.9 | 144.2 | 118.1 | 130.4 | 130.4 | 130.4 | 130.4 | 136.6 | 114.6 | | | | | | | | | | | | | |
| 4720 | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 | | | | | |
| 4720 | 23.9 | 96.1 | 79.7 | 107.3 | 61.0 | 119.3 | 40.4 | 96.1 | 79.7 | 107.3 | 61.0 | 119.3 | 40.4 | 96.1 | 79.7 | 107.3 | 61.0 | 119.3 | 40.4 | | | | | | | | | | | | |
| | 26.7 | 97.9 | 95.8 | 107.9 | 76.2 | 119.9 | 56.6 | 97.9 | 95.8 | 107.9 | 76.2 | 119.9 | 56.6 | 97.9 | 95.8 | 107.9 | 76.2 | 119.9 | 56.6 | | | | | | | | | | | | |
| | 29.4 | 103.2 | 103.2 | 108.7 | 92.0 | 120.2 | 72.7 | 103.2 | 103.2 | 108.7 | 92.0 | 120.2 | 72.7 | 103.2 | 103.2 | 108.7 | 92.0 | 120.2 | 72.7 | | | | | | | | | | | | |
| | 32.2 | 109.3 | 109.3 | 110.5 | 108.1 | 120.7 | 87.9 | 109.3 | 109.3 | 110.5 | 108.1 | 120.7 | 87.9 | 109.3 | 109.3 | 110.5 | 108.1 | 120.7 | 87.9 | | | | | | | | | | | | |
| 5190 | 23.9 | 98.2 | 84.1 | 109.3 | 63.9 | 121.3 | 41.3 | 98.2 | 84.1 | 109.3 | 63.9 | 121.3 | 41.3 | 98.2 | 84.1 | 109.3 | 63.9 | 121.3 | 41.3 | | | | | | | | | | | | |
| | 26.7 | 100.2 | 100.2 | 109.6 | 80.3 | 121.6 | 58.9 | 100.2 | 100.2 | 109.6 | 80.3 | 121.6 | 58.9 | 100.2 | 100.2 | 109.6 | 80.3 | 121.6 | 58.9 | | | | | | | | | | | | |
| | 29.4 | 106.7 | 106.7 | 111.1 | 97.6 | 122.2 | 76.5 | 106.7 | 106.7 | 111.1 | 97.6 | 122.2 | 76.5 | 106.7 | 106.7 | 111.1 | 97.6 | 122.2 | 76.5 | | | | | | | | | | | | |
| | 32.2 | 113.4 | 113.4 | 113.1 | 113.1 | 122.8 | 93.2 | 113.4 | 113.4 | 113.1 | 113.1 | 122.8 | 93.2 | 113.4 | 113.4 | 113.1 | 113.1 | 122.8 | 93.2 | | | | | | | | | | | | |
| 5660 | 23.9 | 99.9 | 88.5 | 110.8 | 66.8 | 122.8 | 42.2 | 99.9 | 88.5 | 110.8 | 66.8 | 122.8 | 42.2 | 99.9 | 88.5 | 110.8 | 66.8 | 122.8 | 42.2 | | | | | | | | | | | | |
| | 26.7 | 103.2 | 103.2 | 111.4 | 84.4 | 123.4 | 61.3 | 103.2 | 103.2 | 111.4 | 84.4 | 123.4 | 61.3 | 103.2 | 103.2 | 111.4 | 84.4 | 123.4 | 61.3 | | | | | | | | | | | | |
| | 29.4 | 109.9 | 109.9 | 113.1 | 103.2 | 123.7 | 79.7 | 109.9 | 109.9 | 113.1 | 103.2 | 123.7 | 79.7 | 109.9 | 109.9 | 113.1 | 103.2 | 123.7 | 79.7 | | | | | | | | | | | | |
| | 32.2 | 116.6 | 116.6 | 116.6 | 116.6 | 124.8 | 98.2 | 116.6 | 116.6 | 116.6 | 116.6 | 124.8 | 98.2 | 116.6 | 116.6 | 116.6 | 116.6 | 124.8 | 98.2 | | | | | | | | | | | | |
| 6140 | 23.9 | 101.7 | 92.9 | 112.2 | 69.5 | 124.3 | 42.8 | 101.7 | 92.9 | 112.2 | 69.5 | 124.3 | 42.8 | 101.7 | 92.9 | 112.2 | 69.5 | 124.3 | 42.8 | | | | | | | | | | | | |
| | 26.7 | 105.8 | 105.8 | 113.1 | 88.2 | 124.8 | 63.6 | 105.8 | 105.8 | 113.1 | 88.2 | 124.8 | 63.6 | 105.8 | 105.8 | 113.1 | 88.2 | 124.8 | 63.6 | | | | | | | | | | | | |
| | 29.4 | 112.8 | 112.8 | 114.9 | 108.4 | 125.4 | 83.2 | 112.8 | 112.8 | 114.9 | 108.4 | 125.4 | 83.2 | 112.8 | 112.8 | 114.9 | 108.4 | 125.4 | 83.2 | | | | | | | | | | | | |
| | 32.2 | 119.6 | 119.6 | 119.6 | 119.6 | 126.6 | 103.2 | 119.6 | 119.6 | 119.6 | 119.6 | 126.6 | 103.2 | 119.6 | 119.6 | 119.6 | 119.6 | 126.6 | 103.2 | | | | | | | | | | | | |
| 6890 | 23.9 | 104.0 | 99.6 | 114.0 | 73.9 | 126.0 | 44.0 | 104.0 | 99.6 | 114.0 | 73.9 | 126.0 | 44.0 | 104.0 | 99.6 | 114.0 | 73.9 | 126.0 | 44.0 | | | | | | | | | | | | |
| | 26.7 | 109.6 | 109.6 | 115.2 | 94.4 | 126.6 | 67.1 | 109.6 | 109.6 | 115.2 | 94.4 | 126.6 | 67.1 | 109.6 | 109.6 | 115.2 | 94.4 | 126.6 | 67.1 | | | | | | | | | | | | |
| | 29.4 | 116.6 | 116.6 | 117.5 | 116.9 | 127.2 | 88.8 | 116.6 | 116.6 | 117.5 | 116.9 | 127.2 | 88.8 | 116.6 | 116.6 | 117.5 | 116.9 | 127.2 | 88.8 | | | | | | | | | | | | |
| | 32.2 | 124.0 | 124.0 | 124.0 | 124.0 | 129.0 | 111.1 | 124.0 | 124.0 | 124.0 | 124.0 | 129.0 | 111.1 | 124.0 | 124.0 | 124.0 | 124.0 | 129.0 | 111.1 | | | | | | | | | | | | |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 44. 41.7 Ton Gross Cooling Capacities (MBh)—Standard Efficiency 2-Row Condenser Coil (I-P)—50 Hz R-22 Refrigerant

| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-----------------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | | 115 | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 12500 | 75 | 469 | 385 | 519 | 298 | 574 | 206 | 446 | 372 | 494 | 286 | 546 | 193 | 421 | 358 | 467 | 272 | 517 | 180 | 395 | 344 | 438 | 259 | 486 | 167 |
| | 80 | 476 | 459 | 521 | 369 | 576 | 279 | 454 | 446 | 495 | 355 | 548 | 267 | 428 | 428 | 469 | 342 | 519 | 254 | 406 | 406 | 441 | 328 | 488 | 240 |
| | 85 | 498 | 498 | 525 | 440 | 578 | 351 | 477 | 477 | 500 | 427 | 550 | 338 | 455 | 455 | 474 | 413 | 521 | 325 | 432 | 432 | 446 | 399 | 489 | 311 |
| | 90 | 526 | 526 | 533 | 513 | 580 | 421 | 504 | 504 | 508 | 500 | 552 | 408 | 482 | 482 | 481 | 481 | 523 | 394 | 458 | 458 | 458 | 458 | 493 | 380 |
| 13500 | 75 | 476 | 402 | 526 | 309 | 582 | 209 | 453 | 388 | 500 | 296 | 553 | 196 | 428 | 374 | 472 | 283 | 523 | 183 | 401 | 360 | 444 | 269 | 491 | 170 |
| | 80 | 485 | 481 | 528 | 383 | 583 | 288 | 462 | 462 | 502 | 370 | 555 | 275 | 440 | 440 | 475 | 356 | 525 | 262 | 416 | 416 | 447 | 342 | — | — |
| | 85 | 511 | 511 | 533 | 460 | 585 | 365 | 489 | 489 | 508 | 447 | 556 | 351 | 467 | 467 | 481 | 433 | 526 | 338 | 443 | 443 | 453 | 419 | — | — |
| | 90 | 540 | 540 | 543 | 539 | 588 | 440 | 518 | 518 | 517 | 517 | 560 | 427 | 494 | 494 | 494 | 494 | 530 | 413 | 470 | 470 | 469 | 469 | — | — |
| 14500 | 75 | 483 | 418 | 532 | 319 | 588 | 211 | 459 | 404 | 506 | 306 | 558 | 199 | 434 | 390 | 478 | 293 | 528 | 186 | 407 | 375 | 448 | 279 | — | — |
| | 80 | 494 | 494 | 535 | 398 | 590 | 296 | 472 | 472 | 509 | 384 | 561 | 283 | 449 | 449 | 481 | 371 | 530 | 270 | 425 | 425 | 452 | 356 | — | — |
| | 85 | 523 | 523 | 541 | 480 | 591 | 378 | 501 | 501 | 515 | 467 | 562 | 364 | 477 | 477 | 488 | 453 | 532 | 351 | 453 | 453 | 459 | 439 | — | — |
| | 90 | 553 | 553 | 552 | 552 | 595 | 458 | 530 | 530 | 530 | 530 | 567 | 445 | 506 | 506 | 506 | 506 | 537 | 431 | 480 | 480 | 480 | 480 | — | — |
| 15500 | 75 | 489 | 433 | 538 | 329 | 593 | 214 | 465 | 420 | 511 | 316 | 563 | 202 | 439 | 406 | 482 | 302 | 532 | 189 | 412 | 391 | 452 | 289 | — | — |
| | 80 | 504 | 504 | 541 | 412 | 595 | 304 | 482 | 482 | 514 | 399 | 566 | 291 | 458 | 458 | 486 | 385 | 535 | 278 | 434 | 434 | 457 | 370 | — | — |
| | 85 | 534 | 534 | 548 | 500 | 597 | 390 | 511 | 511 | 522 | 487 | 568 | 377 | 487 | 487 | 494 | 473 | 537 | 363 | 462 | 462 | 465 | 458 | — | — |
| | 90 | 564 | 564 | 564 | 564 | 602 | 476 | 541 | 541 | 541 | 541 | 573 | 463 | 516 | 516 | 516 | 516 | 542 | 449 | 490 | 490 | 490 | 490 | — | — |
| 16500 | 75 | 495 | 449 | 543 | 339 | 598 | 217 | 470 | 435 | 515 | 326 | 568 | 204 | 444 | 421 | 486 | 312 | 536 | 191 | 417 | 406 | 456 | 295 | — | — |
| | 80 | 513 | 513 | 546 | 426 | 600 | 312 | 491 | 491 | 519 | 413 | 570 | 299 | 467 | 467 | 491 | 399 | 539 | 286 | 441 | 441 | 461 | 384 | — | — |
| | 85 | 544 | 544 | 554 | 520 | 603 | 403 | 521 | 521 | 528 | 506 | 573 | 390 | 496 | 496 | 500 | 492 | 542 | 376 | 470 | 470 | 470 | 470 | — | — |
| | 90 | 575 | 575 | 575 | 575 | 608 | 494 | 551 | 551 | 551 | 551 | 578 | 481 | 526 | 526 | 526 | 526 | 548 | 467 | — | — | — | — | — | — |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 45. 148 kW (41.7 Ton) Gross Cooling Capacities—Standard Efficiency 2-Row Condenser Coil (SI)—50 Hz R-22 Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | | 46.1 | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 | | | 16.1 | | | 19.4 | | | 22.8 |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | |
| 5900 | 75 | 137 | 113 | 152 | 87 | 168 | 60 | 131 | 109 | 145 | 84 | 160 | 57 | 123 | 105 | 137 | 80 | 152 | 53 | 116 | 101 | 128 | 76 | 142 | 49 | |
| | 80 | 140 | 135 | 153 | 108 | 169 | 82 | 133 | 131 | 145 | 104 | 161 | 78 | 125 | 125 | 137 | 100 | 152 | 74 | 119 | 119 | 129 | 96 | 143 | 70 | |
| | 85 | 146 | 146 | 154 | 129 | 169 | 103 | 140 | 140 | 147 | 125 | 161 | 99 | 133 | 133 | 139 | 121 | 153 | 95 | 127 | 127 | 131 | 117 | 143 | 91 | |
| | 90 | 154 | 154 | 156 | 150 | 170 | 123 | 148 | 148 | 149 | 147 | 162 | 120 | 141 | 141 | 141 | 141 | 153 | 115 | 134 | 134 | 134 | 134 | 144 | 111 | |
| 6370 | 75 | 140 | 118 | 154 | 91 | 171 | 61 | 133 | 114 | 147 | 87 | 162 | 57 | 125 | 110 | 138 | 83 | 153 | 54 | 118 | 106 | 130 | 79 | 144 | 50 | |
| | 80 | 142 | 141 | 155 | 112 | 171 | 84 | 135 | 135 | 147 | 108 | 163 | 81 | 129 | 129 | 139 | 104 | 154 | 77 | 122 | 122 | 131 | 100 | — | — | |
| | 85 | 150 | 150 | 156 | 135 | 171 | 107 | 143 | 143 | 149 | 131 | 163 | 103 | 137 | 137 | 141 | 127 | 154 | 99 | 130 | 130 | 133 | 123 | — | — | |
| | 90 | 158 | 158 | 159 | 158 | 172 | 129 | 152 | 152 | 152 | 152 | 164 | 125 | 145 | 145 | 145 | 145 | 155 | 121 | 138 | 138 | 137 | 137 | — | — | |
| 6840 | 75 | 142 | 123 | 156 | 93 | 172 | 62 | 135 | 118 | 148 | 90 | 164 | 58 | 127 | 114 | 140 | 86 | 155 | 55 | 119 | 110 | 131 | 82 | — | — | |
| | 80 | 145 | 145 | 157 | 117 | 173 | 87 | 138 | 138 | 149 | 113 | 164 | 83 | 132 | 132 | 141 | 109 | 155 | 79 | 125 | 125 | 132 | 104 | — | — | |
| | 85 | 153 | 153 | 159 | 141 | 173 | 111 | 147 | 147 | 151 | 137 | 165 | 107 | 140 | 140 | 143 | 133 | 156 | 103 | 133 | 133 | 135 | 129 | — | — | |
| | 90 | 162 | 162 | 162 | 162 | 174 | 134 | 155 | 155 | 155 | 155 | 166 | 130 | 148 | 148 | 148 | 148 | 157 | 126 | 141 | 141 | 141 | 141 | — | — | |
| 7320 | 75 | 143 | 127 | 158 | 96 | 174 | 63 | 136 | 123 | 150 | 93 | 165 | 59 | 129 | 119 | 141 | 89 | 156 | 55 | 121 | 115 | 132 | 85 | — | — | |
| | 80 | 148 | 148 | 159 | 121 | 174 | 89 | 141 | 141 | 151 | 117 | 166 | 85 | 134 | 134 | 142 | 113 | 157 | 81 | 127 | 127 | 134 | 108 | — | — | |
| | 85 | 156 | 156 | 161 | 147 | 175 | 114 | 150 | 150 | 153 | 143 | 166 | 110 | 143 | 143 | 145 | 139 | 157 | 106 | 135 | 135 | 136 | 134 | — | — | |
| | 90 | 165 | 165 | 165 | 165 | 176 | 140 | 159 | 159 | 159 | 159 | 168 | 136 | 151 | 151 | 151 | 151 | 159 | 132 | 144 | 144 | 144 | 144 | — | — | |
| 7790 | 75 | 145 | 132 | 159 | 99 | 175 | 64 | 138 | 127 | 151 | 96 | 166 | 60 | 130 | 123 | 142 | 91 | 157 | 56 | 122 | 119 | 134 | 86 | — | — | |
| | 80 | 150 | 150 | 160 | 125 | 176 | 91 | 144 | 144 | 152 | 121 | 167 | 88 | 137 | 137 | 144 | 117 | 158 | 84 | 129 | 129 | 135 | 113 | — | — | |
| | 85 | 159 | 159 | 162 | 152 | 177 | 118 | 153 | 153 | 155 | 148 | 168 | 114 | 145 | 145 | 147 | 144 | 159 | 110 | 138 | 138 | 138 | 138 | — | — | |
| | 90 | 169 | 169 | 169 | 169 | 178 | 145 | 161 | 161 | 161 | 161 | 169 | 141 | 154 | 154 | 154 | 154 | 161 | 137 | — | — | — | — | — | — | |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 46. 22.9 Ton Gross Cooling Capacities (MBh)—High Efficiency 3-Row Condenser Coil (I-P)—50 Hz R-22 Refrigerant

| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-----------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | | 115 | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 6900 | 75 | 248 | 195 | 275 | 158 | 306 | 110 | 237 | 189 | 263 | 153 | 293 | 105 | 225 | 182 | 250 | 146 | 279 | 99 | 212 | 175 | 237 | 140 | 264 | 92 |
| | 80 | 250 | 230 | 276 | 188 | 306 | 146 | 239 | 224 | 264 | 182 | 293 | 140 | 228 | 217 | 251 | 175 | 279 | 134 | 216 | 210 | 238 | 168 | 264 | 127 |
| | 85 | 257 | 257 | 277 | 222 | 307 | 180 | 248 | 248 | 266 | 215 | 294 | 174 | 238 | 238 | 253 | 209 | 280 | 168 | 227 | 227 | 239 | 202 | 265 | 161 |
| | 90 | 271 | 271 | 280 | 256 | 308 | 213 | 262 | 262 | 268 | 250 | 295 | 207 | 251 | 251 | 256 | 243 | 281 | 200 | 240 | 240 | 243 | 236 | 266 | 194 |
| 7500 | 75 | 252 | 204 | 280 | 165 | 311 | 112 | 241 | 198 | 268 | 159 | 297 | 107 | 229 | 191 | 255 | 152 | 283 | 100 | 216 | 184 | 241 | 146 | 268 | 94 |
| | 80 | 256 | 241 | 281 | 196 | 312 | 150 | 245 | 235 | 269 | 190 | 298 | 144 | 233 | 228 | 256 | 183 | 284 | 138 | 220 | 220 | 242 | 176 | 269 | 132 |
| | 85 | 265 | 265 | 283 | 232 | 312 | 187 | 255 | 255 | 271 | 226 | 299 | 181 | 245 | 245 | 258 | 219 | 285 | 174 | 233 | 233 | 244 | 212 | 269 | 168 |
| | 90 | 280 | 280 | 286 | 269 | 313 | 223 | 270 | 270 | 274 | 263 | 300 | 217 | 259 | 259 | 262 | 256 | 286 | 210 | 247 | 247 | 247 | 247 | 271 | 203 |
| 8000 | 75 | 256 | 211 | 284 | 170 | 315 | 114 | 245 | 204 | 271 | 164 | 301 | 108 | 232 | 198 | 258 | 157 | 286 | 102 | 219 | 190 | 243 | 151 | 270 | 96 |
| | 80 | 260 | 251 | 285 | 202 | 315 | 154 | 249 | 244 | 272 | 196 | 302 | 148 | 236 | 236 | 259 | 189 | 287 | 142 | 224 | 224 | 245 | 182 | 271 | 135 |
| | 85 | 271 | 271 | 287 | 241 | 316 | 193 | 261 | 261 | 274 | 234 | 302 | 187 | 250 | 250 | 261 | 228 | 288 | 180 | 239 | 239 | 247 | 220 | 273 | 173 |
| | 90 | 286 | 286 | 291 | 280 | 317 | 231 | 276 | 276 | 279 | 274 | 304 | 224 | 265 | 265 | 265 | 265 | 289 | 218 | 253 | 253 | 253 | 253 | 274 | 211 |
| 9000 | 75 | 262 | 224 | 290 | 179 | 321 | 117 | 250 | 218 | 277 | 173 | 307 | 111 | 238 | 211 | 263 | 165 | 291 | 105 | 224 | 203 | 248 | 158 | 275 | 98 |
| | 80 | 266 | 266 | 291 | 214 | 322 | 161 | 256 | 256 | 278 | 208 | 308 | 155 | 245 | 245 | 264 | 201 | 293 | 149 | 233 | 233 | 250 | 194 | 276 | 142 |
| | 85 | 282 | 282 | 294 | 257 | 323 | 204 | 272 | 272 | 281 | 251 | 309 | 197 | 260 | 260 | 267 | 244 | 294 | 191 | 248 | 248 | 253 | 237 | 278 | 184 |
| | 90 | 298 | 298 | 298 | 298 | 324 | 246 | 287 | 287 | 287 | 287 | 310 | 239 | 275 | 275 | 275 | 275 | 295 | 233 | 263 | 263 | 263 | 263 | 280 | 226 |
| 10000 | 75 | 268 | 237 | 295 | 187 | 326 | 120 | 255 | 230 | 281 | 181 | 311 | 114 | 243 | 223 | 267 | 174 | 296 | 108 | 229 | 216 | 252 | 167 | 279 | 101 |
| | 80 | 275 | 275 | 296 | 226 | 327 | 168 | 264 | 264 | 283 | 219 | 313 | 162 | 253 | 253 | 269 | 212 | 297 | 156 | 240 | 240 | 254 | 205 | 280 | 148 |
| | 85 | 292 | 292 | 300 | 274 | 328 | 214 | 280 | 280 | 287 | 267 | 314 | 208 | 269 | 269 | 273 | 260 | 298 | 201 | 256 | 256 | 258 | 253 | 282 | 194 |
| | 90 | 308 | 308 | 308 | 308 | 330 | 261 | 297 | 297 | 297 | 297 | 316 | 254 | 285 | 285 | 284 | 284 | 300 | 247 | 271 | 271 | 271 | 271 | 284 | 240 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 47. 82 kW (22.9 Ton) Gross Cooling Capacities—High Efficiency 3-Row Condenser Coil (SI)—50 Hz R-22 Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
|------|--------------|------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 3260 | 23.9 | 72.7 | 57.2 | 80.6 | 46.3 | 89.7 | 32.2 | 69.5 | 55.4 | 77.1 | 44.8 | 85.9 | 30.8 | 65.9 | 53.3 | 73.3 | 42.8 | 81.8 | 28.9 |
| | 26.7 | 73.3 | 67.4 | 80.9 | 55.1 | 89.7 | 42.8 | 70.0 | 65.7 | 77.4 | 53.3 | 85.9 | 41.0 | 66.8 | 63.6 | 73.6 | 51.3 | 81.8 | 39.3 |
| | 29.4 | 75.3 | 75.3 | 81.2 | 65.1 | 90.0 | 52.8 | 72.7 | 72.7 | 78.0 | 63.0 | 86.2 | 51.0 | 69.8 | 69.8 | 74.2 | 61.3 | 82.1 | 49.2 |
| | 32.2 | 79.4 | 79.4 | 82.1 | 75.0 | 90.3 | 62.4 | 76.8 | 76.8 | 78.5 | 73.3 | 86.5 | 60.7 | 73.6 | 73.6 | 75.0 | 71.2 | 82.4 | 58.6 |
| 3540 | 23.9 | 73.9 | 59.8 | 82.1 | 48.4 | 91.1 | 32.8 | 70.6 | 58.0 | 78.5 | 46.6 | 87.0 | 31.4 | 67.1 | 56.0 | 74.7 | 44.5 | 82.9 | 29.3 |
| | 26.7 | 75.0 | 70.6 | 82.4 | 57.4 | 91.4 | 44.0 | 71.8 | 68.9 | 78.8 | 55.7 | 87.3 | 42.2 | 68.3 | 66.8 | 75.0 | 53.6 | 83.2 | 40.4 |
| | 29.4 | 77.7 | 77.7 | 82.9 | 68.0 | 91.4 | 54.8 | 74.7 | 74.7 | 79.4 | 66.2 | 87.6 | 53.0 | 71.8 | 71.8 | 75.6 | 64.2 | 83.5 | 51.0 |
| | 32.2 | 82.1 | 82.1 | 83.8 | 78.8 | 91.7 | 65.4 | 79.1 | 79.1 | 80.3 | 77.1 | 87.9 | 63.6 | 75.9 | 75.9 | 76.8 | 75.0 | 83.8 | 61.5 |
| 3780 | 23.9 | 75.0 | 61.8 | 83.2 | 49.8 | 92.3 | 33.4 | 71.8 | 59.8 | 79.4 | 48.1 | 88.2 | 31.7 | 68.0 | 58.0 | 75.6 | 46.0 | 83.8 | 29.9 |
| | 26.7 | 76.2 | 73.6 | 83.5 | 59.2 | 92.3 | 45.1 | 73.0 | 71.5 | 79.7 | 57.4 | 88.5 | 43.4 | 69.2 | 69.2 | 75.9 | 55.4 | 84.1 | 41.6 |
| | 29.4 | 79.4 | 79.4 | 84.1 | 70.6 | 92.6 | 56.6 | 76.5 | 76.5 | 80.3 | 68.6 | 88.5 | 54.8 | 73.3 | 73.3 | 76.5 | 66.8 | 84.4 | 52.8 |
| | 32.2 | 83.8 | 83.8 | 85.3 | 82.1 | 92.9 | 67.7 | 80.9 | 80.9 | 81.8 | 80.3 | 89.1 | 65.7 | 77.7 | 77.7 | 77.7 | 77.7 | 84.7 | 63.9 |
| 4250 | 23.9 | 76.8 | 65.7 | 85.0 | 52.5 | 94.1 | 34.3 | 73.3 | 63.9 | 81.2 | 50.7 | 90.0 | 32.5 | 69.8 | 61.8 | 77.1 | 48.4 | 85.3 | 30.8 |
| | 26.7 | 78.0 | 78.0 | 85.3 | 62.7 | 94.4 | 47.2 | 75.0 | 75.0 | 81.5 | 61.0 | 90.3 | 45.4 | 71.8 | 71.8 | 77.4 | 58.9 | 85.9 | 43.7 |
| | 29.4 | 82.6 | 82.6 | 86.2 | 75.3 | 94.7 | 59.8 | 79.7 | 79.7 | 82.4 | 73.6 | 90.6 | 57.7 | 76.2 | 76.2 | 78.3 | 71.5 | 86.2 | 56.0 |
| | 32.2 | 87.3 | 87.3 | 87.3 | 87.3 | 95.0 | 72.1 | 84.1 | 84.1 | 84.1 | 84.1 | 90.9 | 70.0 | 80.6 | 80.6 | 80.6 | 80.6 | 86.5 | 68.3 |
| 4720 | 23.9 | 78.5 | 69.5 | 86.5 | 54.8 | 95.5 | 35.2 | 74.7 | 67.4 | 82.4 | 53.0 | 91.1 | 33.4 | 71.2 | 65.4 | 78.3 | 51.0 | 86.8 | 31.7 |
| | 26.7 | 80.6 | 80.6 | 86.8 | 66.2 | 95.8 | 49.2 | 77.4 | 77.4 | 82.9 | 64.2 | 91.7 | 47.5 | 74.2 | 74.2 | 78.8 | 62.1 | 87.0 | 45.7 |
| | 29.4 | 85.6 | 85.6 | 87.9 | 80.3 | 96.1 | 62.7 | 82.1 | 82.1 | 84.1 | 78.3 | 92.0 | 61.0 | 78.8 | 78.8 | 80.0 | 76.2 | 87.3 | 58.9 |
| | 32.2 | 90.3 | 90.3 | 90.3 | 90.3 | 96.7 | 76.5 | 87.0 | 87.0 | 87.0 | 87.0 | 92.6 | 74.4 | 83.5 | 83.5 | 83.2 | 83.2 | 87.9 | 72.4 |
| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 3260 | 23.9 | 62.1 | 51.3 | 69.5 | 41.0 | 77.4 | 27.1 | | | | | | | | | | | | |
| | 26.7 | 63.3 | 61.5 | 69.8 | 49.2 | 77.4 | 37.2 | | | | | | | | | | | | |
| | 29.4 | 66.5 | 66.5 | 70.0 | 59.2 | 77.7 | 47.2 | | | | | | | | | | | | |
| | 32.2 | 70.3 | 70.3 | 71.2 | 69.2 | 78.0 | 56.9 | | | | | | | | | | | | |
| 3540 | 23.9 | 63.3 | 53.9 | 70.6 | 42.8 | 78.5 | 27.6 | | | | | | | | | | | | |
| | 26.7 | 64.5 | 64.5 | 70.9 | 51.6 | 78.8 | 38.7 | | | | | | | | | | | | |
| | 29.4 | 68.3 | 68.3 | 71.5 | 62.1 | 78.8 | 49.2 | | | | | | | | | | | | |
| | 32.2 | 72.4 | 72.4 | 72.4 | 72.4 | 79.4 | 59.5 | | | | | | | | | | | | |
| 3780 | 23.9 | 64.2 | 55.7 | 71.2 | 44.3 | 79.1 | 28.0 | | | | | | | | | | | | |
| | 26.7 | 65.7 | 65.7 | 71.8 | 53.3 | 79.4 | 39.6 | | | | | | | | | | | | |
| | 29.4 | 70.0 | 70.0 | 72.4 | 64.5 | 80.0 | 50.7 | | | | | | | | | | | | |
| | 32.2 | 74.2 | 74.2 | 74.2 | 74.2 | 80.3 | 61.8 | | | | | | | | | | | | |
| 4250 | 23.9 | 65.7 | 59.5 | 72.7 | 46.3 | 80.6 | 28.8 | | | | | | | | | | | | |
| | 26.7 | 68.3 | 68.3 | 73.3 | 56.9 | 80.9 | 41.6 | | | | | | | | | | | | |
| | 29.4 | 72.7 | 72.7 | 74.2 | 69.5 | 81.5 | 53.9 | | | | | | | | | | | | |
| | 32.2 | 77.1 | 77.1 | 77.1 | 77.1 | 82.1 | 66.2 | | | | | | | | | | | | |
| 4720 | 23.9 | 67.1 | 63.3 | 73.9 | 48.9 | 81.8 | 29.6 | | | | | | | | | | | | |
| | 26.7 | 70.3 | 70.3 | 74.4 | 60.1 | 82.1 | 43.4 | | | | | | | | | | | | |
| | 29.4 | 75.0 | 75.0 | 75.6 | 74.2 | 82.6 | 56.9 | | | | | | | | | | | | |
| | 32.2 | 79.4 | 79.4 | 79.4 | 79.4 | 83.2 | 70.3 | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 48. 25.4 Ton Gross Cooling Capacities (MBh)—High Efficiency 3-Row Condenser Coil (I-P)—50 Hz R-22 Refrigerant

| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-----------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | | 115 | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 7500 | 75 | 280 | 219 | 311 | 178 | 345 | 125 | 267 | 212 | 297 | 172 | 330 | 118 | 254 | 205 | 283 | 165 | 314 | 111 | 240 | 197 | 267 | 158 | 297 | 104 |
| | 80 | 282 | 258 | 311 | 211 | 345 | 164 | 270 | 251 | 298 | 204 | 331 | 157 | 257 | 243 | 284 | 197 | 315 | 150 | 244 | 235 | 268 | 189 | 298 | 143 |
| | 85 | 289 | 289 | 313 | 248 | 346 | 202 | 279 | 279 | 299 | 241 | 332 | 195 | 267 | 267 | 285 | 234 | 316 | 188 | 255 | 255 | 270 | 226 | 299 | 180 |
| | 90 | 305 | 305 | 316 | 286 | 347 | 239 | 294 | 294 | 303 | 279 | 332 | 232 | 282 | 282 | 289 | 272 | 317 | 224 | 270 | 270 | 274 | 264 | 300 | 217 |
| 8000 | 75 | 284 | 227 | 315 | 184 | 349 | 126 | 271 | 219 | 301 | 177 | 334 | 120 | 258 | 212 | 286 | 170 | 318 | 113 | 243 | 204 | 270 | 163 | 301 | 106 |
| | 80 | 287 | 267 | 316 | 218 | 350 | 168 | 275 | 260 | 302 | 211 | 335 | 161 | 262 | 253 | 287 | 203 | 319 | 154 | 248 | 245 | 272 | 195 | 302 | 147 |
| | 85 | 296 | 296 | 317 | 257 | 351 | 208 | 285 | 285 | 304 | 250 | 335 | 201 | 273 | 273 | 289 | 243 | 319 | 194 | 261 | 261 | 274 | 235 | 302 | 186 |
| | 90 | 312 | 312 | 321 | 297 | 352 | 247 | 301 | 301 | 308 | 290 | 337 | 240 | 289 | 289 | 293 | 283 | 321 | 232 | 276 | 276 | 279 | 275 | 304 | 225 |
| 9000 | 75 | 291 | 240 | 322 | 194 | 357 | 130 | 278 | 233 | 308 | 187 | 341 | 123 | 264 | 226 | 293 | 180 | 324 | 116 | 249 | 218 | 276 | 173 | 306 | 109 |
| | 80 | 295 | 286 | 323 | 230 | 358 | 175 | 283 | 279 | 309 | 223 | 342 | 169 | 268 | 268 | 294 | 216 | 325 | 162 | 255 | 255 | 278 | 208 | 308 | 154 |
| | 85 | 308 | 308 | 325 | 274 | 358 | 220 | 297 | 297 | 311 | 267 | 343 | 212 | 285 | 285 | 296 | 260 | 326 | 205 | 271 | 271 | 281 | 252 | 309 | 197 |
| | 90 | 326 | 326 | 330 | 320 | 360 | 263 | 314 | 314 | 317 | 313 | 344 | 255 | 301 | 301 | 301 | 301 | 328 | 248 | 288 | 288 | 287 | 287 | 310 | 240 |
| 10000 | 75 | 297 | 254 | 328 | 204 | 363 | 133 | 284 | 246 | 313 | 197 | 347 | 126 | 270 | 239 | 298 | 188 | 329 | 119 | 254 | 231 | 281 | 180 | 311 | 112 |
| | 80 | 302 | 302 | 330 | 242 | 364 | 183 | 290 | 290 | 315 | 235 | 348 | 176 | 277 | 277 | 299 | 227 | 331 | 169 | 264 | 264 | 283 | 219 | 312 | 161 |
| | 85 | 319 | 319 | 332 | 291 | 365 | 230 | 307 | 307 | 318 | 284 | 349 | 223 | 294 | 294 | 303 | 276 | 332 | 216 | 280 | 280 | 286 | 268 | 314 | 208 |
| | 90 | 337 | 337 | 337 | 337 | 366 | 278 | 325 | 325 | 325 | 325 | 351 | 271 | 311 | 311 | 311 | 311 | 334 | 263 | 297 | 297 | 297 | 297 | 316 | 255 |
| 11000 | 75 | 303 | 267 | 333 | 211 | 368 | 135 | 289 | 259 | 318 | 204 | 351 | 129 | 274 | 252 | 302 | 197 | 334 | 122 | 259 | 243 | 285 | 189 | 315 | 114 |
| | 80 | 310 | 310 | 335 | 254 | 369 | 189 | 298 | 298 | 320 | 247 | 353 | 183 | 285 | 285 | 304 | 239 | 335 | 175 | 271 | 271 | 287 | 231 | 317 | 168 |
| | 85 | 329 | 329 | 338 | 307 | 370 | 241 | 316 | 316 | 324 | 300 | 354 | 234 | 303 | 303 | 308 | 292 | 337 | 226 | 288 | 288 | 292 | 284 | 318 | 218 |
| | 90 | 347 | 347 | 347 | 347 | 372 | 293 | 334 | 334 | 334 | 334 | 356 | 286 | 320 | 320 | 320 | 320 | 339 | 278 | 306 | 306 | 306 | 306 | 321 | 270 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 49. 89 kw (25.4 Ton) Gross Cooling Capacities—High Efficiency 3-Row Condenser Coil (SI)—50 Hz R-22 Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-------|-------|-------|-------|------|------|------|------|------|-------|------|------|------|------|------|------|------|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 3540 | 23.9 | 82.1 | 64.2 | 91.1 | 52.2 | 101.1 | 36.6 | 78.3 | 62.1 | 87.0 | 50.4 | 96.7 | 34.6 | 74.4 | 60.1 | 82.9 | 48.4 | 92.0 | 32.5 |
| | 26.7 | 82.6 | 75.6 | 91.1 | 61.8 | 101.1 | 48.1 | 79.1 | 73.6 | 87.3 | 59.8 | 97.0 | 46.0 | 75.3 | 71.2 | 83.2 | 57.7 | 92.3 | 44.0 |
| | 29.4 | 84.7 | 84.7 | 91.7 | 72.7 | 101.4 | 59.2 | 81.8 | 81.8 | 87.6 | 70.6 | 97.3 | 57.2 | 78.3 | 78.3 | 83.5 | 68.6 | 92.6 | 55.1 |
| | 32.2 | 89.4 | 89.4 | 92.6 | 83.8 | 101.7 | 70.0 | 86.2 | 86.2 | 88.8 | 81.8 | 97.3 | 68.0 | 82.6 | 82.6 | 84.7 | 79.7 | 92.9 | 65.7 |
| 3780 | 23.9 | 83.2 | 66.5 | 92.3 | 53.9 | 102.3 | 36.9 | 79.4 | 64.2 | 88.2 | 51.9 | 97.9 | 35.2 | 75.6 | 62.1 | 83.8 | 49.8 | 93.2 | 33.1 |
| | 26.7 | 84.1 | 78.3 | 92.6 | 63.9 | 102.6 | 49.2 | 80.6 | 76.2 | 88.5 | 61.8 | 98.2 | 47.2 | 76.8 | 74.2 | 84.1 | 59.5 | 93.5 | 45.1 |
| | 29.4 | 86.8 | 86.8 | 92.9 | 75.3 | 102.9 | 61.0 | 83.5 | 83.5 | 89.1 | 73.3 | 98.2 | 58.9 | 80.0 | 80.0 | 84.7 | 71.2 | 93.5 | 56.9 |
| | 32.2 | 91.4 | 91.4 | 94.1 | 87.0 | 103.2 | 72.4 | 88.2 | 88.2 | 90.3 | 85.0 | 98.8 | 70.3 | 84.7 | 84.7 | 85.9 | 82.9 | 94.1 | 68.0 |
| 4250 | 23.9 | 85.3 | 70.3 | 94.4 | 56.9 | 104.6 | 38.1 | 81.5 | 68.3 | 90.3 | 54.8 | 99.9 | 36.0 | 77.4 | 66.2 | 85.9 | 52.8 | 95.0 | 34.0 |
| | 26.7 | 86.5 | 83.8 | 94.7 | 67.4 | 104.9 | 51.3 | 82.9 | 81.8 | 90.6 | 65.4 | 100.2 | 49.5 | 78.5 | 78.5 | 86.2 | 63.3 | 95.3 | 47.5 |
| | 29.4 | 90.3 | 90.3 | 95.3 | 80.3 | 104.9 | 64.5 | 87.0 | 87.0 | 91.1 | 78.3 | 100.5 | 62.1 | 83.5 | 83.5 | 86.8 | 76.2 | 95.5 | 60.1 |
| | 32.2 | 95.5 | 95.5 | 96.7 | 93.8 | 105.5 | 77.1 | 92.0 | 92.0 | 92.9 | 91.7 | 100.8 | 74.7 | 88.2 | 88.2 | 88.2 | 88.2 | 96.1 | 72.7 |
| 4720 | 23.9 | 87.0 | 74.4 | 96.1 | 59.8 | 106.4 | 39.0 | 83.2 | 72.1 | 91.7 | 57.7 | 101.7 | 36.9 | 79.1 | 70.0 | 87.3 | 55.1 | 96.4 | 34.9 |
| | 26.7 | 88.5 | 88.5 | 96.7 | 70.9 | 106.7 | 53.6 | 85.0 | 85.0 | 92.3 | 68.9 | 102.0 | 51.6 | 81.2 | 81.2 | 87.6 | 66.5 | 97.0 | 49.5 |
| | 29.4 | 93.5 | 93.5 | 97.3 | 85.3 | 107.0 | 67.4 | 90.0 | 90.0 | 93.2 | 83.2 | 102.3 | 65.4 | 86.2 | 86.2 | 88.8 | 80.9 | 97.3 | 63.3 |
| | 32.2 | 98.8 | 98.8 | 98.8 | 98.8 | 107.3 | 81.5 | 95.3 | 95.3 | 95.3 | 95.3 | 102.9 | 79.4 | 91.1 | 91.1 | 91.1 | 91.1 | 97.9 | 77.1 |
| 5190 | 23.9 | 88.8 | 78.3 | 97.6 | 61.8 | 107.9 | 39.6 | 84.7 | 75.9 | 93.2 | 59.8 | 102.9 | 37.8 | 80.3 | 73.9 | 88.5 | 57.7 | 97.9 | 35.8 |
| | 26.7 | 90.9 | 90.9 | 98.2 | 74.4 | 108.1 | 55.4 | 87.3 | 87.3 | 93.8 | 72.4 | 103.5 | 53.6 | 83.5 | 83.5 | 89.1 | 70.0 | 98.2 | 51.3 |
| | 29.4 | 96.4 | 96.4 | 99.1 | 90.0 | 108.4 | 70.6 | 92.6 | 92.6 | 95.0 | 87.9 | 103.8 | 68.6 | 88.8 | 88.8 | 90.3 | 85.6 | 98.8 | 66.2 |
| | 32.2 | 101.7 | 101.7 | 101.7 | 101.7 | 109.0 | 85.9 | 97.9 | 97.9 | 97.9 | 97.9 | 104.3 | 83.8 | 93.8 | 93.8 | 93.8 | 93.8 | 99.4 | 81.5 |
| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 3540 | 23.9 | 70.3 | 57.7 | 78.3 | 46.3 | 87.0 | 30.5 | | | | | | | | | | | | |
| | 26.7 | 71.5 | 68.9 | 78.5 | 55.4 | 87.3 | 41.9 | | | | | | | | | | | | |
| | 29.4 | 74.7 | 74.7 | 79.1 | 66.2 | 87.6 | 52.8 | | | | | | | | | | | | |
| | 32.2 | 79.1 | 79.1 | 80.3 | 77.4 | 87.9 | 63.6 | | | | | | | | | | | | |
| 3780 | 23.9 | 71.2 | 59.8 | 79.1 | 47.8 | 88.2 | 31.1 | | | | | | | | | | | | |
| | 26.7 | 72.7 | 71.8 | 79.7 | 57.2 | 88.5 | 43.1 | | | | | | | | | | | | |
| | 29.4 | 76.5 | 76.5 | 80.3 | 68.9 | 88.5 | 54.5 | | | | | | | | | | | | |
| | 32.2 | 80.9 | 80.9 | 81.8 | 80.6 | 89.1 | 65.9 | | | | | | | | | | | | |
| 4250 | 23.9 | 73.0 | 63.9 | 80.9 | 50.7 | 89.7 | 31.9 | | | | | | | | | | | | |
| | 26.7 | 74.7 | 74.7 | 81.5 | 61.0 | 90.3 | 45.1 | | | | | | | | | | | | |
| | 29.4 | 79.4 | 79.4 | 82.4 | 73.9 | 90.6 | 57.7 | | | | | | | | | | | | |
| | 32.2 | 84.4 | 84.4 | 84.1 | 84.1 | 90.9 | 70.3 | | | | | | | | | | | | |
| 4720 | 23.9 | 74.4 | 67.7 | 82.4 | 52.8 | 91.1 | 32.8 | | | | | | | | | | | | |
| | 26.7 | 77.4 | 77.4 | 82.9 | 64.2 | 91.4 | 47.2 | | | | | | | | | | | | |
| | 29.4 | 82.1 | 82.1 | 83.8 | 78.5 | 92.0 | 61.0 | | | | | | | | | | | | |
| | 32.2 | 87.0 | 87.0 | 87.0 | 87.0 | 92.6 | 74.7 | | | | | | | | | | | | |
| 5190 | 23.9 | 75.9 | 71.2 | 83.5 | 55.4 | 92.3 | 33.4 | | | | | | | | | | | | |
| | 26.7 | 79.4 | 79.4 | 84.1 | 67.7 | 92.9 | 49.2 | | | | | | | | | | | | |
| | 29.4 | 84.4 | 84.4 | 85.6 | 83.2 | 93.2 | 63.9 | | | | | | | | | | | | |
| | 32.2 | 89.7 | 89.7 | 89.7 | 89.7 | 94.1 | 79.1 | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 50. 29.2 Ton Gross Cooling Capacities (MBh)—High Efficiency 3-Row Condenser Coil (I-P)—50 Hz R-22 Refrigerant

| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-----------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | | 115 | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 8750 | 75 | 323 | 264 | 358 | 207 | 396 | 143 | 308 | 256 | 341 | 200 | 378 | 136 | 293 | 247 | 324 | 192 | 359 | 128 | 276 | 238 | 306 | 184 | 339 | 120 |
| | 80 | 327 | 313 | 358 | 252 | 396 | 192 | 313 | 305 | 342 | 244 | 379 | 185 | 298 | 296 | 325 | 236 | 360 | 177 | 282 | 282 | 307 | 227 | 340 | 169 |
| | 85 | 340 | 340 | 361 | 300 | 397 | 240 | 328 | 328 | 345 | 292 | 380 | 233 | 314 | 314 | 328 | 283 | 361 | 225 | 299 | 299 | 310 | 275 | 341 | 216 |
| | 90 | 359 | 359 | 365 | 348 | 398 | 287 | 346 | 346 | 350 | 340 | 381 | 279 | 332 | 332 | 334 | 332 | 362 | 271 | 316 | 316 | 316 | 316 | 343 | 262 |
| 9000 | 75 | 325 | 267 | 360 | 210 | 398 | 144 | 310 | 259 | 343 | 202 | 380 | 137 | 295 | 251 | 326 | 194 | 361 | 129 | 278 | 242 | 307 | 186 | 340 | 121 |
| | 80 | 330 | 318 | 360 | 256 | 398 | 194 | 315 | 310 | 344 | 248 | 381 | 187 | 299 | 299 | 327 | 239 | 362 | 179 | 284 | 284 | 309 | 231 | 342 | 171 |
| | 85 | 344 | 344 | 363 | 305 | 399 | 244 | 331 | 331 | 347 | 297 | 382 | 236 | 317 | 317 | 330 | 288 | 363 | 228 | 302 | 302 | 312 | 279 | 342 | 219 |
| | 90 | 363 | 363 | 368 | 354 | 400 | 291 | 349 | 349 | 352 | 347 | 383 | 283 | 335 | 335 | 335 | 335 | 364 | 275 | 319 | 319 | 319 | 319 | 344 | 266 |
| 10000 | 75 | 332 | 283 | 366 | 220 | 404 | 147 | 317 | 275 | 349 | 212 | 386 | 139 | 301 | 266 | 331 | 204 | 366 | 132 | 284 | 257 | 313 | 196 | 346 | 123 |
| | 80 | 336 | 336 | 367 | 270 | 405 | 202 | 323 | 323 | 351 | 262 | 387 | 195 | 309 | 309 | 333 | 253 | 368 | 187 | 294 | 294 | 314 | 244 | 347 | 178 |
| | 85 | 356 | 356 | 371 | 324 | 407 | 257 | 342 | 342 | 354 | 315 | 388 | 248 | 328 | 328 | 337 | 307 | 368 | 240 | 312 | 312 | 319 | 298 | 348 | 231 |
| | 90 | 376 | 376 | 376 | 376 | 408 | 309 | 362 | 362 | 361 | 361 | 390 | 301 | 347 | 347 | 346 | 346 | 371 | 292 | 330 | 330 | 330 | 330 | 351 | 284 |
| 11000 | 75 | 338 | 298 | 372 | 230 | 410 | 150 | 322 | 289 | 355 | 222 | 391 | 142 | 306 | 281 | 336 | 214 | 371 | 134 | 289 | 272 | 317 | 206 | 350 | 126 |
| | 80 | 346 | 346 | 373 | 283 | 411 | 210 | 333 | 333 | 356 | 275 | 392 | 202 | 318 | 318 | 338 | 266 | 372 | 194 | 302 | 302 | 319 | 257 | 351 | 186 |
| | 85 | 367 | 367 | 378 | 342 | 412 | 268 | 352 | 352 | 361 | 334 | 393 | 260 | 337 | 337 | 343 | 325 | 374 | 252 | 321 | 321 | 325 | 316 | 353 | 243 |
| | 90 | 387 | 387 | 387 | 387 | 415 | 326 | 373 | 373 | 372 | 372 | 396 | 318 | 357 | 357 | 357 | 357 | 376 | 309 | 340 | 340 | 340 | 340 | 356 | 300 |
| 12000 | 75 | 343 | 312 | 376 | 240 | 415 | 152 | 328 | 304 | 359 | 232 | 395 | 145 | 311 | 295 | 340 | 224 | 375 | 137 | 293 | 286 | 320 | 213 | 353 | 129 |
| | 80 | 355 | 355 | 379 | 296 | 416 | 218 | 341 | 341 | 361 | 288 | 397 | 210 | 326 | 326 | 343 | 279 | 377 | 202 | 309 | 309 | 323 | 270 | 355 | 193 |
| | 85 | 376 | 376 | 384 | 360 | 417 | 280 | 361 | 361 | 367 | 352 | 398 | 272 | 346 | 346 | 349 | 344 | 378 | 263 | 329 | 329 | 329 | 329 | 357 | 254 |
| | 90 | 397 | 397 | 397 | 397 | 420 | 342 | 382 | 382 | 382 | 382 | 401 | 334 | 366 | 366 | 366 | 366 | 381 | 326 | 349 | 349 | 348 | 348 | 361 | 317 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 51. 105 kW (29.2 Ton) Gross Cooling Capacity—High Efficiency 3-Row Condenser Coil (kW) (SI)—50 Hz R-22 Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|------|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 4130 | 23.9 | 94.7 | 77.4 | 104.9 | 60.7 | 116.1 | 41.9 | 90.3 | 75.0 | 99.9 | 58.6 | 110.8 | 39.9 | 85.9 | 72.4 | 95.0 | 56.3 | 105.2 | 37.5 |
| | 26.7 | 95.8 | 91.7 | 104.9 | 73.9 | 116.1 | 56.3 | 91.7 | 89.4 | 100.2 | 71.5 | 111.1 | 54.2 | 87.3 | 86.8 | 95.3 | 69.2 | 105.5 | 51.9 |
| | 29.4 | 99.6 | 99.6 | 105.8 | 87.9 | 116.4 | 70.3 | 96.1 | 96.1 | 101.1 | 85.6 | 111.4 | 68.3 | 92.0 | 92.0 | 96.1 | 82.9 | 105.8 | 65.9 |
| | 32.2 | 105.2 | 105.2 | 107.0 | 102.0 | 116.6 | 84.1 | 101.4 | 101.4 | 102.6 | 99.6 | 111.7 | 81.8 | 97.3 | 97.3 | 97.9 | 97.3 | 106.1 | 79.4 |
| 4250 | 23.9 | 95.3 | 78.3 | 105.5 | 61.5 | 116.6 | 42.2 | 90.9 | 75.9 | 100.5 | 59.2 | 111.4 | 40.2 | 86.5 | 73.6 | 95.5 | 56.9 | 105.8 | 37.8 |
| | 26.7 | 96.7 | 93.2 | 105.5 | 75.0 | 116.6 | 56.9 | 92.3 | 90.9 | 100.8 | 72.7 | 111.7 | 54.8 | 87.6 | 87.6 | 95.8 | 70.0 | 106.1 | 52.5 |
| | 29.4 | 100.8 | 100.8 | 106.4 | 89.4 | 116.9 | 71.5 | 97.0 | 97.0 | 101.7 | 87.0 | 112.0 | 69.2 | 92.9 | 92.9 | 96.7 | 84.4 | 106.4 | 66.8 |
| | 32.2 | 106.4 | 106.4 | 107.9 | 103.8 | 117.2 | 85.3 | 102.3 | 102.3 | 103.2 | 101.7 | 112.3 | 82.9 | 98.2 | 98.2 | 98.2 | 98.2 | 106.7 | 80.6 |
| 4720 | 23.9 | 97.3 | 82.9 | 107.3 | 64.5 | 118.4 | 43.1 | 92.9 | 80.6 | 102.3 | 62.1 | 113.1 | 40.7 | 88.2 | 78.0 | 97.0 | 59.8 | 107.3 | 38.7 |
| | 26.7 | 98.5 | 98.5 | 107.6 | 79.1 | 118.7 | 59.2 | 94.7 | 94.7 | 102.9 | 76.8 | 113.4 | 57.2 | 90.6 | 90.6 | 97.6 | 74.2 | 107.9 | 54.8 |
| | 29.4 | 104.3 | 104.3 | 108.7 | 95.0 | 119.3 | 75.3 | 100.2 | 100.2 | 103.8 | 92.3 | 113.7 | 72.7 | 96.1 | 96.1 | 98.8 | 90.0 | 107.9 | 70.3 |
| | 32.2 | 110.2 | 110.2 | 110.2 | 110.2 | 119.6 | 90.6 | 106.1 | 106.1 | 105.8 | 105.8 | 114.3 | 88.2 | 101.7 | 101.7 | 101.4 | 101.4 | 108.7 | 85.6 |
| 5190 | 23.9 | 99.1 | 87.3 | 109.0 | 67.4 | 120.2 | 44.0 | 94.4 | 84.7 | 104.0 | 65.1 | 114.6 | 41.6 | 89.7 | 82.4 | 98.5 | 62.7 | 108.7 | 39.3 |
| | 26.7 | 101.4 | 101.4 | 109.3 | 82.9 | 120.5 | 61.5 | 97.6 | 97.6 | 104.3 | 80.6 | 114.9 | 59.2 | 93.2 | 93.2 | 99.1 | 78.0 | 109.0 | 56.9 |
| | 29.4 | 107.6 | 107.6 | 110.8 | 100.2 | 120.8 | 78.5 | 103.2 | 103.2 | 105.8 | 97.9 | 115.2 | 76.2 | 98.8 | 98.8 | 100.5 | 95.3 | 109.6 | 73.9 |
| | 32.2 | 113.4 | 113.4 | 113.4 | 113.4 | 121.6 | 95.5 | 109.3 | 109.3 | 109.0 | 109.0 | 116.1 | 93.2 | 104.6 | 104.6 | 104.6 | 104.6 | 110.2 | 90.6 |
| 5660 | 23.9 | 100.5 | 91.4 | 110.2 | 70.3 | 121.6 | 44.5 | 96.1 | 89.1 | 105.2 | 68.0 | 115.8 | 42.5 | 91.1 | 86.5 | 99.6 | 65.7 | 109.9 | 40.2 |
| | 26.7 | 104.0 | 104.0 | 111.1 | 86.8 | 121.9 | 63.9 | 99.9 | 99.9 | 105.8 | 84.4 | 116.4 | 61.5 | 95.5 | 95.5 | 100.5 | 81.8 | 110.5 | 59.2 |
| | 29.4 | 110.2 | 110.2 | 112.5 | 105.5 | 122.2 | 82.1 | 105.8 | 105.8 | 107.6 | 103.2 | 116.6 | 79.7 | 101.4 | 101.4 | 102.3 | 100.8 | 110.8 | 77.1 |
| | 32.2 | 116.4 | 116.4 | 116.4 | 116.4 | 123.1 | 100.2 | 112.0 | 112.0 | 112.0 | 112.0 | 117.5 | 97.9 | 107.3 | 107.3 | 107.3 | 107.3 | 111.7 | 95.5 |
| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 4130 | 23.9 | 80.9 | 69.8 | 89.7 | 53.9 | 99.4 | 35.2 | | | | | | | | | | | | |
| | 26.7 | 82.6 | 82.6 | 90.0 | 66.5 | 99.6 | 49.5 | | | | | | | | | | | | |
| | 29.4 | 87.6 | 87.6 | 90.9 | 80.6 | 99.9 | 63.3 | | | | | | | | | | | | |
| | 32.2 | 92.6 | 92.6 | 92.6 | 92.6 | 100.5 | 76.8 | | | | | | | | | | | | |
| 4250 | 23.9 | 81.5 | 70.9 | 90.0 | 54.5 | 99.6 | 35.5 | | | | | | | | | | | | |
| | 26.7 | 83.2 | 83.2 | 90.6 | 67.7 | 100.2 | 50.1 | | | | | | | | | | | | |
| | 29.4 | 88.5 | 88.5 | 91.4 | 81.8 | 100.2 | 64.2 | | | | | | | | | | | | |
| | 32.2 | 93.5 | 93.5 | 93.5 | 93.5 | 100.8 | 78.0 | | | | | | | | | | | | |
| 4720 | 23.9 | 83.2 | 75.3 | 91.7 | 57.4 | 101.4 | 36.0 | | | | | | | | | | | | |
| | 26.7 | 86.2 | 86.2 | 92.0 | 71.5 | 101.7 | 52.2 | | | | | | | | | | | | |
| | 29.4 | 91.4 | 91.4 | 93.5 | 87.3 | 102.0 | 67.7 | | | | | | | | | | | | |
| | 32.2 | 96.7 | 96.7 | 96.7 | 96.7 | 102.9 | 83.2 | | | | | | | | | | | | |
| 5190 | 23.9 | 84.7 | 79.7 | 92.9 | 60.4 | 102.6 | 36.9 | | | | | | | | | | | | |
| | 26.7 | 88.5 | 88.5 | 93.5 | 75.3 | 102.9 | 54.5 | | | | | | | | | | | | |
| | 29.4 | 94.1 | 94.1 | 95.3 | 92.6 | 103.5 | 71.2 | | | | | | | | | | | | |
| | 32.2 | 99.6 | 99.6 | 99.6 | 99.6 | 104.3 | 87.9 | | | | | | | | | | | | |
| 5660 | 23.9 | 85.9 | 83.8 | 93.8 | 62.4 | 103.5 | 37.8 | | | | | | | | | | | | |
| | 26.7 | 90.6 | 90.6 | 94.7 | 79.1 | 104.0 | 56.6 | | | | | | | | | | | | |
| | 29.4 | 96.4 | 96.4 | 96.4 | 96.4 | 104.6 | 74.4 | | | | | | | | | | | | |
| | 32.2 | 102.3 | 102.3 | 102.0 | 102.0 | 105.8 | 92.9 | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 52. 33.3 Ton Gross Cooling Capacities (MBh)—High Efficiency 3-Row Condenser Coil (I-P)—50 Hz R-22 Refrigerant

| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-----------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | | 115 | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 10000 | 75 | 399 | 314 | 445 | 248 | 494 | 176 | 380 | 303 | 424 | 237 | 471 | 165 | 360 | 291 | 401 | 226 | 447 | 154 | 338 | 279 | 378 | 214 | 421 | 143 |
| | 80 | 404 | 371 | 446 | 303 | 495 | 233 | 385 | 360 | 425 | 291 | 472 | 222 | 366 | 348 | 403 | 280 | 448 | 211 | 345 | 336 | 379 | 267 | 423 | 199 |
| | 85 | 416 | 416 | 448 | 358 | 496 | 289 | 399 | 399 | 428 | 346 | 474 | 278 | 381 | 381 | 406 | 334 | 450 | 267 | 362 | 362 | 383 | 322 | 424 | 255 |
| | 90 | 439 | 439 | 454 | 414 | 497 | 344 | 422 | 422 | 433 | 402 | 475 | 332 | 404 | 404 | 412 | 391 | 451 | 321 | 385 | 385 | 389 | 378 | 426 | 309 |
| 11000 | 75 | 408 | 331 | 453 | 259 | 503 | 179 | 389 | 319 | 432 | 248 | 479 | 169 | 368 | 307 | 409 | 236 | 454 | 158 | 346 | 295 | 385 | 225 | 428 | 146 |
| | 80 | 414 | 393 | 455 | 317 | 504 | 242 | 395 | 382 | 433 | 306 | 481 | 231 | 375 | 370 | 411 | 294 | 456 | 219 | 352 | 352 | 387 | 282 | 430 | 208 |
| | 85 | 431 | 431 | 458 | 378 | 505 | 302 | 413 | 413 | 437 | 366 | 482 | 291 | 395 | 395 | 415 | 354 | 457 | 280 | 375 | 375 | 391 | 342 | 431 | 268 |
| | 90 | 455 | 455 | 465 | 439 | 507 | 362 | 437 | 437 | 444 | 428 | 484 | 351 | 418 | 418 | 422 | 416 | 459 | 339 | 398 | 398 | 398 | 398 | 434 | 327 |
| 12000 | 75 | 416 | 346 | 461 | 269 | 510 | 182 | 396 | 335 | 439 | 258 | 486 | 172 | 375 | 323 | 415 | 246 | 461 | 161 | 352 | 310 | 391 | 234 | 434 | 149 |
| | 80 | 424 | 414 | 462 | 332 | 511 | 250 | 404 | 403 | 441 | 320 | 488 | 239 | 383 | 383 | 417 | 308 | 462 | 227 | 363 | 363 | 393 | 295 | 436 | 216 |
| | 85 | 444 | 444 | 467 | 397 | 513 | 316 | 426 | 426 | 445 | 386 | 489 | 305 | 407 | 407 | 422 | 374 | 464 | 293 | 387 | 387 | 398 | 361 | 437 | 280 |
| | 90 | 470 | 470 | 475 | 464 | 515 | 380 | 451 | 451 | 454 | 453 | 492 | 368 | 431 | 431 | 431 | 431 | 467 | 357 | 410 | 410 | 410 | 410 | 441 | 344 |
| 13000 | 75 | 423 | 362 | 467 | 279 | 517 | 185 | 402 | 350 | 445 | 268 | 492 | 175 | 381 | 338 | 421 | 256 | 466 | 163 | 358 | 325 | 395 | 244 | 439 | 152 |
| | 80 | 430 | 430 | 469 | 346 | 518 | 258 | 412 | 412 | 447 | 334 | 494 | 247 | 393 | 393 | 423 | 322 | 468 | 235 | 372 | 372 | 399 | 309 | 441 | 223 |
| | 85 | 456 | 456 | 475 | 416 | 520 | 329 | 438 | 438 | 453 | 405 | 495 | 317 | 418 | 418 | 429 | 393 | 469 | 305 | 397 | 397 | 405 | 380 | 442 | 293 |
| | 90 | 483 | 483 | 482 | 482 | 522 | 397 | 463 | 463 | 463 | 463 | 498 | 386 | 443 | 443 | 443 | 443 | 473 | 374 | 421 | 421 | 421 | 421 | 447 | 362 |
| 14600 | 75 | 433 | 386 | 476 | 295 | 525 | 190 | 412 | 374 | 452 | 283 | 500 | 179 | 389 | 362 | 428 | 272 | 473 | 168 | 366 | 349 | 402 | 260 | 445 | 156 |
| | 80 | 446 | 446 | 479 | 367 | 527 | 270 | 427 | 427 | 456 | 355 | 502 | 259 | 407 | 407 | 432 | 343 | 475 | 247 | 386 | 386 | 406 | 330 | 447 | 236 |
| | 85 | 473 | 473 | 485 | 447 | 528 | 348 | 454 | 454 | 463 | 435 | 503 | 336 | 433 | 433 | 439 | 422 | 477 | 324 | 411 | 411 | 415 | 410 | 450 | 312 |
| | 90 | 501 | 501 | 500 | 500 | 532 | 425 | 480 | 480 | 480 | 480 | 508 | 413 | 459 | 459 | 459 | 459 | 482 | 401 | 436 | 436 | 436 | 436 | 455 | 389 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 53. 120 kW (33.3 Ton) Gross Cooling Capacities—High Efficiency 3-Row Condenser Coil (SI)—50 Hz R-22 Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 4720 | 23.9 | 116.9 | 92.0 | 130.4 | 72.7 | 144.8 | 51.6 | 111.4 | 88.8 | 124.3 | 69.5 | 138.0 | 48.4 | 105.5 | 85.3 | 117.5 | 66.2 | 131.0 | 45.1 |
| | 26.7 | 118.4 | 108.7 | 130.7 | 88.8 | 145.1 | 68.3 | 112.8 | 105.5 | 124.6 | 85.3 | 138.3 | 65.1 | 107.3 | 102.0 | 118.1 | 82.1 | 131.3 | 61.8 |
| | 29.4 | 121.9 | 121.9 | 131.3 | 104.9 | 145.4 | 84.7 | 116.9 | 116.9 | 125.4 | 101.4 | 138.9 | 81.5 | 111.7 | 111.7 | 119.0 | 97.9 | 131.9 | 78.3 |
| | 32.2 | 128.7 | 128.7 | 133.1 | 121.3 | 145.7 | 100.8 | 123.7 | 123.7 | 126.9 | 117.8 | 139.2 | 97.3 | 118.4 | 118.4 | 120.8 | 114.6 | 132.2 | 94.1 |
| 5190 | 23.9 | 119.6 | 97.0 | 132.8 | 75.9 | 147.4 | 52.5 | 114.0 | 93.5 | 126.6 | 72.7 | 140.4 | 49.5 | 107.9 | 90.0 | 119.9 | 69.2 | 133.1 | 46.3 |
| | 26.7 | 121.3 | 115.2 | 133.4 | 92.9 | 147.7 | 70.9 | 115.8 | 112.0 | 126.9 | 89.7 | 141.0 | 67.7 | 109.9 | 108.4 | 120.5 | 86.2 | 133.6 | 64.2 |
| | 29.4 | 126.3 | 126.3 | 134.2 | 110.8 | 148.0 | 88.5 | 121.0 | 121.0 | 128.1 | 107.3 | 141.3 | 85.3 | 115.8 | 115.8 | 121.6 | 103.8 | 133.9 | 82.1 |
| | 32.2 | 133.4 | 133.4 | 136.3 | 128.7 | 148.6 | 106.1 | 128.1 | 128.1 | 130.1 | 125.4 | 141.9 | 102.9 | 122.5 | 122.5 | 123.7 | 121.9 | 134.5 | 99.4 |
| 5660 | 23.9 | 121.9 | 101.4 | 135.1 | 78.8 | 149.5 | 53.3 | 116.1 | 98.2 | 128.7 | 75.6 | 142.4 | 50.4 | 109.9 | 94.7 | 121.6 | 72.1 | 135.1 | 47.2 |
| | 26.7 | 124.3 | 121.3 | 135.4 | 97.3 | 149.8 | 73.3 | 118.4 | 118.1 | 129.2 | 93.8 | 143.0 | 70.0 | 112.3 | 112.3 | 122.2 | 90.3 | 135.4 | 66.5 |
| | 29.4 | 130.1 | 130.1 | 136.9 | 116.4 | 150.4 | 92.6 | 124.9 | 124.9 | 130.4 | 113.1 | 143.3 | 89.4 | 119.3 | 119.3 | 123.7 | 109.6 | 136.0 | 85.9 |
| | 32.2 | 137.7 | 137.7 | 139.2 | 136.0 | 150.9 | 111.4 | 132.2 | 132.2 | 133.1 | 132.8 | 144.2 | 107.9 | 126.3 | 126.3 | 126.3 | 126.3 | 136.9 | 104.6 |
| 6140 | 23.9 | 124.0 | 106.1 | 136.9 | 81.8 | 151.5 | 54.2 | 117.8 | 102.6 | 130.4 | 78.5 | 144.2 | 51.3 | 111.7 | 99.1 | 123.4 | 75.0 | 136.6 | 47.8 |
| | 26.7 | 126.0 | 126.0 | 137.5 | 101.4 | 151.8 | 75.6 | 120.8 | 120.8 | 131.0 | 97.9 | 144.8 | 72.4 | 115.2 | 115.2 | 124.0 | 94.4 | 137.2 | 68.9 |
| | 29.4 | 133.6 | 133.6 | 139.2 | 121.9 | 152.4 | 96.4 | 128.4 | 128.4 | 132.8 | 118.7 | 145.1 | 92.9 | 122.5 | 122.5 | 125.7 | 115.2 | 137.5 | 89.4 |
| | 32.2 | 141.6 | 141.6 | 141.3 | 141.3 | 153.0 | 116.4 | 135.7 | 135.7 | 135.7 | 135.7 | 146.0 | 113.1 | 129.8 | 129.8 | 129.8 | 129.8 | 138.6 | 109.6 |
| 6890 | 23.9 | 126.9 | 113.1 | 139.5 | 86.5 | 153.9 | 55.7 | 120.8 | 109.6 | 132.5 | 82.9 | 146.5 | 52.5 | 114.0 | 106.1 | 125.4 | 79.7 | 138.6 | 49.2 |
| | 26.7 | 130.7 | 130.7 | 140.4 | 107.6 | 154.5 | 79.1 | 125.1 | 125.1 | 133.6 | 104.0 | 147.1 | 75.9 | 119.3 | 119.3 | 126.6 | 100.5 | 139.2 | 72.4 |
| | 29.4 | 138.6 | 138.6 | 142.1 | 131.0 | 154.7 | 102.0 | 133.1 | 133.1 | 135.7 | 127.5 | 147.4 | 98.5 | 126.9 | 126.9 | 128.7 | 123.7 | 139.8 | 95.0 |
| | 32.2 | 146.8 | 146.8 | 146.5 | 146.5 | 155.9 | 124.6 | 140.7 | 140.7 | 140.7 | 140.7 | 148.9 | 121.0 | 134.5 | 134.5 | 134.5 | 134.5 | 141.3 | 117.5 |
| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 4720 | 23.9 | 99.1 | 81.8 | 110.8 | 62.7 | 123.4 | 41.9 | | | | | | | | | | | | |
| | 26.7 | 101.1 | 98.5 | 111.1 | 78.3 | 124.0 | 58.3 | | | | | | | | | | | | |
| | 29.4 | 106.1 | 106.1 | 112.3 | 94.4 | 124.3 | 74.7 | | | | | | | | | | | | |
| | 32.2 | 112.8 | 112.8 | 114.0 | 110.8 | 124.9 | 90.6 | | | | | | | | | | | | |
| 5190 | 23.9 | 101.4 | 86.5 | 112.8 | 65.9 | 125.4 | 42.8 | | | | | | | | | | | | |
| | 26.7 | 103.2 | 103.2 | 113.4 | 82.6 | 126.0 | 61.0 | | | | | | | | | | | | |
| | 29.4 | 109.9 | 109.9 | 114.6 | 100.2 | 126.3 | 78.5 | | | | | | | | | | | | |
| | 32.2 | 116.6 | 116.6 | 116.6 | 116.6 | 127.2 | 95.8 | | | | | | | | | | | | |
| 5660 | 23.9 | 103.2 | 90.9 | 114.6 | 68.6 | 127.2 | 43.7 | | | | | | | | | | | | |
| | 26.7 | 106.4 | 106.4 | 115.2 | 86.5 | 127.8 | 63.3 | | | | | | | | | | | | |
| | 29.4 | 113.4 | 113.4 | 116.6 | 105.8 | 128.1 | 82.1 | | | | | | | | | | | | |
| | 32.2 | 120.2 | 120.2 | 120.2 | 120.2 | 129.2 | 100.8 | | | | | | | | | | | | |
| 6140 | 23.9 | 104.9 | 95.3 | 115.8 | 71.5 | 128.7 | 44.5 | | | | | | | | | | | | |
| | 26.7 | 109.0 | 109.0 | 116.9 | 90.6 | 129.2 | 65.4 | | | | | | | | | | | | |
| | 29.4 | 116.4 | 116.4 | 118.7 | 111.4 | 129.5 | 85.9 | | | | | | | | | | | | |
| | 32.2 | 123.4 | 123.4 | 123.4 | 123.4 | 131.0 | 106.1 | | | | | | | | | | | | |
| 6890 | 23.9 | 107.3 | 102.3 | 117.8 | 76.2 | 130.4 | 45.7 | | | | | | | | | | | | |
| | 26.7 | 113.1 | 113.1 | 119.0 | 96.7 | 131.0 | 69.2 | | | | | | | | | | | | |
| | 29.4 | 120.5 | 120.5 | 121.6 | 120.2 | 131.9 | 91.4 | | | | | | | | | | | | |
| | 32.2 | 127.8 | 127.8 | 127.8 | 127.8 | 133.4 | 114.0 | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 54. 41.7 Ton Gross Cooling Capacities (MBh)—High Efficiency 3-Row Condenser Coil (I-P)—50 Hz R-22 Refrigerant

| CFM | Ent DB °F | Ambient Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-----------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | | 115 | | | | | |
| | | Entering Wet Bulb Temperature (°F) | | | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 12500 | 75 | 479 | 392 | 531 | 304 | 587 | 210 | 456 | 379 | 505 | 292 | 559 | 198 | 431 | 365 | 478 | 278 | 530 | 185 | 405 | 351 | 450 | 265 | 499 | 172 |
| | 80 | 486 | 467 | 532 | 376 | 589 | 285 | 464 | 454 | 507 | 363 | 561 | 272 | 438 | 438 | 480 | 349 | 532 | 259 | 415 | 415 | 452 | 335 | 501 | 246 |
| | 85 | 508 | 508 | 537 | 448 | 590 | 358 | 487 | 487 | 511 | 435 | 563 | 345 | 465 | 465 | 485 | 421 | 534 | 332 | 442 | 442 | 457 | 407 | 503 | 318 |
| | 90 | 536 | 536 | 544 | 522 | 593 | 429 | 515 | 515 | 520 | 509 | 565 | 416 | 492 | 492 | 492 | 492 | 536 | 402 | 469 | 469 | 469 | 469 | 506 | 388 |
| 13500 | 75 | 487 | 409 | 538 | 315 | 595 | 213 | 463 | 396 | 512 | 302 | 566 | 201 | 438 | 382 | 484 | 289 | 536 | 188 | 411 | 367 | 455 | 275 | 505 | 175 |
| | 80 | 496 | 490 | 540 | 391 | 596 | 293 | 472 | 472 | 514 | 378 | 568 | 281 | 449 | 449 | 487 | 364 | 538 | 268 | 426 | 426 | 458 | 349 | 507 | 254 |
| | 85 | 521 | 521 | 545 | 469 | 598 | 372 | 500 | 500 | 520 | 456 | 570 | 359 | 478 | 478 | 493 | 442 | 540 | 345 | 453 | 453 | 464 | 427 | 509 | 331 |
| | 90 | 551 | 551 | 555 | 549 | 601 | 448 | 529 | 529 | 529 | 529 | 573 | 435 | 506 | 506 | 505 | 505 | 544 | 421 | 481 | 481 | 481 | 481 | 513 | 407 |
| 14500 | 75 | 494 | 425 | 544 | 325 | 601 | 216 | 469 | 412 | 518 | 312 | 572 | 204 | 444 | 398 | 490 | 299 | 541 | 191 | 417 | 383 | 460 | 285 | 509 | 178 |
| | 80 | 504 | 504 | 547 | 406 | 603 | 302 | 482 | 482 | 521 | 392 | 574 | 289 | 460 | 460 | 493 | 378 | 544 | 276 | 436 | 436 | 464 | 364 | 512 | 263 |
| | 85 | 534 | 534 | 553 | 489 | 604 | 385 | 512 | 512 | 527 | 476 | 576 | 372 | 488 | 488 | 500 | 462 | 546 | 358 | 464 | 464 | 471 | 448 | 514 | 344 |
| | 90 | 564 | 564 | 564 | 564 | 608 | 467 | 541 | 541 | 541 | 541 | 580 | 453 | 517 | 517 | 517 | 517 | 550 | 440 | 492 | 492 | 492 | 492 | 519 | 425 |
| 15500 | 75 | 500 | 442 | 550 | 335 | 606 | 219 | 475 | 428 | 523 | 322 | 577 | 207 | 450 | 414 | 494 | 308 | 546 | 194 | 423 | 399 | 464 | 295 | 514 | 180 |
| | 80 | 514 | 514 | 553 | 420 | 609 | 310 | 492 | 492 | 526 | 407 | 579 | 297 | 469 | 469 | 498 | 393 | 549 | 284 | 444 | 444 | 469 | 378 | 516 | 271 |
| | 85 | 545 | 545 | 560 | 509 | 610 | 398 | 522 | 522 | 534 | 496 | 581 | 385 | 499 | 499 | 506 | 482 | 551 | 371 | 473 | 473 | 477 | 468 | 519 | 357 |
| | 90 | 576 | 576 | 576 | 576 | 615 | 485 | 553 | 553 | 553 | 553 | 586 | 472 | 528 | 528 | 528 | 528 | 556 | 458 | 502 | 502 | 502 | 502 | 524 | 444 |
| 16500 | 75 | 506 | 457 | 555 | 345 | 612 | 222 | 481 | 444 | 527 | 332 | 582 | 209 | 455 | 429 | 498 | 319 | 550 | 196 | 428 | 415 | 468 | 305 | 518 | 183 |
| | 80 | 524 | 524 | 558 | 434 | 614 | 318 | 501 | 501 | 531 | 421 | 584 | 306 | 478 | 478 | 503 | 407 | 553 | 292 | 452 | 452 | 473 | 392 | 520 | 279 |
| | 85 | 555 | 555 | 566 | 529 | 616 | 411 | 532 | 532 | 540 | 516 | 586 | 397 | 508 | 508 | 512 | 502 | 556 | 384 | 482 | 482 | 482 | 482 | 523 | 369 |
| | 90 | 587 | 587 | 587 | 587 | 621 | 503 | 563 | 563 | 563 | 563 | 592 | 490 | 538 | 538 | 538 | 538 | 561 | 476 | 511 | 511 | 511 | 511 | 529 | 462 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 55. 148 kW (41.7 Ton) Gross Cooling Capacities—High Efficiency 3-Row Condenser Coil (SI)—50 Hz R-22 Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 5900 | 23.9 | 140.4 | 114.9 | 155.6 | 89.1 | 172.0 | 61.5 | 133.6 | 111.1 | 148.0 | 85.6 | 163.8 | 58.0 | 126.3 | 107.0 | 140.1 | 81.5 | 155.3 | 54.2 |
| | 26.7 | 142.4 | 136.9 | 155.9 | 110.2 | 172.6 | 83.5 | 136.0 | 133.1 | 148.6 | 106.4 | 164.4 | 79.7 | 128.4 | 128.4 | 140.7 | 102.3 | 155.9 | 75.9 |
| | 29.4 | 148.9 | 148.9 | 157.4 | 131.3 | 172.9 | 104.9 | 142.7 | 142.7 | 149.8 | 127.5 | 165.0 | 101.1 | 136.3 | 136.3 | 142.1 | 123.4 | 156.5 | 97.3 |
| | 32.2 | 157.1 | 157.1 | 159.4 | 153.0 | 173.8 | 125.7 | 150.9 | 150.9 | 152.4 | 149.2 | 165.6 | 121.9 | 144.2 | 144.2 | 144.2 | 144.2 | 157.1 | 117.8 |
| 6370 | 23.9 | 142.7 | 119.9 | 157.7 | 92.3 | 174.4 | 62.4 | 135.7 | 116.1 | 150.1 | 88.5 | 165.9 | 58.9 | 128.4 | 112.0 | 141.9 | 84.7 | 157.1 | 55.1 |
| | 26.7 | 145.4 | 143.6 | 158.3 | 114.6 | 174.7 | 85.9 | 138.3 | 138.3 | 150.6 | 110.8 | 166.5 | 82.4 | 131.6 | 131.6 | 142.7 | 106.7 | 157.7 | 78.5 |
| | 29.4 | 152.7 | 152.7 | 159.7 | 137.5 | 175.3 | 109.0 | 146.5 | 146.5 | 152.4 | 133.6 | 167.1 | 105.2 | 140.1 | 140.1 | 144.5 | 129.5 | 158.3 | 101.1 |
| | 32.2 | 161.5 | 161.5 | 162.7 | 160.9 | 176.1 | 131.3 | 155.0 | 155.0 | 155.0 | 155.0 | 167.9 | 127.5 | 148.3 | 148.3 | 148.0 | 148.0 | 159.4 | 123.4 |
| 6840 | 23.9 | 144.8 | 124.6 | 159.4 | 95.3 | 176.1 | 63.3 | 137.5 | 120.8 | 151.8 | 91.4 | 167.6 | 59.8 | 130.1 | 116.6 | 143.6 | 87.6 | 158.6 | 56.0 |
| | 26.7 | 147.7 | 147.7 | 160.3 | 119.0 | 176.7 | 88.5 | 141.3 | 141.3 | 152.7 | 114.9 | 168.2 | 84.7 | 134.8 | 134.8 | 144.5 | 110.8 | 159.4 | 80.9 |
| | 29.4 | 156.5 | 156.5 | 162.1 | 143.3 | 177.0 | 112.8 | 150.1 | 150.1 | 154.5 | 139.5 | 168.8 | 109.0 | 143.0 | 143.0 | 146.5 | 135.4 | 160.0 | 104.9 |
| | 32.2 | 165.3 | 165.3 | 165.3 | 165.3 | 178.2 | 136.9 | 158.6 | 158.6 | 158.6 | 158.6 | 170.0 | 132.8 | 151.5 | 151.5 | 151.5 | 151.5 | 161.2 | 129.0 |
| 7320 | 23.9 | 146.5 | 129.5 | 161.2 | 98.2 | 177.6 | 64.2 | 139.2 | 125.4 | 153.3 | 94.4 | 169.1 | 60.7 | 131.9 | 121.3 | 144.8 | 90.3 | 160.0 | 56.9 |
| | 26.7 | 150.6 | 150.6 | 162.1 | 123.1 | 178.5 | 90.9 | 144.2 | 144.2 | 154.2 | 119.3 | 169.7 | 87.0 | 137.5 | 137.5 | 146.0 | 115.2 | 160.9 | 83.2 |
| | 29.4 | 159.7 | 159.7 | 164.1 | 149.2 | 178.8 | 116.6 | 153.0 | 153.0 | 156.5 | 145.4 | 170.3 | 112.8 | 146.2 | 146.2 | 148.3 | 141.3 | 161.5 | 108.7 |
| | 32.2 | 168.8 | 168.8 | 168.8 | 168.8 | 180.2 | 142.1 | 162.1 | 162.1 | 162.1 | 162.1 | 171.7 | 138.3 | 154.7 | 154.7 | 154.7 | 154.7 | 163.0 | 134.2 |
| 7790 | 23.9 | 148.3 | 133.9 | 162.7 | 101.1 | 179.4 | 65.1 | 141.0 | 130.1 | 154.5 | 97.3 | 170.6 | 61.3 | 133.4 | 125.7 | 146.0 | 93.5 | 161.2 | 57.4 |
| | 26.7 | 153.6 | 153.6 | 163.5 | 127.2 | 180.0 | 93.2 | 146.8 | 146.8 | 155.6 | 123.4 | 171.2 | 89.7 | 140.1 | 140.1 | 147.4 | 119.3 | 162.1 | 85.6 |
| | 29.4 | 162.7 | 162.7 | 165.9 | 155.0 | 180.5 | 120.5 | 155.9 | 155.9 | 158.3 | 151.2 | 171.7 | 116.4 | 148.9 | 148.9 | 150.1 | 147.1 | 163.0 | 112.5 |
| | 32.2 | 172.0 | 172.0 | 172.0 | 172.0 | 182.0 | 147.4 | 165.0 | 165.0 | 165.0 | 165.0 | 173.5 | 143.6 | 157.7 | 157.7 | 157.7 | 157.7 | 164.4 | 139.5 |
| 5900 | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 5900 | 23.9 | 118.7 | 102.9 | 131.9 | 77.7 | 146.2 | 50.4 | | | | | | | | | | | | |
| | 26.7 | 121.6 | 121.6 | 132.5 | 98.2 | 146.8 | 72.1 | | | | | | | | | | | | |
| | 29.4 | 129.5 | 129.5 | 133.9 | 119.3 | 147.4 | 93.2 | | | | | | | | | | | | |
| | 32.2 | 137.5 | 137.5 | 137.5 | 137.5 | 148.3 | 113.7 | | | | | | | | | | | | |
| 6370 | 23.9 | 120.5 | 107.6 | 133.4 | 80.6 | 148.0 | 51.3 | | | | | | | | | | | | |
| | 26.7 | 124.9 | 124.9 | 134.2 | 102.3 | 148.6 | 74.4 | | | | | | | | | | | | |
| | 29.4 | 132.8 | 132.8 | 136.0 | 125.1 | 149.2 | 97.0 | | | | | | | | | | | | |
| | 32.2 | 141.0 | 141.0 | 141.0 | 141.0 | 150.4 | 119.3 | | | | | | | | | | | | |
| 6840 | 23.9 | 122.2 | 112.3 | 134.8 | 83.5 | 149.2 | 52.2 | | | | | | | | | | | | |
| | 26.7 | 127.8 | 127.8 | 136.0 | 106.7 | 150.1 | 77.1 | | | | | | | | | | | | |
| | 29.4 | 136.0 | 136.0 | 138.0 | 131.3 | 150.6 | 100.8 | | | | | | | | | | | | |
| | 32.2 | 144.2 | 144.2 | 144.2 | 144.2 | 152.1 | 124.6 | | | | | | | | | | | | |
| 7320 | 23.9 | 124.0 | 116.9 | 136.0 | 86.5 | 150.6 | 52.8 | | | | | | | | | | | | |
| | 26.7 | 130.1 | 130.1 | 137.5 | 110.8 | 151.2 | 79.4 | | | | | | | | | | | | |
| | 29.4 | 138.6 | 138.6 | 139.8 | 137.2 | 152.1 | 104.6 | | | | | | | | | | | | |
| | 32.2 | 147.1 | 147.1 | 147.1 | 147.1 | 153.6 | 130.1 | | | | | | | | | | | | |
| 7790 | 23.9 | 125.4 | 121.6 | 137.2 | 89.4 | 151.8 | 53.6 | | | | | | | | | | | | |
| | 26.7 | 132.5 | 132.5 | 138.6 | 114.9 | 152.4 | 81.8 | | | | | | | | | | | | |
| | 29.4 | 141.3 | 141.3 | 141.3 | 141.3 | 153.3 | 108.1 | | | | | | | | | | | | |
| | 32.2 | 149.8 | 149.8 | 149.8 | 149.8 | 155.0 | 135.4 | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 56. 22.9 Ton Gross Cooling Capacities (Mbh)—High Efficiency 3-Row Condenser Coil (I-P)—50 Hz R-407C Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 85 | | | | 95 | | | | 105 | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 6900 | 75 | 246.0 | 193.0 | 271.0 | 156.0 | 300.0 | 109.0 | 234.0 | 185.0 | 258.0 | 149.0 | 284.0 | 102.0 | 220.0 | 178.0 | 242.0 | 141.0 | 268.0 | 95.6 |
| | 80 | 250.0 | 228.0 | 273.0 | 185.0 | 300.0 | 144.0 | 238.0 | 220.0 | 260.0 | 178.0 | 284.0 | 138.0 | 225.0 | 213.0 | 245.0 | 170.0 | 269.0 | 130.0 |
| | 85 | 258.0 | 258.0 | 276.0 | 219.0 | 302.0 | 177.0 | 247.0 | 247.0 | 262.0 | 211.0 | 287.0 | 170.0 | 236.0 | 236.0 | 248.0 | 204.0 | 272.0 | 162.0 |
| | 90 | 273.0 | 273.0 | 280.0 | 253.0 | 305.0 | 210.0 | 261.0 | 261.0 | 267.0 | 246.0 | 290.0 | 202.0 | 249.0 | 249.0 | 253.0 | 239.0 | 274.0 | 195.0 |
| 7500 | 75 | 251.0 | 201.0 | 276.0 | 161.0 | 304.0 | 111.0 | 238.0 | 193.0 | 261.0 | 154.0 | 288.0 | 104.0 | 224.0 | 186.0 | 246.0 | 146.0 | 272.0 | 97.3 |
| | 80 | 256.0 | 239.0 | 278.0 | 192.0 | 304.0 | 149.0 | 243.0 | 231.0 | 264.0 | 185.0 | 289.0 | 141.0 | 230.0 | 224.0 | 249.0 | 177.0 | 274.0 | 134.0 |
| | 85 | 266.0 | 266.0 | 281.0 | 229.0 | 307.0 | 184.0 | 255.0 | 255.0 | 267.0 | 221.0 | 292.0 | 176.0 | 242.0 | 242.0 | 253.0 | 214.0 | 276.0 | 169.0 |
| | 90 | 281.0 | 281.0 | 286.0 | 266.0 | 310.0 | 219.0 | 269.0 | 269.0 | 273.0 | 259.0 | 294.0 | 212.0 | 257.0 | 257.0 | 259.0 | 251.0 | 279.0 | 204.0 |
| 8000 | 75 | 254.0 | 208.0 | 279.0 | 165.0 | 307.0 | 112.0 | 241.0 | 200.0 | 264.0 | 158.0 | 291.0 | 105.0 | 227.0 | 192.0 | 249.0 | 150.0 | 274.0 | 98.7 |
| | 80 | 260.0 | 248.0 | 282.0 | 198.0 | 308.0 | 152.0 | 247.0 | 240.0 | 267.0 | 191.0 | 292.0 | 145.0 | 234.0 | 233.0 | 252.0 | 183.0 | 276.0 | 137.0 |
| | 85 | 272.0 | 272.0 | 285.0 | 237.0 | 311.0 | 189.0 | 260.0 | 260.0 | 271.0 | 230.0 | 295.0 | 181.0 | 248.0 | 248.0 | 256.0 | 222.0 | 279.0 | 174.0 |
| | 90 | 287.0 | 287.0 | 291.0 | 277.0 | 313.0 | 226.0 | 275.0 | 275.0 | 277.0 | 270.0 | 298.0 | 219.0 | 262.0 | 262.0 | 263.0 | 262.0 | 282.0 | 212.0 |
| 9000 | 75 | 261.0 | 220.0 | 285.0 | 174.0 | 312.0 | 115.0 | 247.0 | 213.0 | 269.0 | 166.0 | 295.0 | 108.0 | 233.0 | 205.0 | 254.0 | 158.0 | 278.0 | 101.0 |
| | 80 | 268.0 | 265.0 | 288.0 | 210.0 | 314.0 | 158.0 | 254.0 | 254.0 | 273.0 | 202.0 | 297.0 | 151.0 | 241.0 | 241.0 | 257.0 | 194.0 | 281.0 | 143.0 |
| | 85 | 282.0 | 282.0 | 292.0 | 253.0 | 317.0 | 199.0 | 270.0 | 270.0 | 277.0 | 246.0 | 301.0 | 192.0 | 257.0 | 257.0 | 263.0 | 238.0 | 285.0 | 184.0 |
| | 90 | 298.0 | 298.0 | 299.0 | 298.0 | 320.0 | 241.0 | 285.0 | 285.0 | 285.0 | 285.0 | 304.0 | 234.0 | 272.0 | 272.0 | 272.0 | 272.0 | 288.0 | 226.0 |
| 10000 | 75 | 266.0 | 233.0 | 289.0 | 182.0 | 316.0 | 117.0 | 252.0 | 225.0 | 274.0 | 174.0 | 299.0 | 110.0 | 238.0 | 217.0 | 258.0 | 166.0 | 282.0 | 104.0 |
| | 80 | 274.0 | 274.0 | 293.0 | 221.0 | 319.0 | 164.0 | 262.0 | 262.0 | 277.0 | 213.0 | 302.0 | 156.0 | 249.0 | 249.0 | 262.0 | 205.0 | 285.0 | 149.0 |
| | 85 | 291.0 | 291.0 | 298.0 | 269.0 | 322.0 | 209.0 | 278.0 | 278.0 | 283.0 | 261.0 | 305.0 | 201.0 | 264.0 | 264.0 | 268.0 | 253.0 | 289.0 | 194.0 |
| | 90 | 307.0 | 307.0 | 307.0 | 307.0 | 326.0 | 255.0 | 294.0 | 294.0 | 294.0 | 294.0 | 309.0 | 248.0 | 280.0 | 280.0 | 280.0 | 280.0 | 293.0 | 240.0 |
| 6900 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | 75 | 206.0 | 170.0 | 227.0 | 134.0 | 252.0 | 88.8 | 212.0 | 205.0 | 230.0 | 163.0 | 254.0 | 123.0 | 223.0 | 223.0 | 234.0 | 196.0 | 257.0 |
| 7500 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | 75 | 210.0 | 178.0 | 231.0 | 139.0 | 255.0 | 90.7 | 217.0 | 216.0 | 234.0 | 170.0 | 258.0 | 126.0 | 230.0 | 230.0 | 238.0 | 206.0 | 261.0 |
| 8000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | 75 | 213.0 | 184.0 | 233.0 | 143.0 | 257.0 | 92.0 | 220.0 | 220.0 | 237.0 | 175.0 | 260.0 | 130.0 | 235.0 | 235.0 | 242.0 | 214.0 | 263.0 |
| 9000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | 75 | 218.0 | 196.0 | 238.0 | 151.0 | 261.0 | 94.5 | 228.0 | 228.0 | 242.0 | 186.0 | 265.0 | 136.0 | 243.0 | 243.0 | 248.0 | 230.0 | 269.0 |
| 10000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | 75 | 223.0 | 208.0 | 241.0 | 158.0 | 264.0 | 96.9 | 235.0 | 235.0 | 246.0 | 197.0 | 269.0 | 141.0 | 251.0 | 251.0 | 253.0 | 245.0 | 273.0 |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 57. 82 kW (22.9 Ton) Gross Cooling Capacities—High Efficiency 3-Row Condenser Coil (SI)—50 Hz R-407C Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 3260 | 23.9 | 72.1 | 56.6 | 79.4 | 45.7 | 87.9 | 31.9 | 68.6 | 54.2 | 75.6 | 43.7 | 83.2 | 29.9 | 64.5 | 52.2 | 70.9 | 41.3 | 78.5 | 28.0 |
| | 26.7 | 73.3 | 66.8 | 80.0 | 54.2 | 87.9 | 42.2 | 69.8 | 64.5 | 76.2 | 52.2 | 83.2 | 40.4 | 65.9 | 62.4 | 71.8 | 49.8 | 78.8 | 38.1 |
| | 29.4 | 75.6 | 75.6 | 80.9 | 64.2 | 88.5 | 51.9 | 72.4 | 72.4 | 76.8 | 61.8 | 84.1 | 49.8 | 69.2 | 69.2 | 72.7 | 59.8 | 79.7 | 47.5 |
| | 32.2 | 80.0 | 80.0 | 82.1 | 74.2 | 89.4 | 61.5 | 76.5 | 76.5 | 78.3 | 72.1 | 85.0 | 59.2 | 73.0 | 73.0 | 74.2 | 70.0 | 80.3 | 57.2 |
| 3540 | 23.9 | 73.6 | 58.9 | 80.9 | 47.2 | 89.1 | 32.5 | 69.8 | 56.6 | 76.5 | 45.1 | 84.4 | 30.5 | 65.7 | 54.5 | 72.1 | 42.8 | 79.7 | 28.5 |
| | 26.7 | 75.0 | 70.0 | 81.5 | 56.3 | 89.1 | 43.7 | 71.2 | 67.7 | 77.4 | 54.2 | 84.7 | 41.3 | 67.4 | 65.7 | 73.0 | 51.9 | 80.3 | 39.3 |
| | 29.4 | 78.0 | 78.0 | 82.4 | 67.1 | 90.0 | 53.9 | 74.7 | 74.7 | 78.3 | 64.8 | 85.6 | 51.6 | 70.9 | 70.9 | 74.2 | 62.7 | 80.9 | 49.5 |
| | 32.2 | 82.4 | 82.4 | 83.8 | 78.0 | 90.9 | 64.2 | 78.8 | 78.8 | 80.0 | 75.9 | 86.2 | 62.1 | 75.3 | 75.3 | 75.9 | 73.6 | 81.8 | 59.8 |
| 3780 | 23.9 | 74.4 | 61.0 | 81.8 | 48.4 | 90.0 | 32.8 | 70.6 | 58.6 | 77.4 | 46.3 | 85.3 | 30.8 | 66.5 | 56.3 | 73.0 | 44.0 | 80.3 | 28.9 |
| | 26.7 | 76.2 | 72.7 | 82.6 | 58.0 | 90.3 | 44.5 | 72.4 | 70.3 | 78.3 | 56.0 | 85.6 | 42.5 | 68.6 | 68.3 | 73.9 | 53.6 | 80.9 | 40.2 |
| | 29.4 | 79.7 | 79.7 | 83.5 | 69.5 | 91.1 | 55.4 | 76.2 | 76.2 | 79.4 | 67.4 | 86.5 | 53.0 | 72.7 | 72.7 | 75.0 | 65.1 | 81.8 | 51.0 |
| | 32.2 | 84.1 | 84.1 | 85.3 | 81.2 | 91.7 | 66.2 | 80.6 | 80.6 | 81.2 | 79.1 | 87.3 | 64.2 | 76.8 | 76.8 | 77.1 | 76.8 | 82.6 | 62.1 |
| 4250 | 23.9 | 76.5 | 64.5 | 83.5 | 51.0 | 91.4 | 33.7 | 72.4 | 62.4 | 78.8 | 48.7 | 86.5 | 31.7 | 68.3 | 60.1 | 74.4 | 46.3 | 81.5 | 29.6 |
| | 26.7 | 78.5 | 77.7 | 84.4 | 61.5 | 92.0 | 46.3 | 74.4 | 74.4 | 80.0 | 59.2 | 87.0 | 44.3 | 70.6 | 70.6 | 75.3 | 56.9 | 82.4 | 41.9 |
| | 29.4 | 82.6 | 82.6 | 85.6 | 74.2 | 92.9 | 58.3 | 79.1 | 79.1 | 81.2 | 72.1 | 88.2 | 56.3 | 75.3 | 75.3 | 77.1 | 69.8 | 83.5 | 53.9 |
| | 32.2 | 87.3 | 87.3 | 87.6 | 87.3 | 93.8 | 70.6 | 83.5 | 83.5 | 83.5 | 83.5 | 89.1 | 68.6 | 79.7 | 79.7 | 79.7 | 79.7 | 84.4 | 66.2 |
| 4720 | 23.9 | 78.0 | 68.3 | 84.7 | 53.3 | 92.6 | 34.3 | 73.9 | 65.9 | 80.3 | 51.0 | 87.6 | 32.2 | 69.8 | 63.6 | 75.6 | 48.7 | 82.6 | 30.5 |
| | 26.7 | 80.3 | 80.3 | 85.9 | 64.8 | 93.5 | 48.1 | 76.8 | 76.8 | 81.2 | 62.4 | 88.5 | 45.7 | 73.0 | 73.0 | 76.8 | 60.1 | 83.5 | 43.7 |
| | 29.4 | 85.3 | 85.3 | 87.3 | 78.8 | 94.4 | 61.3 | 81.5 | 81.5 | 82.9 | 76.5 | 89.4 | 58.9 | 77.4 | 77.4 | 78.5 | 74.2 | 84.7 | 56.9 |
| | 32.2 | 90.0 | 90.0 | 90.0 | 90.0 | 95.5 | 74.7 | 86.2 | 86.2 | 86.2 | 86.2 | 90.6 | 72.7 | 82.1 | 82.1 | 82.1 | 82.1 | 85.9 | 70.3 |
| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 3260 | 23.9 | 60.4 | 49.8 | 66.5 | 39.3 | 73.9 | 26.0 | | | | | | | | | | | | |
| | 26.7 | 62.1 | 60.1 | 67.4 | 47.8 | 74.4 | 36.0 | | | | | | | | | | | | |
| | 29.4 | 65.4 | 65.4 | 68.6 | 57.4 | 75.3 | 45.4 | | | | | | | | | | | | |
| | 32.2 | 69.5 | 69.5 | 70.0 | 67.7 | 75.9 | 55.1 | | | | | | | | | | | | |
| 3540 | 23.9 | 61.5 | 52.2 | 67.7 | 40.7 | 74.7 | 26.6 | | | | | | | | | | | | |
| | 26.7 | 63.6 | 63.3 | 68.6 | 49.8 | 75.6 | 36.9 | | | | | | | | | | | | |
| | 29.4 | 67.4 | 67.4 | 69.8 | 60.4 | 76.5 | 47.2 | | | | | | | | | | | | |
| | 32.2 | 71.5 | 71.5 | 71.8 | 71.5 | 77.4 | 57.7 | | | | | | | | | | | | |
| 3780 | 23.9 | 62.4 | 53.9 | 68.3 | 41.9 | 75.3 | 27.0 | | | | | | | | | | | | |
| | 26.7 | 64.5 | 64.5 | 69.5 | 51.3 | 76.2 | 38.1 | | | | | | | | | | | | |
| | 29.4 | 68.9 | 68.9 | 70.9 | 62.7 | 77.1 | 48.9 | | | | | | | | | | | | |
| | 32.2 | 73.0 | 73.0 | 73.0 | 73.0 | 78.3 | 59.8 | | | | | | | | | | | | |
| 4250 | 23.9 | 63.9 | 57.4 | 69.8 | 44.3 | 76.5 | 27.7 | | | | | | | | | | | | |
| | 26.7 | 66.8 | 66.8 | 70.9 | 54.5 | 77.7 | 39.9 | | | | | | | | | | | | |
| | 29.4 | 71.2 | 71.2 | 72.7 | 67.4 | 78.8 | 51.9 | | | | | | | | | | | | |
| | 32.2 | 75.9 | 75.9 | 75.6 | 75.6 | 80.0 | 64.2 | | | | | | | | | | | | |
| 4720 | 23.9 | 65.4 | 61.0 | 70.6 | 46.3 | 77.4 | 28.4 | | | | | | | | | | | | |
| | 26.7 | 68.9 | 68.9 | 72.1 | 57.7 | 78.8 | 41.3 | | | | | | | | | | | | |
| | 29.4 | 73.6 | 73.6 | 74.2 | 71.8 | 80.0 | 54.5 | | | | | | | | | | | | |
| | 32.2 | 78.3 | 78.3 | 78.3 | 78.3 | 81.5 | 68.3 | | | | | | | | | | | | |

- Notes:**
1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 58. 25.4 Ton Gross Cooling Capacities (MBh)—High Efficiency 3-Row Condenser Coil (I-P)—50 Hz R-407C Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 7500 | 75 | 279.0 | 218.0 | 307.0 | 176.0 | 340.0 | 123.0 | 265.0 | 210.0 | 291.0 | 168.0 | 322.0 | 116.0 | 250.0 | 201.0 | 275.0 | 160.0 | 304.0 | 109.0 |
| | 80 | 284.0 | 257.0 | 310.0 | 209.0 | 340.0 | 163.0 | 270.0 | 248.0 | 294.0 | 201.0 | 323.0 | 156.0 | 256.0 | 240.0 | 278.0 | 192.0 | 305.0 | 148.0 |
| | 85 | 292.0 | 292.0 | 313.0 | 247.0 | 342.0 | 200.0 | 280.0 | 280.0 | 297.0 | 238.0 | 326.0 | 192.0 | 267.0 | 267.0 | 281.0 | 230.0 | 308.0 | 184.0 |
| | 90 | 308.0 | 308.0 | 317.0 | 285.0 | 345.0 | 236.0 | 295.0 | 295.0 | 302.0 | 277.0 | 328.0 | 228.0 | 282.0 | 282.0 | 287.0 | 268.0 | 311.0 | 220.0 |
| 8000 | 75 | 284.0 | 225.0 | 312.0 | 181.0 | 344.0 | 125.0 | 269.0 | 216.0 | 295.0 | 173.0 | 326.0 | 118.0 | 254.0 | 208.0 | 279.0 | 165.0 | 308.0 | 110.0 |
| | 80 | 289.0 | 266.0 | 314.0 | 215.0 | 344.0 | 167.0 | 275.0 | 258.0 | 298.0 | 207.0 | 326.0 | 159.0 | 260.0 | 249.0 | 282.0 | 199.0 | 309.0 | 150.0 |
| | 85 | 299.0 | 299.0 | 317.0 | 255.0 | 347.0 | 205.0 | 286.0 | 286.0 | 302.0 | 247.0 | 330.0 | 197.0 | 272.0 | 272.0 | 285.0 | 238.0 | 312.0 | 189.0 |
| | 90 | 315.0 | 315.0 | 322.0 | 296.0 | 349.0 | 244.0 | 302.0 | 302.0 | 307.0 | 288.0 | 332.0 | 236.0 | 288.0 | 288.0 | 292.0 | 279.0 | 315.0 | 228.0 |
| 9000 | 75 | 291.0 | 238.0 | 318.0 | 190.0 | 350.0 | 128.0 | 276.0 | 230.0 | 302.0 | 182.0 | 332.0 | 121.0 | 260.0 | 221.0 | 284.0 | 167.0 | 313.0 | 113.0 |
| | 80 | 297.0 | 284.0 | 321.0 | 227.0 | 351.0 | 174.0 | 283.0 | 276.0 | 305.0 | 219.0 | 333.0 | 166.0 | 268.0 | 267.0 | 288.0 | 210.0 | 314.0 | 156.0 |
| | 85 | 311.0 | 311.0 | 325.0 | 272.0 | 354.0 | 216.0 | 297.0 | 297.0 | 309.0 | 263.0 | 336.0 | 208.0 | 283.0 | 283.0 | 292.0 | 255.0 | 318.0 | 200.0 |
| | 90 | 328.0 | 328.0 | 332.0 | 318.0 | 357.0 | 259.0 | 314.0 | 314.0 | 316.0 | 309.0 | 339.0 | 251.0 | 299.0 | 299.0 | 299.0 | 299.0 | 322.0 | 243.0 |
| 10000 | 75 | 297.0 | 251.0 | 324.0 | 199.0 | 355.0 | 131.0 | 282.0 | 242.0 | 307.0 | 190.0 | 336.0 | 123.0 | 266.0 | 233.0 | 289.0 | 181.0 | 317.0 | 116.0 |
| | 80 | 305.0 | 302.0 | 327.0 | 239.0 | 357.0 | 180.0 | 289.0 | 289.0 | 310.0 | 230.0 | 338.0 | 172.0 | 275.0 | 275.0 | 293.0 | 222.0 | 320.0 | 163.0 |
| | 85 | 321.0 | 321.0 | 332.0 | 288.0 | 360.0 | 226.0 | 306.0 | 306.0 | 316.0 | 279.0 | 342.0 | 218.0 | 292.0 | 292.0 | 299.0 | 271.0 | 324.0 | 210.0 |
| | 90 | 338.0 | 338.0 | 340.0 | 339.0 | 363.0 | 274.0 | 324.0 | 324.0 | 324.0 | 324.0 | 346.0 | 266.0 | 309.0 | 309.0 | 309.0 | 309.0 | 328.0 | 257.0 |
| 11000 | 75 | 302.0 | 264.0 | 328.0 | 207.0 | 359.0 | 133.0 | 287.0 | 255.0 | 311.0 | 198.0 | 340.0 | 126.0 | 270.0 | 245.0 | 293.0 | 189.0 | 320.0 | 118.0 |
| | 80 | 311.0 | 311.0 | 332.0 | 250.0 | 361.0 | 186.0 | 297.0 | 297.0 | 315.0 | 241.0 | 343.0 | 177.0 | 282.0 | 282.0 | 297.0 | 232.0 | 324.0 | 169.0 |
| | 85 | 329.0 | 329.0 | 338.0 | 304.0 | 365.0 | 236.0 | 315.0 | 315.0 | 321.0 | 295.0 | 347.0 | 228.0 | 300.0 | 300.0 | 304.0 | 286.0 | 328.0 | 220.0 |
| | 90 | 348.0 | 348.0 | 348.0 | 348.0 | 369.0 | 289.0 | 333.0 | 333.0 | 333.0 | 333.0 | 351.0 | 280.0 | 318.0 | 318.0 | 317.0 | 317.0 | 333.0 | 272.0 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 7500 | 75 | 235.0 | 192.0 | 258.0 | 152.0 | 286.0 | 101.0 | | | | | | | | | | | | |
| | 80 | 240.0 | 231.0 | 261.0 | 184.0 | 287.0 | 140.0 | | | | | | | | | | | | |
| | 85 | 253.0 | 253.0 | 265.0 | 221.0 | 291.0 | 175.0 | | | | | | | | | | | | |
| | 90 | 268.0 | 268.0 | 271.0 | 260.0 | 294.0 | 212.0 | | | | | | | | | | | | |
| 8000 | 75 | 238.0 | 199.0 | 261.0 | 156.0 | 289.0 | 103.0 | | | | | | | | | | | | |
| | 80 | 245.0 | 240.0 | 265.0 | 190.0 | 291.0 | 143.0 | | | | | | | | | | | | |
| | 85 | 258.0 | 258.0 | 269.0 | 230.0 | 294.0 | 181.0 | | | | | | | | | | | | |
| | 90 | 274.0 | 274.0 | 276.0 | 271.0 | 298.0 | 220.0 | | | | | | | | | | | | |
| 9000 | 75 | 244.0 | 212.0 | 267.0 | 164.0 | 294.0 | 106.0 | | | | | | | | | | | | |
| | 80 | 252.0 | 252.0 | 270.0 | 201.0 | 296.0 | 149.0 | | | | | | | | | | | | |
| | 85 | 268.0 | 268.0 | 276.0 | 246.0 | 300.0 | 191.0 | | | | | | | | | | | | |
| | 90 | 285.0 | 285.0 | 285.0 | 285.0 | 304.0 | 235.0 | | | | | | | | | | | | |
| 10000 | 75 | 249.0 | 224.0 | 271.0 | 172.0 | 298.0 | 108.0 | | | | | | | | | | | | |
| | 80 | 260.0 | 260.0 | 275.0 | 213.0 | 301.0 | 155.0 | | | | | | | | | | | | |
| | 85 | 277.0 | 277.0 | 282.0 | 262.0 | 305.0 | 201.0 | | | | | | | | | | | | |
| | 90 | 294.0 | 294.0 | 294.0 | 294.0 | — | — | | | | | | | | | | | | |
| 11000 | 75 | 253.0 | 236.0 | 275.0 | 180.0 | 301.0 | 111.0 | | | | | | | | | | | | |
| | 80 | 267.0 | 267.0 | 280.0 | 223.0 | 305.0 | 160.0 | | | | | | | | | | | | |
| | 85 | 284.0 | 284.0 | 287.0 | 277.0 | — | — | | | | | | | | | | | | |
| | 90 | 302.0 | 302.0 | 302.0 | 302.0 | — | — | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.

Table 59. 89 kW (25.4 Ton) Gross Cooling Capacities—High Efficiency 3-Row Condenser Coil (SI)—50 Hz R-407C Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-------|-------|-------|-------|------|------|------|------|------|-------|------|------|------|------|------|------|------|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 3540 | 23.9 | 81.8 | 63.9 | 90.0 | 51.6 | 99.6 | 36.0 | 77.7 | 61.5 | 85.3 | 49.2 | 94.4 | 34.0 | 73.3 | 58.9 | 80.6 | 46.9 | 89.1 | 31.9 |
| | 26.7 | 83.2 | 75.3 | 90.9 | 61.3 | 99.6 | 47.8 | 79.1 | 72.7 | 86.2 | 58.9 | 94.7 | 45.7 | 75.0 | 70.3 | 81.5 | 56.3 | 89.4 | 43.4 |
| | 29.4 | 85.6 | 85.6 | 91.7 | 72.4 | 100.2 | 58.6 | 82.1 | 82.1 | 87.0 | 69.8 | 95.5 | 56.3 | 78.3 | 78.3 | 82.4 | 67.4 | 90.3 | 53.9 |
| | 32.2 | 90.3 | 90.3 | 92.9 | 83.5 | 101.1 | 69.2 | 86.5 | 86.5 | 88.5 | 81.2 | 96.1 | 66.8 | 82.6 | 82.6 | 84.1 | 78.5 | 91.1 | 64.5 |
| 3780 | 23.9 | 83.2 | 65.9 | 91.4 | 53.0 | 100.8 | 36.6 | 78.8 | 63.3 | 86.5 | 50.7 | 95.5 | 34.6 | 74.4 | 61.0 | 81.8 | 48.4 | 90.3 | 32.2 |
| | 26.7 | 84.7 | 78.0 | 92.0 | 63.0 | 100.8 | 48.9 | 80.6 | 75.6 | 87.3 | 60.7 | 95.5 | 46.6 | 76.2 | 73.0 | 82.6 | 58.3 | 90.6 | 44.0 |
| | 29.4 | 87.6 | 87.6 | 92.9 | 74.7 | 101.7 | 60.1 | 83.8 | 83.8 | 88.5 | 72.4 | 96.7 | 57.7 | 79.7 | 79.7 | 83.5 | 69.8 | 91.4 | 55.4 |
| | 32.2 | 92.3 | 92.3 | 94.4 | 86.8 | 102.3 | 71.5 | 88.5 | 88.5 | 90.0 | 84.4 | 97.3 | 69.2 | 84.4 | 84.4 | 85.6 | 81.8 | 92.3 | 66.8 |
| 4250 | 23.9 | 85.3 | 69.8 | 93.2 | 55.7 | 102.6 | 37.5 | 80.9 | 67.4 | 88.5 | 53.3 | 97.3 | 35.5 | 76.2 | 64.8 | 83.2 | 48.9 | 91.7 | 33.1 |
| | 26.7 | 87.0 | 83.2 | 94.1 | 66.5 | 102.9 | 51.0 | 82.9 | 80.9 | 89.4 | 64.2 | 97.6 | 48.7 | 78.5 | 78.3 | 84.4 | 61.5 | 92.0 | 45.7 |
| | 29.4 | 91.1 | 91.1 | 95.3 | 79.7 | 103.8 | 63.3 | 87.0 | 87.0 | 90.6 | 77.1 | 98.5 | 61.0 | 82.9 | 82.9 | 85.6 | 74.7 | 93.2 | 58.6 |
| | 32.2 | 96.1 | 96.1 | 97.3 | 93.2 | 104.6 | 75.9 | 92.0 | 92.0 | 92.6 | 90.6 | 99.4 | 73.6 | 87.6 | 87.6 | 87.6 | 87.6 | 94.4 | 71.2 |
| 4720 | 23.9 | 87.0 | 73.6 | 95.0 | 58.3 | 104.0 | 38.4 | 82.6 | 70.9 | 90.0 | 55.7 | 98.5 | 36.0 | 78.0 | 68.3 | 84.7 | 53.0 | 92.9 | 34.0 |
| | 26.7 | 89.4 | 88.5 | 95.8 | 70.0 | 104.6 | 52.8 | 84.7 | 84.7 | 90.9 | 67.4 | 99.1 | 50.4 | 80.6 | 80.6 | 85.9 | 65.1 | 93.8 | 47.8 |
| | 29.4 | 94.1 | 94.1 | 97.3 | 84.4 | 105.5 | 66.2 | 89.7 | 89.7 | 92.6 | 81.8 | 100.2 | 63.9 | 85.6 | 85.6 | 87.6 | 79.4 | 95.0 | 61.5 |
| | 32.2 | 99.1 | 99.1 | 99.6 | 99.4 | 106.4 | 80.3 | 95.0 | 95.0 | 95.0 | 95.0 | 101.4 | 78.0 | 90.6 | 90.6 | 90.6 | 90.6 | 96.1 | 75.3 |
| 5190 | 23.9 | 88.5 | 77.4 | 96.1 | 60.7 | 105.2 | 39.0 | 84.1 | 74.7 | 91.1 | 58.0 | 99.6 | 36.9 | 79.1 | 71.8 | 85.9 | 55.4 | 93.8 | 34.6 |
| | 26.7 | 91.1 | 91.1 | 97.3 | 73.3 | 105.8 | 54.5 | 87.0 | 87.0 | 92.3 | 70.6 | 100.5 | 51.9 | 82.6 | 82.6 | 87.0 | 68.0 | 95.0 | 49.5 |
| | 29.4 | 96.4 | 96.4 | 99.1 | 89.1 | 107.0 | 69.2 | 92.3 | 92.3 | 94.1 | 86.5 | 101.7 | 66.8 | 87.9 | 87.9 | 89.1 | 83.8 | 96.1 | 64.5 |
| | 32.2 | 102.0 | 102.0 | 102.0 | 102.0 | 108.1 | 84.7 | 97.6 | 97.6 | 97.6 | 97.6 | 102.9 | 82.1 | 93.2 | 93.2 | 92.9 | 92.9 | 97.6 | 79.7 |
| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 3540 | 23.9 | 68.9 | 56.3 | 75.6 | 44.5 | 83.8 | 29.6 | | | | | | | | | | | | |
| | 26.7 | 70.3 | 67.7 | 76.5 | 53.9 | 84.1 | 41.0 | | | | | | | | | | | | |
| | 29.4 | 74.2 | 74.2 | 77.7 | 64.8 | 85.3 | 51.3 | | | | | | | | | | | | |
| | 32.2 | 78.5 | 78.5 | 79.4 | 76.2 | 86.2 | 62.1 | | | | | | | | | | | | |
| 3780 | 23.9 | 69.8 | 58.3 | 76.5 | 45.7 | 84.7 | 30.2 | | | | | | | | | | | | |
| | 26.7 | 71.8 | 70.3 | 77.7 | 55.7 | 85.3 | 41.9 | | | | | | | | | | | | |
| | 29.4 | 75.6 | 75.6 | 78.8 | 67.4 | 86.2 | 53.0 | | | | | | | | | | | | |
| | 32.2 | 80.3 | 80.3 | 80.9 | 79.4 | 87.3 | 64.5 | | | | | | | | | | | | |
| 4250 | 23.9 | 71.5 | 62.1 | 78.3 | 48.1 | 86.2 | 31.1 | | | | | | | | | | | | |
| | 26.7 | 73.9 | 73.9 | 79.1 | 58.9 | 86.8 | 43.7 | | | | | | | | | | | | |
| | 29.4 | 78.5 | 78.5 | 80.9 | 72.1 | 87.9 | 56.0 | | | | | | | | | | | | |
| | 32.2 | 83.5 | 83.5 | 83.5 | 83.5 | 89.1 | 68.9 | | | | | | | | | | | | |
| 4720 | 23.9 | 73.0 | 65.7 | 79.4 | 50.4 | 87.3 | 31.7 | | | | | | | | | | | | |
| | 26.7 | 76.2 | 76.2 | 80.6 | 62.4 | 88.2 | 45.4 | | | | | | | | | | | | |
| | 29.4 | 81.2 | 81.2 | 82.6 | 76.8 | 89.4 | 58.9 | | | | | | | | | | | | |
| | 32.2 | 86.2 | 86.2 | 86.2 | 86.2 | | | | | | | | | | | | | | |
| 5190 | 23.9 | 74.2 | 69.2 | 80.6 | 52.8 | 88.2 | 32.5 | | | | | | | | | | | | |
| | 26.7 | 78.3 | 78.3 | 82.1 | 65.4 | 89.4 | 46.9 | | | | | | | | | | | | |
| | 29.4 | 83.2 | 83.2 | 84.1 | 81.2 | | | | | | | | | | | | | | |
| | 32.2 | 88.5 | 88.5 | 88.5 | 88.5 | | | | | | | | | | | | | | |

Notes:
1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 60. 29.2 Ton Gross Cooling Capacities (MBh)—High Efficiency 3-Row Condenser Coil (I-P)—50 Hz R-407C Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|--|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | | | | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | |
| 8750 | 75 | 324.0 | 262.0 | 354.0 | 203.0 | 390.0 | 142.0 | 307.0 | 252.0 | 335.0 | 192.0 | 369.0 | 134.0 | 289.0 | 242.0 | 315.0 | 184.0 | 348.0 | 125.0 | | | | |
| | 80 | 330.0 | 311.0 | 358.0 | 250.0 | 390.0 | 190.0 | 314.0 | 301.0 | 339.0 | 240.0 | 369.0 | 182.0 | 297.0 | 292.0 | 320.0 | 230.0 | 349.0 | 173.0 | | | | |
| | 85 | 344.0 | 344.0 | 362.0 | 297.0 | 394.0 | 237.0 | 329.0 | 329.0 | 343.0 | 288.0 | 374.0 | 228.0 | 313.0 | 313.0 | 325.0 | 278.0 | 354.0 | 219.0 | | | | |
| | 90 | 363.0 | 363.0 | 368.0 | 346.0 | 397.0 | 284.0 | 347.0 | 347.0 | 350.0 | 337.0 | 377.0 | 274.0 | 331.0 | 331.0 | 333.0 | 328.0 | 358.0 | 265.0 | | | | |
| 9000 | 75 | 326.0 | 265.0 | 356.0 | 205.0 | 391.0 | 143.0 | 309.0 | 256.0 | 337.0 | 196.0 | 370.0 | 134.0 | 291.0 | 246.0 | 318.0 | 188.0 | 349.0 | 126.0 | | | | |
| | 80 | 332.0 | 316.0 | 360.0 | 253.0 | 392.0 | 193.0 | 316.0 | 307.0 | 341.0 | 243.0 | 371.0 | 184.0 | 299.0 | 297.0 | 322.0 | 234.0 | 351.0 | 175.0 | | | | |
| | 85 | 348.0 | 348.0 | 364.0 | 302.0 | 396.0 | 240.0 | 332.0 | 332.0 | 345.0 | 292.0 | 376.0 | 231.0 | 316.0 | 316.0 | 327.0 | 283.0 | 356.0 | 222.0 | | | | |
| | 90 | 366.0 | 366.0 | 370.0 | 352.0 | 399.0 | 288.0 | 351.0 | 351.0 | 353.0 | 343.0 | 379.0 | 279.0 | 334.0 | 334.0 | 335.0 | 334.0 | 360.0 | 270.0 | | | | |
| 10000 | 75 | 333.0 | 280.0 | 362.0 | 213.0 | 397.0 | 145.0 | 315.0 | 270.0 | 343.0 | 207.0 | 375.0 | 137.0 | 297.0 | 260.0 | 323.0 | 197.0 | 353.0 | 128.0 | | | | |
| | 80 | 341.0 | 336.0 | 366.0 | 266.0 | 398.0 | 200.0 | 324.0 | 324.0 | 347.0 | 256.0 | 378.0 | 191.0 | 308.0 | 308.0 | 328.0 | 247.0 | 357.0 | 181.0 | | | | |
| | 85 | 359.0 | 359.0 | 371.0 | 320.0 | 402.0 | 252.0 | 343.0 | 343.0 | 353.0 | 311.0 | 382.0 | 242.0 | 327.0 | 327.0 | 334.0 | 301.0 | 361.0 | 233.0 | | | | |
| | 90 | 379.0 | 379.0 | 380.0 | 376.0 | 406.0 | 304.0 | 362.0 | 362.0 | 362.0 | 362.0 | 386.0 | 295.0 | 346.0 | 346.0 | 346.0 | 346.0 | 366.0 | 286.0 | | | | |
| 11000 | 75 | 339.0 | 294.0 | 368.0 | 221.0 | 401.0 | 148.0 | 321.0 | 284.0 | 348.0 | 211.0 | 379.0 | 139.0 | 302.0 | 274.0 | 327.0 | 205.0 | 356.0 | 131.0 | | | | |
| | 80 | 349.0 | 349.0 | 372.0 | 279.0 | 403.0 | 208.0 | 333.0 | 333.0 | 352.0 | 269.0 | 382.0 | 197.0 | 316.0 | 316.0 | 333.0 | 259.0 | 361.0 | 188.0 | | | | |
| | 85 | 369.0 | 369.0 | 378.0 | 338.0 | 408.0 | 263.0 | 353.0 | 353.0 | 359.0 | 328.0 | 387.0 | 254.0 | 336.0 | 336.0 | 340.0 | 319.0 | 367.0 | 244.0 | | | | |
| | 90 | 389.0 | 389.0 | 389.0 | 389.0 | 412.0 | 321.0 | 372.0 | 372.0 | 372.0 | 372.0 | 392.0 | 312.0 | 356.0 | 356.0 | 355.0 | 355.0 | 372.0 | 302.0 | | | | |
| 12000 | 75 | 344.0 | 308.0 | 372.0 | 233.0 | 404.0 | 150.0 | 326.0 | 298.0 | 352.0 | 223.0 | 382.0 | 141.0 | 307.0 | 287.0 | 331.0 | 213.0 | 359.0 | 133.0 | | | | |
| | 80 | 357.0 | 357.0 | 377.0 | 291.0 | 408.0 | 213.0 | 341.0 | 341.0 | 357.0 | 281.0 | 386.0 | 203.0 | 323.0 | 323.0 | 337.0 | 271.0 | 365.0 | 193.0 | | | | |
| | 85 | 378.0 | 378.0 | 384.0 | 356.0 | 413.0 | 274.0 | 361.0 | 361.0 | 365.0 | 346.0 | 392.0 | 265.0 | 344.0 | 344.0 | 346.0 | 336.0 | 371.0 | 255.0 | | | | |
| | 90 | 399.0 | 399.0 | 399.0 | 399.0 | 418.0 | 337.0 | 381.0 | 381.0 | 381.0 | 381.0 | 397.0 | 328.0 | 364.0 | 364.0 | 364.0 | 364.0 | 377.0 | 318.0 | | | | |
| 8750 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | | | | | | | | | | | | | | | | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | | | | | | | | | | | |
| | | 75 | 271.0 | 232.0 | 296.0 | 176.0 | — | — | | | | | | | | | | | | | | | |
| 80 | 280.0 | 280.0 | 301.0 | 221.0 | — | — | | | | | | | | | | | | | | | | | |
| 85 | 297.0 | 297.0 | — | — | — | — | | | | | | | | | | | | | | | | | |
| 90 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | |
| 9000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | | | | | | | | | | | | | | | | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | | | | | | | | | | | |
| | | 75 | 273.0 | 235.0 | 298.0 | 179.0 | — | — | | | | | | | | | | | | | | | |
| 80 | 282.0 | 282.0 | 302.0 | 224.0 | — | — | | | | | | | | | | | | | | | | | |
| 85 | 300.0 | 300.0 | — | — | — | — | | | | | | | | | | | | | | | | | |
| 90 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | |
| 10000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | | | | | | | | | | | | | | | | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | | | | | | | | | | | |
| | | 75 | 278.0 | 249.0 | 303.0 | 187.0 | — | — | | | | | | | | | | | | | | | |
| 80 | 291.0 | 291.0 | — | — | — | — | | | | | | | | | | | | | | | | | |
| 85 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | |
| 90 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | |
| 11000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | | | | | | | | | | | | | | | | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | | | | | | | | | | | |
| | | 75 | 284.0 | 263.0 | — | — | — | — | | | | | | | | | | | | | | | |
| 80 | 299.0 | 299.0 | — | — | — | — | | | | | | | | | | | | | | | | | |
| 85 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | |
| 90 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | |
| 12000 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | | | | | | | | | | | | | | | | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | | | | | | | | | | | |
| | | 75 | 288.0 | 276.0 | — | — | — | — | | | | | | | | | | | | | | | |
| 80 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | |
| 85 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | |
| 90 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 61. 105 kW (29.2 Ton) Gross Cooling Capacities—High Efficiency 3-Row Condenser Coil (SI)—50 Hz R-407C Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|------|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 4130 | 23.9 | 95.0 | 76.8 | 103.8 | 59.5 | 114.3 | 41.6 | 90.0 | 73.9 | 98.2 | 56.3 | 108.1 | 39.3 | 84.7 | 70.9 | 92.3 | 53.9 | 102.0 | 36.6 |
| | 26.7 | 96.7 | 91.1 | 104.9 | 73.3 | 114.3 | 55.7 | 92.0 | 88.2 | 99.4 | 70.3 | 108.1 | 53.3 | 87.0 | 85.6 | 93.8 | 67.4 | 102.3 | 50.7 |
| | 29.4 | 100.8 | 100.8 | 106.1 | 87.0 | 115.5 | 69.5 | 96.4 | 96.4 | 100.5 | 84.4 | 109.6 | 66.8 | 91.7 | 91.7 | 95.3 | 81.5 | 103.8 | 64.2 |
| | 32.2 | 106.4 | 106.4 | 107.9 | 101.4 | 116.4 | 83.2 | 101.7 | 101.7 | 102.6 | 98.8 | 110.5 | 80.3 | 97.0 | 97.0 | 97.6 | 96.1 | 104.9 | 77.7 |
| 4250 | 23.9 | 95.5 | 77.7 | 104.3 | 60.1 | 114.6 | 41.9 | 90.6 | 75.0 | 98.8 | 57.4 | 108.4 | 39.3 | 85.3 | 72.1 | 93.2 | 55.1 | 102.3 | 36.9 |
| | 26.7 | 97.3 | 92.6 | 105.5 | 74.2 | 114.9 | 56.6 | 92.6 | 90.0 | 99.9 | 71.2 | 108.7 | 53.9 | 87.6 | 87.0 | 94.4 | 68.6 | 102.9 | 51.3 |
| | 29.4 | 102.0 | 102.0 | 106.7 | 88.5 | 116.1 | 70.3 | 97.3 | 97.3 | 101.1 | 85.6 | 110.2 | 67.7 | 92.6 | 92.6 | 95.8 | 82.9 | 104.3 | 65.1 |
| | 32.2 | 107.3 | 107.3 | 108.4 | 103.2 | 116.9 | 84.4 | 102.9 | 102.9 | 103.5 | 100.5 | 111.1 | 81.8 | 97.9 | 97.9 | 98.2 | 97.9 | 105.5 | 79.1 |
| 4720 | 23.9 | 97.6 | 82.1 | 106.1 | 62.4 | 116.4 | 42.5 | 92.3 | 79.1 | 100.5 | 60.7 | 109.9 | 40.2 | 87.0 | 76.2 | 94.7 | 57.7 | 103.5 | 37.5 |
| | 26.7 | 99.9 | 98.5 | 107.3 | 78.0 | 116.6 | 58.6 | 95.0 | 95.0 | 101.7 | 75.0 | 110.8 | 56.0 | 90.3 | 90.3 | 96.1 | 72.4 | 104.6 | 53.0 |
| | 29.4 | 105.2 | 105.2 | 108.7 | 93.8 | 117.8 | 73.9 | 100.5 | 100.5 | 103.5 | 91.1 | 112.0 | 70.9 | 95.8 | 95.8 | 97.9 | 88.2 | 105.8 | 68.3 |
| | 32.2 | 111.1 | 111.1 | 111.4 | 110.2 | 119.0 | 89.1 | 106.1 | 106.1 | 106.1 | 106.1 | 113.1 | 86.5 | 101.4 | 101.4 | 101.4 | 101.4 | 107.3 | 83.8 |
| 5190 | 23.9 | 99.4 | 86.2 | 107.9 | 64.8 | 117.5 | 43.4 | 94.1 | 83.2 | 102.0 | 61.8 | 111.1 | 40.7 | 88.5 | 80.3 | 95.8 | 60.1 | 104.3 | 38.4 |
| | 26.7 | 102.3 | 102.3 | 109.0 | 81.8 | 118.1 | 61.0 | 97.6 | 97.6 | 103.2 | 78.8 | 112.0 | 57.7 | 92.6 | 92.6 | 97.6 | 75.9 | 105.8 | 55.1 |
| | 29.4 | 108.1 | 108.1 | 110.8 | 99.1 | 119.6 | 77.1 | 103.5 | 103.5 | 105.2 | 96.1 | 113.4 | 74.4 | 98.5 | 98.5 | 99.6 | 93.5 | 107.6 | 71.5 |
| | 32.2 | 114.0 | 114.0 | 114.0 | 114.0 | 120.8 | 94.1 | 109.0 | 109.0 | 109.0 | 109.0 | 114.9 | 91.4 | 104.3 | 104.3 | 104.0 | 104.0 | 109.0 | 88.5 |
| 5660 | 23.9 | 100.8 | 90.3 | 109.0 | 68.3 | 118.4 | 44.0 | 95.5 | 87.3 | 103.2 | 65.4 | 112.0 | 41.3 | 90.0 | 84.1 | 97.0 | 62.4 | 105.2 | 39.0 |
| | 26.7 | 104.6 | 104.6 | 110.5 | 85.3 | 119.6 | 62.4 | 99.9 | 99.9 | 104.6 | 82.4 | 113.1 | 59.5 | 94.7 | 94.7 | 98.8 | 79.4 | 107.0 | 56.6 |
| | 29.4 | 110.8 | 110.8 | 112.5 | 104.3 | 121.0 | 80.3 | 105.8 | 105.8 | 107.0 | 101.4 | 114.9 | 77.7 | 100.8 | 100.8 | 101.4 | 98.5 | 108.7 | 74.7 |
| | 32.2 | 116.9 | 116.9 | 116.9 | 116.9 | 122.5 | 98.8 | 111.7 | 111.7 | 111.7 | 111.7 | 116.4 | 96.1 | 106.7 | 106.7 | 106.7 | 106.7 | 110.5 | 93.2 |
| 4130 | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | |
| 4130 | 23.9 | 79.4 | 68.0 | 86.8 | 51.6 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 26.7 | 82.1 | 82.1 | 88.2 | 64.8 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 29.4 | 87.0 | 87.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 4250 | 23.9 | 80.0 | 68.9 | 87.3 | 52.5 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 26.7 | 82.6 | 82.6 | 88.5 | 65.7 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 29.4 | 87.9 | 87.9 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 4720 | 23.9 | 81.5 | 73.0 | 88.8 | 54.8 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 26.7 | 85.3 | 85.3 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 5190 | 23.9 | 83.2 | 77.1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 26.7 | 87.6 | 87.6 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 5660 | 23.9 | 84.4 | 80.9 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 26.7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 62. 33.3 Ton Gross Cooling Capacities (MBh)—High Efficiency 3-Row Condenser Coil (I-P)—50 Hz R-407C Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 10000 | 75 | 400.0 | 312.0 | 442.0 | 246.0 | 488.0 | 175.0 | 378.0 | 299.0 | 417.0 | 234.0 | 462.0 | 163.0 | 356.0 | 285.0 | 392.0 | 222.0 | 435.0 | 151.0 |
| | 80 | 407.0 | 368.0 | 445.0 | 299.0 | 489.0 | 232.0 | 385.0 | 355.0 | 421.0 | 286.0 | 463.0 | 220.0 | 363.0 | 342.0 | 396.0 | 273.0 | 435.0 | 208.0 |
| | 85 | 420.0 | 420.0 | 449.0 | 354.0 | 492.0 | 286.0 | 401.0 | 401.0 | 426.0 | 341.0 | 466.0 | 273.0 | 381.0 | 381.0 | 402.0 | 328.0 | 441.0 | 260.0 |
| | 90 | 444.0 | 444.0 | 456.0 | 410.0 | 496.0 | 340.0 | 424.0 | 424.0 | 433.0 | 398.0 | 470.0 | 327.0 | 404.0 | 404.0 | 409.0 | 384.0 | 445.0 | 314.0 |
| 11000 | 75 | 409.0 | 327.0 | 449.0 | 254.0 | 496.0 | 178.0 | 386.0 | 314.0 | 424.0 | 241.0 | 468.0 | 166.0 | 363.0 | 300.0 | 399.0 | 230.0 | 441.0 | 154.0 |
| | 80 | 417.0 | 390.0 | 453.0 | 313.0 | 497.0 | 240.0 | 395.0 | 376.0 | 429.0 | 300.0 | 470.0 | 227.0 | 373.0 | 363.0 | 404.0 | 287.0 | 443.0 | 215.0 |
| | 85 | 435.0 | 435.0 | 459.0 | 374.0 | 501.0 | 298.0 | 415.0 | 415.0 | 435.0 | 360.0 | 475.0 | 285.0 | 394.0 | 394.0 | 410.0 | 347.0 | 448.0 | 273.0 |
| | 90 | 459.0 | 459.0 | 467.0 | 435.0 | 505.0 | 357.0 | 439.0 | 439.0 | 443.0 | 422.0 | 479.0 | 344.0 | 418.0 | 418.0 | 420.0 | 409.0 | 453.0 | 332.0 |
| 12000 | 75 | 416.0 | 342.0 | 456.0 | 265.0 | 502.0 | 181.0 | 393.0 | 329.0 | 431.0 | 251.0 | 474.0 | 169.0 | 370.0 | 315.0 | 404.0 | 238.0 | 446.0 | 157.0 |
| | 80 | 426.0 | 410.0 | 461.0 | 327.0 | 504.0 | 246.0 | 404.0 | 397.0 | 436.0 | 313.0 | 476.0 | 235.0 | 381.0 | 381.0 | 410.0 | 300.0 | 449.0 | 222.0 |
| | 85 | 448.0 | 448.0 | 467.0 | 392.0 | 508.0 | 310.0 | 427.0 | 427.0 | 442.0 | 379.0 | 481.0 | 297.0 | 405.0 | 405.0 | 418.0 | 366.0 | 455.0 | 285.0 |
| | 90 | 473.0 | 473.0 | 477.0 | 460.0 | 513.0 | 374.0 | 452.0 | 452.0 | 453.0 | 447.0 | 486.0 | 361.0 | 430.0 | 430.0 | 430.0 | 430.0 | 461.0 | 349.0 |
| 13000 | 75 | 423.0 | 357.0 | 462.0 | 274.0 | 507.0 | 183.0 | 400.0 | 343.0 | 437.0 | 260.0 | 478.0 | 171.0 | 376.0 | 329.0 | 410.0 | 247.0 | 450.0 | 159.0 |
| | 80 | 435.0 | 431.0 | 467.0 | 340.0 | 510.0 | 255.0 | 412.0 | 412.0 | 442.0 | 326.0 | 482.0 | 241.0 | 391.0 | 391.0 | 416.0 | 313.0 | 455.0 | 229.0 |
| | 85 | 459.0 | 459.0 | 474.0 | 411.0 | 514.0 | 322.0 | 438.0 | 438.0 | 450.0 | 397.0 | 487.0 | 309.0 | 416.0 | 416.0 | 425.0 | 384.0 | 461.0 | 296.0 |
| | 90 | 485.0 | 485.0 | 486.0 | 484.0 | 520.0 | 391.0 | 463.0 | 463.0 | 463.0 | 463.0 | 493.0 | 378.0 | 441.0 | 441.0 | 441.0 | 441.0 | 467.0 | 365.0 |
| 14600 | 75 | 432.0 | 380.0 | 470.0 | 283.0 | 513.0 | 187.0 | 409.0 | 366.0 | 444.0 | 274.0 | 484.0 | 175.0 | 384.0 | 352.0 | 417.0 | 260.0 | 455.0 | 163.0 |
| | 80 | 448.0 | 448.0 | 476.0 | 361.0 | 517.0 | 265.0 | 426.0 | 426.0 | 450.0 | 347.0 | 489.0 | 252.0 | 404.0 | 404.0 | 424.0 | 333.0 | 461.0 | 239.0 |
| | 85 | 475.0 | 475.0 | 485.0 | 440.0 | 523.0 | 341.0 | 453.0 | 453.0 | 460.0 | 426.0 | 495.0 | 327.0 | 430.0 | 430.0 | 435.0 | 413.0 | 468.0 | 314.0 |
| | 90 | 502.0 | 502.0 | 502.0 | 502.0 | 529.0 | 418.0 | 479.0 | 479.0 | 479.0 | 479.0 | 502.0 | 405.0 | 456.0 | 456.0 | 456.0 | 456.0 | 476.0 | 392.0 |
| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| 10000 | 75 | 332.0 | 271.0 | 367.0 | 210.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 80 | 340.0 | 328.0 | 372.0 | 260.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 85 | 360.0 | 360.0 | 377.0 | 315.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 11000 | 75 | 339.0 | 286.0 | 373.0 | 218.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 80 | 350.0 | 350.0 | 379.0 | 273.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 85 | 373.0 | 373.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12000 | 75 | 345.0 | 300.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 80 | 359.0 | 359.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 13000 | 75 | 351.0 | 315.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 80 | 368.0 | 368.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 14600 | 75 | 359.0 | 337.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 80 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 85 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 90 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.



Table 63. 120 kW (33.3 Ton) Gross Cooling Capacities—High Efficiency 3-Row Condenser Coil (SI)—50 Hz R-407C Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 29.4 | | | | | | 35.0 | | | | | | 40.6 | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 4720 | 23.9 | 117.2 | 91.4 | 129.5 | 72.1 | 143.0 | 51.3 | 110.8 | 87.6 | 122.2 | 68.6 | 135.4 | 47.8 | 104.3 | 83.5 | 114.9 | 65.1 | 127.5 | 44.3 |
| | 26.7 | 119.3 | 107.9 | 130.4 | 87.6 | 143.3 | 68.0 | 112.8 | 104.0 | 123.4 | 83.8 | 135.7 | 64.5 | 106.4 | 100.2 | 116.1 | 80.0 | 127.5 | 61.0 |
| | 29.4 | 123.1 | 123.1 | 131.6 | 103.8 | 144.2 | 83.8 | 117.5 | 117.5 | 124.9 | 99.9 | 136.6 | 80.0 | 111.7 | 111.7 | 117.8 | 96.1 | 129.2 | 76.2 |
| | 32.2 | 130.1 | 130.1 | 133.6 | 120.2 | 145.4 | 99.6 | 124.3 | 124.3 | 126.9 | 116.6 | 137.7 | 95.8 | 118.4 | 118.4 | 119.9 | 112.5 | 130.4 | 92.0 |
| 5190 | 23.9 | 119.9 | 95.8 | 131.6 | 74.4 | 145.4 | 52.2 | 113.1 | 92.0 | 124.3 | 70.6 | 137.2 | 48.7 | 106.4 | 87.9 | 116.9 | 67.4 | 129.2 | 45.1 |
| | 26.7 | 122.2 | 114.3 | 132.8 | 91.7 | 145.7 | 70.3 | 115.8 | 110.2 | 125.7 | 87.9 | 137.7 | 66.5 | 109.3 | 106.4 | 118.4 | 84.1 | 129.8 | 63.0 |
| | 29.4 | 127.5 | 127.5 | 134.5 | 109.6 | 146.8 | 87.3 | 121.6 | 121.6 | 127.5 | 105.5 | 139.2 | 83.5 | 115.5 | 115.5 | 120.2 | 101.7 | 131.3 | 80.0 |
| | 32.2 | 134.5 | 134.5 | 136.9 | 127.5 | 148.0 | 104.6 | 128.7 | 128.7 | 129.8 | 123.7 | 140.4 | 100.8 | 122.5 | 122.5 | 123.1 | 119.9 | 132.8 | 97.3 |
| 5660 | 23.9 | 121.9 | 100.2 | 133.6 | 77.7 | 147.1 | 53.0 | 115.2 | 96.4 | 126.3 | 73.6 | 138.9 | 49.5 | 108.4 | 92.3 | 118.4 | 69.8 | 130.7 | 46.0 |
| | 26.7 | 124.9 | 120.2 | 135.1 | 95.8 | 147.7 | 72.1 | 118.4 | 116.4 | 127.8 | 91.7 | 139.5 | 68.9 | 111.7 | 111.7 | 120.2 | 87.9 | 131.6 | 65.1 |
| | 29.4 | 131.3 | 131.3 | 136.9 | 114.9 | 148.9 | 90.9 | 125.1 | 125.1 | 129.5 | 111.1 | 141.0 | 87.0 | 118.7 | 118.7 | 122.5 | 107.3 | 133.4 | 83.5 |
| | 32.2 | 138.6 | 138.6 | 139.8 | 134.8 | 150.4 | 109.6 | 132.5 | 132.5 | 132.8 | 131.0 | 142.4 | 105.8 | 126.0 | 126.0 | 126.0 | 126.0 | 135.1 | 102.3 |
| 6140 | 23.9 | 124.0 | 104.6 | 135.4 | 80.3 | 148.6 | 53.6 | 117.2 | 100.5 | 128.1 | 76.2 | 140.1 | 50.1 | 110.2 | 96.4 | 120.2 | 72.4 | 131.9 | 46.6 |
| | 26.7 | 127.5 | 126.3 | 136.9 | 99.6 | 149.5 | 74.7 | 120.8 | 120.8 | 129.5 | 95.5 | 141.3 | 70.6 | 114.6 | 114.6 | 121.9 | 91.7 | 133.4 | 67.1 |
| | 29.4 | 134.5 | 134.5 | 138.9 | 120.5 | 150.6 | 94.4 | 128.4 | 128.4 | 131.9 | 116.4 | 142.7 | 90.6 | 121.9 | 121.9 | 124.6 | 112.5 | 135.1 | 86.8 |
| | 32.2 | 142.1 | 142.1 | 142.4 | 141.9 | 152.4 | 114.6 | 135.7 | 135.7 | 135.7 | 135.7 | 144.5 | 110.8 | 129.2 | 129.2 | 129.2 | 129.2 | 136.9 | 107.0 |
| 6890 | 23.9 | 126.6 | 111.4 | 137.7 | 82.9 | 150.4 | 54.8 | 119.9 | 107.3 | 130.1 | 80.3 | 141.9 | 51.3 | 112.5 | 103.2 | 122.2 | 76.2 | 133.4 | 47.8 |
| | 26.7 | 131.3 | 131.3 | 139.5 | 105.8 | 151.5 | 77.7 | 124.9 | 124.9 | 131.9 | 101.7 | 143.3 | 73.9 | 118.4 | 118.4 | 124.3 | 97.6 | 135.1 | 70.0 |
| | 29.4 | 139.2 | 139.2 | 142.1 | 129.0 | 153.3 | 99.9 | 132.8 | 132.8 | 134.8 | 124.9 | 145.1 | 95.8 | 126.0 | 126.0 | 127.5 | 121.0 | 137.2 | 92.0 |
| | 32.2 | 147.1 | 147.1 | 147.1 | 147.1 | 155.0 | 122.5 | 140.4 | 140.4 | 140.4 | 140.4 | 147.1 | 118.7 | 133.6 | 133.6 | 133.6 | 133.6 | 139.5 | 114.9 |
| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 4720 | 23.9 | 97.3 | 79.4 | 107.6 | 61.5 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 26.7 | 99.6 | 96.1 | 109.0 | 76.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 29.4 | 105.5 | 105.5 | 110.5 | 92.3 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 5190 | 23.9 | 99.4 | 83.8 | 109.3 | 63.9 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 26.7 | 102.6 | 102.6 | 111.1 | 80.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 29.4 | 109.3 | 109.3 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 5660 | 23.9 | 101.1 | 87.9 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 26.7 | 105.2 | 105.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 6140 | 23.9 | 102.9 | 92.3 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 26.7 | 107.9 | 107.9 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 6890 | 23.9 | 105.2 | 98.8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 26.7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.



Table 64. 41.7 Ton Gross Cooling Capacities (MBh)—High Efficiency 3-Row Condenser Coil (I-P)—50 Hz R-407C Refrigerant

| Air Flow CFM | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | |
| 12500 | 75 | 487.0 | 393.0 | 532.0 | 303.0 | 584.0 | 211.0 | 459.0 | 377.0 | 502.0 | 288.0 | 552.0 | 197.0 | 432.0 | 361.0 | 471.0 | 272.0 | 519.0 | 183.0 |
| | 80 | 497.0 | 470.0 | 538.0 | 375.0 | 587.0 | 283.0 | 471.0 | 453.0 | 509.0 | 360.0 | 555.0 | 271.0 | 444.0 | 437.0 | 479.0 | 344.0 | 524.0 | 256.0 |
| | 85 | 512.0 | 512.0 | 545.0 | 449.0 | 592.0 | 356.0 | 488.0 | 488.0 | 516.0 | 434.0 | 562.0 | 342.0 | 461.0 | 461.0 | 487.0 | 418.0 | 531.0 | 327.0 |
| | 90 | 543.0 | 543.0 | 555.0 | 525.0 | 598.0 | 429.0 | 519.0 | 519.0 | 528.0 | 510.0 | 568.0 | 414.0 | 495.0 | 495.0 | 500.0 | 492.0 | 538.0 | 399.0 |
| 13500 | 75 | 494.0 | 409.0 | 538.0 | 313.0 | 590.0 | 213.0 | 467.0 | 393.0 | 508.0 | 296.0 | 557.0 | 200.0 | 438.0 | 377.0 | 479.0 | 280.0 | 523.0 | 186.0 |
| | 80 | 506.0 | 492.0 | 545.0 | 390.0 | 593.0 | 293.0 | 480.0 | 471.0 | 515.0 | 374.0 | 562.0 | 278.0 | 454.0 | 451.0 | 486.0 | 358.0 | 530.0 | 263.0 |
| | 85 | 527.0 | 527.0 | 553.0 | 469.0 | 600.0 | 369.0 | 500.0 | 500.0 | 524.0 | 455.0 | 569.0 | 354.0 | 474.0 | 474.0 | 495.0 | 438.0 | 538.0 | 340.0 |
| | 90 | 563.0 | 563.0 | 566.0 | 551.0 | 606.0 | 447.0 | 534.0 | 534.0 | 537.0 | 524.0 | 576.0 | 432.0 | 505.0 | 505.0 | 508.0 | 499.0 | 546.0 | 417.0 |
| 14500 | 75 | 501.0 | 425.0 | 544.0 | 320.0 | 594.0 | 216.0 | 473.0 | 409.0 | 514.0 | 305.0 | 561.0 | 202.0 | 445.0 | 392.0 | 483.0 | 289.0 | 527.0 | 188.0 |
| | 80 | 516.0 | 514.0 | 552.0 | 404.0 | 599.0 | 300.0 | 489.0 | 486.0 | 522.0 | 388.0 | 567.0 | 284.0 | 462.0 | 459.0 | 492.0 | 372.0 | 535.0 | 270.0 |
| | 85 | 546.0 | 546.0 | 561.0 | 489.0 | 606.0 | 382.0 | 520.0 | 520.0 | 532.0 | 474.0 | 575.0 | 367.0 | 492.0 | 492.0 | 503.0 | 458.0 | 544.0 | 352.0 |
| | 90 | 576.0 | 576.0 | 576.0 | 576.0 | 614.0 | 465.0 | 550.0 | 550.0 | 550.0 | 550.0 | 583.0 | 450.0 | 523.0 | 523.0 | 523.0 | 523.0 | 553.0 | 435.0 |
| 15500 | 75 | 507.0 | 440.0 | 549.0 | 331.0 | 598.0 | 219.0 | 479.0 | 424.0 | 519.0 | 315.0 | 564.0 | 205.0 | 450.0 | 407.0 | 487.0 | 299.0 | 530.0 | 191.0 |
| | 80 | 525.0 | 525.0 | 557.0 | 418.0 | 605.0 | 306.0 | 499.0 | 499.0 | 527.0 | 402.0 | 572.0 | 292.0 | 474.0 | 474.0 | 497.0 | 386.0 | 540.0 | 279.0 |
| | 85 | 556.0 | 556.0 | 568.0 | 509.0 | 612.0 | 394.0 | 530.0 | 530.0 | 539.0 | 493.0 | 581.0 | 379.0 | 503.0 | 503.0 | 510.0 | 477.0 | 550.0 | 364.0 |
| | 90 | 587.0 | 587.0 | 587.0 | 587.0 | 620.0 | 483.0 | 561.0 | 561.0 | 561.0 | 561.0 | 589.0 | 468.0 | 535.0 | 535.0 | 535.0 | 535.0 | 559.0 | 453.0 |
| 16500 | 75 | 513.0 | 456.0 | 554.0 | 339.0 | 602.0 | 221.0 | 484.0 | 439.0 | 523.0 | 323.0 | 567.0 | 207.0 | 455.0 | 422.0 | 492.0 | 307.0 | 532.0 | 193.0 |
| | 80 | 534.0 | 534.0 | 563.0 | 431.0 | 609.0 | 314.0 | 508.0 | 508.0 | 532.0 | 415.0 | 577.0 | 299.0 | 481.0 | 481.0 | 502.0 | 399.0 | 545.0 | 284.0 |
| | 85 | 566.0 | 566.0 | 575.0 | 528.0 | 617.0 | 406.0 | 539.0 | 539.0 | 545.0 | 512.0 | 586.0 | 391.0 | 513.0 | 513.0 | 516.0 | 496.0 | 554.0 | 376.0 |
| | 90 | 598.0 | 598.0 | 598.0 | 598.0 | 626.0 | 501.0 | 571.0 | 571.0 | 571.0 | 571.0 | 595.0 | 486.0 | 545.0 | 545.0 | 545.0 | 545.0 | 565.0 | 471.0 |
| 12500 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 13500 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 14500 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 15500 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 16500 | 115 | Entering Wet Bulb Temperature | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

Notes:
 1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
 2. TGC = Total gross capacity.
 3. SHC = Sensible heat capacity.

Table 65. 148 kW (41.7 Ton) Gross Cooling Capacities—High Efficiency 3-Row Condenser Coil (SI)—50 Hz R-407C Refrigerant

| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 29.4 | | | | 35.0 | | | | 40.6 | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | | | | | | |
| TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | |
| 5900 | 23.9 | 142.7 | 115.2 | 155.9 | 88.8 | 171.2 | 61.8 | 134.5 | 110.5 | 147.1 | 84.4 | 161.8 | 57.7 | 126.6 | 105.8 | 138.0 | 79.7 | 152.1 | 53.6 |
| | 26.7 | 145.7 | 137.7 | 157.7 | 109.9 | 172.0 | 82.9 | 138.0 | 132.8 | 149.2 | 105.5 | 162.7 | 79.4 | 130.1 | 128.1 | 140.4 | 100.8 | 153.6 | 75.0 |
| | 29.4 | 150.1 | 150.1 | 159.7 | 131.6 | 173.5 | 104.3 | 143.0 | 143.0 | 151.2 | 127.2 | 164.7 | 100.2 | 135.1 | 135.1 | 142.7 | 122.5 | 155.6 | 95.8 |
| | 32.2 | 159.1 | 159.1 | 162.7 | 153.9 | 175.3 | 125.7 | 152.1 | 152.1 | 154.7 | 149.5 | 166.5 | 121.3 | 145.1 | 145.1 | 146.5 | 144.2 | 157.7 | 116.9 |
| 6370 | 23.9 | 144.8 | 119.9 | 157.7 | 91.7 | 172.9 | 62.4 | 136.9 | 115.2 | 148.9 | 86.8 | 163.2 | 58.6 | 128.4 | 110.5 | 140.4 | 82.1 | 153.3 | 54.5 |
| | 26.7 | 148.3 | 144.2 | 159.7 | 114.3 | 173.8 | 85.9 | 140.7 | 138.0 | 150.9 | 109.6 | 164.7 | 81.5 | 133.1 | 132.2 | 142.4 | 104.9 | 155.3 | 77.1 |
| | 29.4 | 154.5 | 154.5 | 162.1 | 137.5 | 175.8 | 108.1 | 146.5 | 146.5 | 153.6 | 133.4 | 166.8 | 103.8 | 138.9 | 138.9 | 145.1 | 128.4 | 157.7 | 99.6 |
| | 32.2 | 165.0 | 165.0 | 165.9 | 161.5 | 177.6 | 131.0 | 156.5 | 156.5 | 157.4 | 153.6 | 168.8 | 126.6 | 148.0 | 148.0 | 148.9 | 146.2 | 160.0 | 122.2 |
| 6840 | 23.9 | 146.8 | 124.6 | 159.4 | 93.8 | 174.1 | 63.3 | 138.6 | 119.9 | 150.6 | 89.4 | 164.4 | 59.2 | 130.4 | 114.9 | 141.6 | 84.7 | 154.5 | 55.1 |
| | 26.7 | 151.2 | 150.6 | 161.8 | 118.4 | 175.6 | 87.9 | 143.3 | 142.4 | 153.0 | 113.7 | 166.2 | 83.2 | 135.4 | 134.5 | 144.2 | 109.0 | 156.8 | 79.1 |
| | 29.4 | 160.0 | 160.0 | 164.4 | 143.3 | 177.6 | 112.0 | 152.4 | 152.4 | 155.9 | 138.9 | 168.5 | 107.6 | 144.2 | 144.2 | 147.4 | 134.2 | 159.4 | 103.2 |
| | 32.2 | 168.8 | 168.8 | 168.8 | 168.8 | 180.0 | 136.3 | 161.2 | 161.2 | 161.2 | 161.2 | 170.9 | 131.9 | 153.3 | 153.3 | 153.3 | 153.3 | 162.1 | 127.5 |
| 7320 | 23.9 | 148.6 | 129.0 | 160.9 | 97.0 | 175.3 | 64.2 | 140.4 | 124.3 | 152.1 | 92.3 | 165.3 | 60.1 | 131.9 | 119.3 | 142.7 | 87.6 | 155.3 | 56.0 |
| | 26.7 | 153.9 | 153.9 | 163.2 | 122.5 | 177.3 | 89.7 | 146.2 | 146.2 | 154.5 | 117.8 | 167.6 | 85.6 | 138.9 | 138.9 | 145.7 | 113.1 | 158.3 | 81.8 |
| | 29.4 | 163.0 | 163.0 | 166.5 | 149.2 | 179.4 | 115.5 | 155.3 | 155.3 | 158.0 | 144.5 | 170.3 | 111.1 | 147.4 | 147.4 | 149.5 | 139.8 | 161.2 | 106.7 |
| | 32.2 | 172.0 | 172.0 | 172.0 | 172.0 | 181.7 | 141.6 | 164.4 | 164.4 | 164.4 | 164.4 | 172.6 | 137.2 | 156.8 | 156.8 | 156.8 | 156.8 | 163.8 | 132.8 |
| 7790 | 23.9 | 150.4 | 133.6 | 162.4 | 99.4 | 176.4 | 64.8 | 141.9 | 128.7 | 153.3 | 94.7 | 166.2 | 60.7 | 133.4 | 123.7 | 144.2 | 90.0 | 155.9 | 56.6 |
| | 26.7 | 156.5 | 156.5 | 165.0 | 126.3 | 178.5 | 92.0 | 148.9 | 148.9 | 155.9 | 121.6 | 169.1 | 87.6 | 141.0 | 141.0 | 147.1 | 116.9 | 159.7 | 83.2 |
| | 29.4 | 165.9 | 165.9 | 168.5 | 154.7 | 180.8 | 119.0 | 158.0 | 158.0 | 159.7 | 150.1 | 171.7 | 114.6 | 150.4 | 150.4 | 151.2 | 145.4 | 162.4 | 110.2 |
| | 32.2 | 175.3 | 175.3 | 175.3 | 175.3 | 183.5 | 146.8 | 167.4 | 167.4 | 167.4 | 167.4 | 174.4 | 142.4 | 159.7 | 159.7 | 159.7 | 159.7 | 165.6 | 138.0 |
| CFM | Ent DB °C | Ambient Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 46.1 | | | | | | | | | | | | | | | | | |
| | | Entering Wet Bulb Temperature (°C) | | | | | | | | | | | | | | | | | |
| | | 16.1 | | 19.4 | | 22.8 | | 16.1 | | 19.4 | | 22.8 | | | | | | | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | | | | | | |
| 5900 | 23.9 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 26.7 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| 6370 | 23.9 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 26.7 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| 6840 | 23.9 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 26.7 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| 7320 | 23.9 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 26.7 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 32.2 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| 7790 | 23.9 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 26.7 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |
| | 29.4 | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | |

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. TGC = Total gross capacity.
3. SHC = Sensible heat capacity.

Table 66. Electric Heat Air Temperature Rise (°F) (I-P)—50 Hz Refrigerant

| Heater Input (kW) | Total MBh | CFM | | | | | | | | | | |
|-------------------|-----------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 7000 | 8000 | 9000 | 10000 | 11000 | 12000 | 13000 | 14000 | 15000 | 16000 | 17000 |
| 26.9 | 92 | 12.1 | 10.6 | 9.4 | 8.5 | 7.7 | 7.1 | — | — | — | — | — |
| 40.4 | 138 | 18.2 | 15.9 | 14.1 | 12.7 | 11.6 | 10.6 | 9.8 | 9.1 | 8.5 | 7.9 | 7.5 |
| 53.8 | 184 | 24.2 | 21.2 | 18.8 | 16.9 | 15.4 | 14.1 | 13.0 | 12.1 | 11.3 | 10.6 | 10.0 |
| 67.3 | 230 | 30.2 | 26.5 | 23.5 | 21.2 | 19.2 | 17.6 | 16.3 | 15.1 | 14.1 | 13.2 | 12.5 |
| 80.7 | 276 | — | — | — | 25.4 | 23.1 | 21.2 | 19.5 | 18.1 | 16.9 | 15.9 | 14.9 |

Notes:

1. Air temperature rise = (kW x 3413)/(scfm x 1.085).
2. All heaters on constant volume units provide 2 increments of capacity.
3. Air temperature rise in this table are based on heater operating at 415 volts.

Table 67. Electric Heat Air Temperature Rise (°C) (SI)—50 Hz Refrigerant

| Heater Input (kW) | L/s | | | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|
| | 3300 | 3780 | 4250 | 4720 | 5190 | 5660 | 6140 | 6610 | 7080 | 7550 | 8020 |
| 26.9 | 6.8 | 5.9 | 5.3 | 4.7 | 4.3 | 4.0 | — | — | — | — | — |
| 40.4 | 10.2 | 8.9 | 7.9 | 7.1 | 6.5 | 5.9 | 5.5 | 5.1 | 4.8 | 4.5 | 4.2 |
| 53.8 | 13.6 | 11.9 | 10.5 | 9.5 | 8.6 | 7.9 | 7.3 | 6.8 | 6.3 | 5.9 | 5.6 |
| 67.3 | 17.0 | 14.8 | 13.2 | 11.9 | 10.8 | 9.9 | 9.1 | 8.5 | 7.9 | 7.4 | 7.0 |
| 80.7 | — | — | — | 14.2 | 13.0 | 11.9 | 11.0 | 10.2 | 9.5 | 8.9 | 8.4 |

Notes:

1. Air temperature rise in this table are based on heater operating at 415 volts.
2. All heaters on constant volume units provide 2 increments of capacity.

Table 68. Available Electric Heat kW Ranges—50 Hz Refrigerant

| Nominal Unit Size Tons | Nominal Voltage (V) | |
|------------------------|---------------------|-------|
| | 380 | 415 |
| 22.9 | 23-56 | 27-67 |
| 25.0 | 23-56 | 27-67 |
| 29.2 | 23-56 | 27-67 |
| 33.3 | 34-68 | 40-81 |
| 42.7 | 34-68 | 40-81 |

Notes:

1. kW ranges in this table are based on heater operating at nominal voltages 380 or 415.

Table 69. Natural Gas Heating Capacities—50 Hz Refrigerant

| Tons | Unit Model No. | Heat Input MBh (kW) | Heating Output MBh (kW) | Air Temp. Rise, °F (°C) |
|-----------|----------------|------------------------|----------------------------|----------------------------|
| 22.9-29.2 | YCD/YCH275**L | 290,000 (85) | 243,000 (69) | 10-40 (-12.2 , 4.4) |
| | YCD/YCH300**L | | | |
| | YCD/YCH350**L | | | |
| 22.9-29.2 | YCD/YCH275**H | 500,000 (147) | 405,000 (119) | 25-55 (-3.9 , 12.8) |
| | YCD/YCH300**H | | | |
| | YCD/YCH350**H | | | |
| 33.3-42.7 | YCD/YCH400**L | 335,000 (98) | 271,350 (80) | 5-35 (-15 , 1.6) |
| | YCD/YCH500**L | | | |
| 33.3-42.7 | YCD/YCH400**H | 670,000 (196) | 542,700 (159) | 20-50 (-6.7 , 10) |
| | YCD/YCH500**H | | | |

Notes:

1. Total heating capacity.

Table 70. Supply Fan Performance – 22.9-29.1 Ton (I-P)

| SCFM | Static Pressure (in. wg) | | | | | | | | | | | | | | | | | |
|-------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 0.25 | | 0.50 | | 0.75 | | 1.00 | | 1.25 | | 1.50 | | 1.75 | | 2.00 | | 2.25 | |
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 6670 | 283 | 0.80 | 351 | 1.18 | 410 | 1.58 | 469 | 2.08 | 524 | 2.63 | 573 | 3.20 | 617 | 3.78 | 659 | 4.37 | 696 | 4.96 |
| 7085 | 291 | 0.90 | 358 | 1.31 | 413 | 1.70 | 469 | 2.21 | 524 | 2.78 | 574 | 3.37 | 619 | 3.98 | 660 | 4.59 | 698 | 5.22 |
| 7500 | 299 | 1.02 | 364 | 1.43 | 418 | 1.86 | 472 | 2.35 | 524 | 2.92 | 574 | 3.55 | 619 | 4.18 | 661 | 4.82 | 699 | 5.46 |
| 7915 | 306 | 1.14 | 371 | 1.58 | 425 | 2.05 | 475 | 2.51 | 524 | 3.08 | 574 | 3.72 | 620 | 4.38 | 661 | 5.04 | 701 | 5.73 |
| 8330 | 313 | 1.27 | 378 | 1.75 | 433 | 2.25 | 478 | 2.69 | 527 | 3.26 | 574 | 3.89 | 620 | 4.58 | 662 | 5.27 | 702 | 5.99 |
| 8745 | 321 | 1.42 | 386 | 1.93 | 439 | 2.43 | 484 | 2.92 | 530 | 3.45 | 574 | 4.08 | 620 | 4.79 | 663 | 5.51 | 702 | 6.24 |
| 9160 | 330 | 1.58 | 394 | 2.12 | 445 | 2.62 | 492 | 3.18 | 533 | 3.67 | 577 | 4.30 | 620 | 4.99 | 664 | 5.74 | 703 | 6.50 |
| 9575 | 339 | 1.76 | 403 | 2.32 | 452 | 2.84 | 499 | 3.44 | 538 | 3.93 | 580 | 4.53 | 622 | 5.22 | 663 | 5.96 | 703 | 6.76 |
| 9990 | 349 | 1.95 | 411 | 2.54 | 459 | 3.08 | 505 | 3.68 | 545 | 4.24 | 583 | 4.80 | 624 | 5.49 | 663 | 6.21 | 703 | 7.02 |
| 10405 | 360 | 2.17 | 419 | 2.77 | 467 | 3.34 | 511 | 3.92 | 552 | 4.57 | 588 | 5.09 | 628 | 5.77 | 665 | 6.49 | 703 | 7.28 |
| 10820 | 371 | 2.41 | 426 | 3.00 | 475 | 3.62 | 518 | 4.20 | 560 | 4.90 | 595 | 5.46 | 631 | 6.07 | 668 | 6.80 | 705 | 7.59 |
| 11235 | 383 | 2.66 | 434 | 3.25 | 483 | 3.90 | 525 | 4.50 | 566 | 5.19 | 603 | 5.85 | 634 | 6.41 | 671 | 7.13 | 707 | 7.90 |
| 11650 | 394 | 2.93 | 441 | 3.51 | 492 | 4.21 | 532 | 4.83 | 572 | 5.51 | 610 | 6.25 | 642 | 6.84 | 675 | 7.50 | 710 | 8.26 |
| 12065 | 405 | 3.23 | 449 | 3.79 | 500 | 4.53 | 540 | 5.18 | 578 | 5.83 | 616 | 6.61 | 649 | 7.30 | 680 | 7.90 | 714 | 8.67 |

| SCFM | Static Pressure (in. wg) | | | | | |
|-------|--------------------------|------|------|-------|------|-------|
| | 2.50 | | 2.75 | | 3.00 | |
| | RPM | BHP | RPM | BHP | RPM | BHP |
| 6670 | 733 | 5.60 | 767 | 6.23 | 800 | 6.88 |
| 7085 | 735 | 5.86 | 769 | 6.52 | 802 | 7.18 |
| 7500 | 736 | 6.13 | 771 | 6.82 | 803 | 7.49 |
| 7915 | 737 | 6.40 | 772 | 7.10 | 806 | 7.83 |
| 8330 | 739 | 6.70 | 773 | 7.41 | 807 | 8.16 |
| 8745 | 740 | 6.99 | 775 | 7.73 | 808 | 8.49 |
| 9160 | 740 | 7.25 | 776 | 8.06 | 809 | 8.83 |
| 9575 | 740 | 7.54 | 777 | 8.38 | 810 | 9.17 |
| 9990 | 741 | 7.83 | 776 | 8.65 | 811 | 9.51 |
| 10405 | 742 | 8.14 | 777 | 8.99 | 812 | 9.86 |
| 10820 | 741 | 8.41 | 777 | 9.31 | 812 | 10.21 |
| 11235 | 742 | 8.74 | 778 | 9.63 | 812 | 10.55 |
| 11650 | 745 | 9.11 | 778 | 9.96 | 812 | 10.89 |
| 12065 | 747 | 9.47 | 779 | 10.34 | 811 | 11.24 |

Table 71. Supply Fan Performance – 82-105 kW (SI)

| (L/s) | Static Pressure (Pascals) | | | | | | | | | | | | | | | | | |
|-------|---------------------------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| | 62.9 | | 124.1 | | 186.2 | | 248.3 | | 310.4 | | 372.5 | | 434.6 | | 496.7 | | 558.8 | |
| | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) |
| 3148 | 283 | 0.59 | 351 | 0.88 | 410 | 1.17 | 469 | 1.55 | 524 | 1.96 | 573 | 2.39 | 617 | 2.82 | 659 | 3.26 | 696 | 3.70 |
| 3344 | 291 | 0.67 | 358 | 0.98 | 413 | 1.27 | 469 | 1.65 | 524 | 2.07 | 574 | 2.52 | 619 | 2.97 | 660 | 3.42 | 698 | 3.89 |
| 3539 | 299 | 0.76 | 364 | 1.07 | 418 | 1.39 | 472 | 1.75 | 524 | 2.18 | 574 | 2.64 | 619 | 3.12 | 661 | 3.59 | 699 | 4.07 |
| 3735 | 306 | 0.85 | 371 | 1.18 | 425 | 1.53 | 475 | 1.87 | 524 | 2.29 | 574 | 2.77 | 620 | 3.26 | 661 | 3.76 | 701 | 4.27 |
| 3931 | 313 | 0.95 | 378 | 1.30 | 433 | 1.68 | 478 | 2.01 | 527 | 2.43 | 574 | 2.90 | 620 | 3.41 | 662 | 3.93 | 702 | 4.46 |
| 4127 | 321 | 1.06 | 386 | 1.44 | 439 | 1.81 | 484 | 2.18 | 530 | 2.58 | 574 | 3.04 | 620 | 3.57 | 663 | 4.11 | 702 | 4.65 |
| 4323 | 330 | 1.18 | 394 | 1.58 | 445 | 1.95 | 492 | 2.37 | 533 | 2.74 | 577 | 3.21 | 620 | 3.72 | 664 | 4.28 | 703 | 4.84 |
| 4519 | 339 | 1.31 | 403 | 1.73 | 452 | 2.12 | 499 | 2.56 | 538 | 2.93 | 580 | 3.38 | 622 | 3.89 | 663 | 4.45 | 703 | 5.04 |
| 4715 | 349 | 1.45 | 411 | 1.89 | 459 | 2.30 | 505 | 2.74 | 545 | 3.17 | 583 | 3.58 | 624 | 4.09 | 663 | 4.63 | 703 | 5.23 |
| 4910 | 360 | 1.62 | 419 | 2.06 | 467 | 2.49 | 511 | 2.93 | 552 | 3.40 | 588 | 3.79 | 628 | 4.31 | 665 | 4.84 | 703 | 5.43 |
| 5106 | 371 | 1.80 | 426 | 2.24 | 475 | 2.70 | 518 | 3.13 | 560 | 3.65 | 595 | 4.07 | 631 | 4.53 | 668 | 5.07 | 705 | 5.66 |
| 5302 | 383 | 1.98 | 434 | 2.42 | 483 | 2.91 | 525 | 3.36 | 566 | 3.87 | 603 | 4.37 | 634 | 4.78 | 671 | 5.32 | 707 | 5.89 |
| 5498 | 394 | 2.19 | 441 | 2.62 | 492 | 3.14 | 532 | 3.60 | 572 | 4.11 | 610 | 4.66 | 642 | 5.10 | 675 | 5.59 | 710 | 6.16 |
| 5694 | 405 | 2.41 | 449 | 2.83 | 500 | 3.38 | 540 | 3.87 | 578 | 4.35 | 616 | 4.93 | 649 | 5.44 | 680 | 5.89 | 714 | 6.46 |
| (L/s) | Static Pressure (Pascals) | | | | | | | | | | | | | | | | | |
| | 620.9 | | 683.0 | | 745.1 | | | | | | | | | | | | | |
| | RPM | (kW) | RPM | (kW) | RPM | (kW) | | | | | | | | | | | | |
| 3148 | 733 | 4.18 | 767 | 4.65 | 800 | 5.13 | | | | | | | | | | | | |
| 3344 | 735 | 4.37 | 769 | 4.86 | 802 | 5.36 | | | | | | | | | | | | |
| 3539 | 736 | 4.57 | 771 | 5.08 | 803 | 5.58 | | | | | | | | | | | | |
| 3735 | 737 | 4.77 | 772 | 5.29 | 806 | 5.84 | | | | | | | | | | | | |
| 3931 | 739 | 5.00 | 773 | 5.53 | 807 | 6.08 | | | | | | | | | | | | |
| 4127 | 740 | 5.21 | 775 | 5.76 | 808 | 6.33 | | | | | | | | | | | | |
| 4323 | 740 | 5.41 | 776 | 6.01 | 809 | 6.58 | | | | | | | | | | | | |
| 4519 | 740 | 5.62 | 777 | 6.25 | 810 | 6.84 | | | | | | | | | | | | |
| 4715 | 741 | 5.84 | 776 | 6.45 | 811 | 7.09 | | | | | | | | | | | | |
| 4910 | 742 | 6.07 | 777 | 6.70 | 812 | 7.35 | | | | | | | | | | | | |
| 5106 | 741 | 6.27 | 777 | 6.94 | 812 | 7.62 | | | | | | | | | | | | |
| 5302 | 742 | 6.52 | 778 | 7.18 | 812 | 7.87 | | | | | | | | | | | | |
| 5498 | 745 | 6.79 | 778 | 7.43 | 812 | 8.12 | | | | | | | | | | | | |
| 5694 | 747 | 7.06 | 779 | 7.71 | 811 | 8.38 | | | | | | | | | | | | |

Notes:

- Supply fan performance table includes internal resistance of rooftop. For total static pressure determination, system external static must be added to appropriate component static pressure drops, (evaporator coil, filters, optional economizer, optional heating system, optional roof curb).
- The pressure drops from the supply fan to the space should not exceed 2.25" (558.8 Pa) positive.
- Maximum air flow 23 ton (80 kW) is 4756 L/s, 25 ton is 5190 L/s, 29 ton is 5663 L/s
- Maximum motor kW for 23 ton unit is 7.5 (10 hp), 25 ton is 7.5 kW (10 hp), 29 ton is 11.2 kW (15 hp).

Figure 8. Supply Fan Performance — 22.9-29.1 Tons

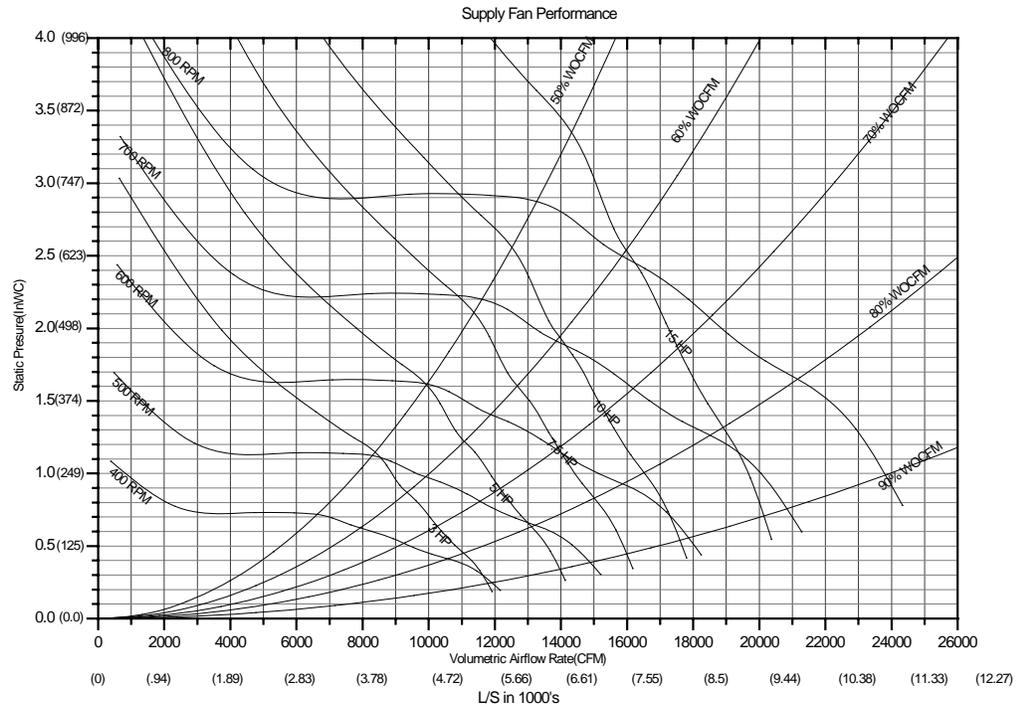


Table 72. Supply Fan Performance – 33.3 and 41.7 Tons (I-P)

| CFM | Static Pressure (in. wg) | | | | | | | | | | | | | | | | | |
|-------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|-------|------|-------|
| | 0.25 | | 0.50 | | 0.75 | | 1.00 | | 1.25 | | 1.50 | | 1.75 | | 2.00 | | 2.25 | |
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 9996 | 273 | 1.46 | 324 | 1.95 | 372 | 2.49 | 417 | 3.04 | 458 | 3.64 | 495 | 4.25 | 535 | 4.92 | 572 | 5.59 | 605 | 6.23 |
| 10829 | 287 | 1.78 | 336 | 2.30 | 383 | 2.87 | 422 | 3.44 | 464 | 4.06 | 501 | 4.71 | 535 | 5.38 | 572 | 6.11 | 606 | 6.81 |
| 11662 | 301 | 2.14 | 348 | 2.69 | 390 | 3.27 | 432 | 3.91 | 469 | 4.53 | 506 | 5.21 | 541 | 5.91 | 573 | 6.64 | 607 | 7.41 |
| 12495 | 315 | 2.53 | 360 | 3.12 | 401 | 3.74 | 442 | 4.41 | 476 | 5.07 | 512 | 5.76 | 546 | 6.49 | 578 | 7.24 | 609 | 8.03 |
| 13328 | 329 | 2.96 | 373 | 3.60 | 412 | 4.27 | 450 | 4.94 | 486 | 5.67 | 518 | 6.38 | 551 | 7.12 | 584 | 7.91 | 614 | 8.71 |
| 14161 | 344 | 3.45 | 387 | 4.14 | 424 | 4.85 | 459 | 5.55 | 495 | 6.31 | 527 | 7.08 | 557 | 7.83 | 589 | 8.62 | 619 | 9.45 |
| 14994 | 358 | 3.99 | 401 | 4.77 | 437 | 5.48 | 470 | 6.23 | 503 | 6.98 | 538 | 7.83 | 565 | 8.61 | 594 | 9.41 | 625 | 10.27 |
| 15827 | 373 | 4.58 | 415 | 5.45 | 449 | 6.17 | 482 | 6.98 | 513 | 7.75 | 546 | 8.61 | 576 | 9.46 | 602 | 10.30 | 630 | 11.14 |
| 16660 | 388 | 5.24 | 429 | 6.19 | 463 | 6.93 | 495 | 7.78 | 525 | 8.61 | 554 | 9.43 | 586 | 10.36 | 613 | 11.26 | 637 | 12.13 |

| CFM | Static Pressure (in. wg) | | | | | | | | | |
|-------|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|
| | 2.50 | | 2.75 | | 3.00 | | 3.25 | | 3.50 | |
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 9996 | 636 | 6.90 | 665 | 7.63 | 691 | 8.35 | 717 | 9.10 | 743 | 9.87 |
| 10829 | 638 | 7.53 | 669 | 8.24 | 697 | 8.99 | 722 | 9.77 | 748 | 10.57 |
| 11662 | 639 | 8.17 | 671 | 8.97 | 699 | 9.73 | 727 | 10.47 | 751 | 11.26 |
| 12495 | 639 | 8.82 | 670 | 9.66 | 700 | 10.49 | 728 | 11.33 | 755 | 12.13 |
| 13328 | 642 | 9.52 | 671 | 10.38 | 700 | 11.27 | 729 | 12.17 | 756 | 13.04 |
| 14161 | 648 | 10.31 | 674 | 11.16 | 702 | 12.08 | 730 | 13.01 | 757 | 13.96 |
| 14994 | 653 | 11.13 | 680 | 12.03 | 706 | 12.96 | 731 | 13.87 | 757 | 14.88 |
| 15827 | 659 | 12.04 | 686 | 12.99 | 711 | 13.92 | 737 | 14.90 | 761 | 15.87 |
| 16660 | 664 | 13.04 | 691 | 13.97 | 717 | 14.94 | 742 | 15.96 | 765 | 16.94 |



Table 73. Supply Fan Performance – 105-148 kW (SI)

| (L/s) | Static Pressure (Pascals) | | | | | | | | | | | | | | | | | |
|-------|---------------------------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| | 62.1 | | 124.2 | | 186.3 | | 248.1 | | 310.4 | | 372.5 | | 434.6 | | 496.7 | | 558.8 | |
| | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) |
| 4717 | 273 | 1.09 | 324 | 1.46 | 372 | 1.86 | 417 | 2.27 | 458 | 2.72 | 495 | 3.17 | 535 | 3.67 | 572 | 4.17 | 605 | 4.64 |
| 5111 | 287 | 1.33 | 336 | 1.72 | 383 | 2.14 | 422 | 2.57 | 464 | 3.03 | 501 | 3.51 | 535 | 4.01 | 572 | 4.55 | 606 | 5.08 |
| 5504 | 301 | 1.59 | 348 | 2.00 | 390 | 2.44 | 432 | 2.91 | 469 | 3.38 | 506 | 3.88 | 541 | 4.41 | 573 | 4.95 | 607 | 5.52 |
| 5897 | 315 | 1.88 | 360 | 2.33 | 401 | 2.79 | 442 | 3.29 | 476 | 3.78 | 512 | 4.30 | 546 | 4.84 | 578 | 5.40 | 609 | 5.99 |
| 6290 | 329 | 2.21 | 373 | 2.68 | 412 | 3.19 | 450 | 3.69 | 486 | 4.23 | 518 | 4.76 | 551 | 5.31 | 584 | 5.90 | 614 | 6.49 |
| 6683 | 344 | 2.57 | 387 | 3.09 | 424 | 3.62 | 459 | 4.14 | 495 | 4.70 | 527 | 5.28 | 557 | 5.84 | 589 | 6.43 | 619 | 7.05 |
| 7076 | 358 | 2.97 | 401 | 3.56 | 437 | 4.09 | 470 | 4.65 | 503 | 5.21 | 538 | 5.84 | 565 | 6.42 | 594 | 7.02 | 625 | 7.66 |
| 7469 | 373 | 3.42 | 415 | 4.07 | 449 | 4.60 | 482 | 5.20 | 513 | 5.78 | 546 | 6.42 | 576 | 7.06 | 602 | 7.68 | 630 | 8.31 |
| 7862 | 388 | 3.91 | 429 | 4.61 | 463 | 5.17 | 495 | 5.80 | 525 | 6.42 | 554 | 7.03 | 586 | 7.73 | 613 | 8.40 | 637 | 9.05 |

| (L/s) | Static Pressure (Pascals) | | | | | | | | | |
|-------|---------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 620.9 | | 683.0 | | 745.1 | | 807.2 | | 869.3 | |
| | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) | RPM | (kW) |
| 4717 | 636 | 5.14 | 665 | 5.69 | 691 | 6.22 | 717 | 6.78 | 743 | 7.36 |
| 5111 | 638 | 5.62 | 669 | 6.14 | 697 | 6.70 | 722 | 7.28 | 748 | 7.88 |
| 5504 | 639 | 6.09 | 671 | 6.69 | 699 | 7.25 | 727 | 7.81 | 751 | 8.40 |
| 5897 | 639 | 6.57 | 670 | 7.20 | 700 | 7.83 | 728 | 8.45 | 755 | 9.05 |
| 6290 | 642 | 7.10 | 671 | 7.74 | 700 | 8.41 | 729 | 9.07 | 756 | 9.72 |
| 6683 | 648 | 7.69 | 674 | 8.32 | 702 | 9.01 | 730 | 9.71 | 757 | 10.41 |
| 7076 | 653 | 8.30 | 680 | 8.97 | 706 | 9.66 | 731 | 10.35 | 757 | 11.10 |
| 7469 | 659 | 8.98 | 686 | 9.69 | 711 | 10.38 | 737 | 11.11 | 761 | 11.84 |
| 7862 | 664 | 9.72 | 691 | 10.42 | 717 | 11.14 | 742 | 11.90 | 765 | 12.63 |

Notes:

1. Supply fan performance table includes internal resistance of rooftop. For total static pressure determination, system external static must be added to appropriate component static pressure drops, (evaporator coil, filters, optional economizer, optional heating system, optional roof curb).
2. The pressure drops from the supply fan to the space should not exceed 2.5" wg (620.9 Pa) positive.
3. Max cfm for 33 ton unit 6825 L/s, 42 ton -7860 L/s
4. Max motor hp for 33 ton unit-11.2 kW (15 hp), 42 ton 14.9 kW (20 hp)

Figure 9. Supply Fan Performance – 33.3 and 41.7 Tons (I-P)

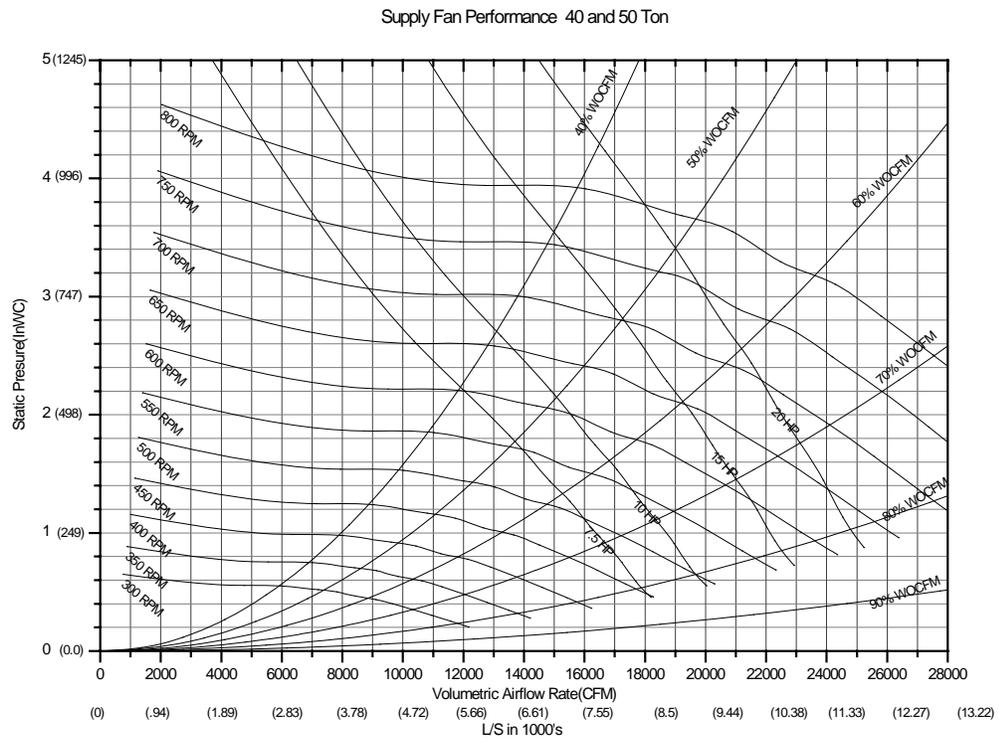




Table 74. Component Static Pressure Drops — in. wg (I-P)

| Nominal Std Tons (kW) | CFM Std Air | Heating System | | | | ID Coil | | Filters | | | Inlet Guide Vanes | Economizer |
|-----------------------|-------------|----------------|------|---------------|-----------|---------|------|------------|-------------------|------|-------------------|------------|
| | | Gas Heat | | Electric Heat | | | | Throw-away | High Eff. Filters | | | |
| | | Low | High | 1 Element | 2 Element | Dry | Wet | 2" | "2" | 4" | | |
| 23 (80) | 6670 | 0.07 | 0.05 | 0.04 | 0.05 | 0.07 | 0.09 | 0.05 | 0.08 | 0.07 | 0.04 | 0.331 |
| | 7500 | 0.08 | 0.07 | 0.06 | 0.06 | 0.08 | 0.1 | 0.07 | 0.11 | 0.1 | 0.06 | 0.04 |
| | 8330 | 0.1 | 0.08 | 0.07 | 0.08 | 0.09 | 0.12 | 0.08 | 0.13 | 0.12 | 0.07 | 0.049 |
| | 9170 | 0.13 | 0.1 | 0.08 | 0.09 | 0.12 | 0.14 | 0.09 | 0.15 | 0.14 | 0.08 | 0.059 |
| | 10000 | 0.15 | 0.12 | 0.1 | 0.11 | 0.13 | 0.17 | 0.11 | 0.18 | 0.16 | 0.1 | 0.07 |
| 25 (88) | 7500 | 0.08 | 0.07 | 0.06 | 0.06 | 0.08 | 0.1 | 0.07 | 0.11 | 0.1 | 0.06 | 0.04 |
| | 8330 | 0.1 | 0.08 | 0.07 | 0.08 | 0.09 | 0.12 | 0.08 | 0.13 | 0.12 | 0.07 | 0.049 |
| | 9170 | 0.13 | 0.1 | 0.08 | 0.09 | 0.12 | 0.14 | 0.09 | 0.15 | 0.14 | 0.08 | 0.059 |
| | 10000 | 0.15 | 0.12 | 0.1 | 0.11 | 0.13 | 0.17 | 0.11 | 0.18 | 0.17 | 0.12 | 0.07 |
| 29 (103) | 8750 | 0.11 | 0.09 | 0.08 | 0.08 | 0.16 | 0.2 | 0.09 | 0.15 | 0.13 | 0.08 | 0.054 |
| | 9580 | 0.14 | 0.11 | 0.09 | 0.1 | 0.18 | 0.23 | 0.1 | 0.17 | 0.16 | 0.11 | 0.065 |
| | 11200 | 0.19 | 0.15 | 0.13 | 0.14 | 0.24 | 0.3 | 0.12 | 0.21 | 0.19 | 0.13 | 0.077 |
| | 12100 | 0.22 | 0.17 | 0.15 | 0.16 | 0.27 | 0.33 | 0.13 | 0.22 | 0.21 | 0.15 | 0.091 |
| 33 (118) | 10000 | 0.01 | 0.03 | 0.07 | 0.11 | 0.15 | 0.19 | 0.11 | 0.18 | 0.16 | 0.03 | 70 |
| | 10800 | 0.01 | 0.03 | 0.08 | 0.13 | 0.17 | 0.22 | 0.12 | 0.21 | 0.18 | 0.04 | 0.076 |
| | 11700 | 0.01 | 0.04 | 0.1 | 0.15 | 0.2 | 0.24 | 0.13 | 0.23 | 0.2 | 0.04 | 0.085 |
| | 12500 | 0.01 | 0.04 | 0.11 | 0.17 | 0.22 | 0.27 | 0.14 | 0.26 | 0.23 | 0.05 | 0.096 |
| | 13300 | 0.02 | 0.05 | 0.12 | 0.19 | 0.24 | 0.3 | 0.15 | 0.28 | 0.25 | 0.06 | 0.107 |
| | 14200 | 0.02 | 0.06 | 0.14 | 0.22 | 0.27 | 0.33 | 0.17 | 0.32 | 0.28 | 0.07 | 0.12 |
| 42 (146) | 12500 | 0.01 | 0.04 | 0.11 | 0.17 | 0.29 | 0.36 | 0.14 | 0.26 | 0.23 | 0.05 | 0.095 |
| | 13300 | 0.02 | 0.05 | 0.12 | 0.19 | 0.32 | 0.4 | 0.15 | 0.28 | 0.25 | 0.06 | 0.108 |
| | 14200 | 0.02 | 0.06 | 0.16 | 0.24 | 0.36 | 0.44 | 0.17 | 0.34 | 0.29 | 0.07 | 0.12 |
| | 15800 | 0.02 | 0.07 | 0.18 | 0.27 | 0.42 | 0.53 | 0.19 | 0.38 | 0.34 | 0.08 | 0.136 |
| | 16700 | 0.03 | 0.08 | 0.2 | 0.3 | 0.46 | 0.57 | 0.2 | 0.41 | 0.36 | 0.09 | 0.155 |

Notes:

1. Static pressure drops of accessory components must be added to external static pressure to enter fan performance tables.

Table 75. Component Static Pressure Drops — Pa (SI)

| Nominal Std Tons (kW) | L/s Std Air | Heating System | | | | ID Coil | | Filters | | | Inlet Guide Vanes | Economizer |
|-----------------------|-------------|----------------|------|---------------|-----------|---------|-----|------------|-------------------|-------|-------------------|------------|
| | | Gas Heat | | Electric Heat | | | | Throw-away | High Eff. Filters | | | |
| | | Low | High | 1 Element | 2 Element | Dry | Wet | | Adder | 50 mm | | |
| 80 (23) | 3150 | 17 | 13 | 11 | 12 | 17 | 22 | 12 | 19 | 17 | 11 | 0.05 |
| | 3540 | 21 | 16 | 14 | 15 | 19 | 24 | 17 | 26 | 24 | 14 | 0.07 |
| | 3930 | 26 | 20 | 17 | 19 | 22 | 29 | 19 | 31 | 29 | 17 | 0.08 |
| | 4320 | 31 | 24 | 21 | 23 | 29 | 34 | 22 | 36 | 34 | 21 | 0.1 |
| | 4720 | 37 | 29 | 25 | 27 | 31 | 41 | 26 | 43 | 38 | 25 | 0.12 |
| 88 (25) | 3540 | 21 | 16 | 14 | 15 | 19 | 24 | 17 | 26 | 24 | 14 | 0.07 |
| | 3930 | 26 | 20 | 17 | 19 | 22 | 29 | 19 | 31 | 29 | 17 | 0.08 |
| | 4320 | 31 | 24 | 21 | 23 | 29 | 34 | 22 | 36 | 34 | 25 | 0.12 |
| | 5120 | 44 | 34 | 29 | 32 | 31 | 41 | 26 | 43 | 41 | 29 | 0.14 |
| 103 (29) | 4130 | 29 | 22 | 19 | 21 | 38 | 48 | 22 | 36 | 31 | 19 | 0.09 |
| | 4520 | 34 | 27 | 23 | 25 | 43 | 55 | 24 | 41 | 38 | 23 | 0.11 |
| | 4920 | 41 | 32 | 27 | 29 | 58 | 72 | 29 | 50 | 46 | 27 | 0.13 |
| | 5310 | 47 | 37 | 32 | 34 | 65 | 79 | 31 | 53 | 50 | 32 | 0.15 |
| 118 (33) | 4720 | 2 | 7 | 18 | 27 | 36 | 46 | 26 | 43 | 38 | 8 | 0.12 |
| | 5120 | 3 | 8 | 21 | 32 | 41 | 53 | 29 | 50 | 43 | 10 | 0.14 |
| | 5510 | 3 | 10 | 24 | 37 | 48 | 58 | 31 | 55 | 48 | 11 | 0.16 |
| | 5900 | 4 | 11 | 27 | 42 | 53 | 65 | 34 | 62 | 55 | 13 | 0.18 |
| | 6290 | 4 | 12 | 31 | 48 | 58 | 72 | 36 | 67 | 60 | 15 | 0.21 |
| | 6680 | 5 | 14 | 35 | 54 | 65 | 79 | 41 | 77 | 67 | 16 | 0.24 |
| 146 (42) | 5900 | 4 | 11 | 27 | 42 | 70 | 86 | 34 | 62 | 55 | 13 | 0.18 |
| | 6290 | 4 | 12 | 31 | 48 | 77 | 96 | 36 | 67 | 60 | 15 | 0.21 |
| | 6680 | 5 | 14 | 35 | 54 | 86 | 106 | 41 | 82 | 72 | 16 | 0.24 |
| | 7070 | 5 | 16 | 39 | 60 | 101 | 127 | 46 | 91 | 82 | 18 | 0.27 |
| | 7470 | 6 | 18 | 44 | 67 | 110 | 137 | 48 | 98 | 86 | 21 | 0.3 |

Notes:

1. Static pressure drops of accessory components must be added to external static pressure to enter fan performance tables.

Table 76. Supply Air Fan Drive Selections

| Nominal Tons (kW) | 5 hp | | 7.5 hp | | 10 hp | | 15 hp | |
|----------------------|------|----------|--------|----------|-------|----------|-------|----------|
| | rpm | Drive No | rpm | Drive No | rpm | Drive No | rpm | Drive No |
| 23 (80) | 458 | A | — | — | — | — | — | — |
| | 500 | B | — | — | — | — | — | — |
| | 541 | C | — | — | — | — | — | — |
| | 583 | — | 583 | D | — | — | — | — |
| | 625 | — | 625* | E | — | — | — | — |
| 25 (88) | 458 | A | — | — | — | — | — | — |
| | 500 | B | — | — | — | — | — | — |
| | 541 | C | — | — | — | — | — | — |
| | 583 | — | 583 | D | — | — | — | — |
| | 625 | — | 625 | E | — | — | — | — |
| 29 (103) | 500 | B | — | — | — | — | — | — |
| | 541 | — | 541 | C | — | — | — | — |
| | 583 | — | 583 | D | — | — | — | — |
| | 658 | — | — | — | 658** | F | — | — |
| | 664 | — | — | — | 664* | G | — | — |
| 33 (118) | 417 | — | 417 | H | — | — | — | — |
| | 437 | — | 437 | J | — | — | — | — |
| | 479 | — | 479 | K | — | — | — | — |
| | 521 | — | — | — | 521 | L | — | — |
| | 562 | — | — | — | 562 | M | — | — |
| | 604 | — | — | — | 604 | N | — | — |
| 42 (146) | 437 | — | 437 | J | — | — | — | — |
| | 479 | — | 479 | K | — | — | — | — |
| | 521 | — | — | — | 521 | L | — | — |
| | 562 | — | — | — | 562 | M | — | — |
| | 604 | — | — | — | — | — | 604 | N |

Notes:

1. *For YC gas/electrics only.
2. **For TC and TE Cooling only and with electric Heat units only.

Table 77. Power Exhaust Fan Performance—22.9 - 29.2 Ton—50 Hz

| | Power Exhaust Selection | | | |
|-------------------------|---------------------------------|-------|------|-------|
| | 50% | | 100% | |
| | Damper Blade Open Distance (mm) | | | |
| | 38.1 | 101.6 | 38.1 | 101.6 |
| Return Duct Static (Pa) | L/s | | | |
| 0.0 | 1499 | 2701 | 2999 | 5405 |
| 24.9 | 1375 | 2083 | 2751 | 4166 |
| 49.8 | 1255 | 1753 | 2488 | 3540 |
| 74.7 | 1134 | 1499 | 2269 | 3003 |
| 99.6 | 1031 | 1321 | 2061 | 2643 |
| 124.5 | 921 | 1135 | 1842 | 2270 |

Table 78. Power Exhaust Fan Performance—33.3 - 41.7 Ton—50 Hz

| | Power Exhaust Selection | | | |
|-------------------------|---------------------------------|-------|------|-------|
| | 50% | | 100% | |
| | Damper Blade Open Distance (mm) | | | |
| | 38.1 | 101.6 | 38.1 | 101.6 |
| Return Duct Static (Pa) | L/s | | | |
| 0.0 | 1909 | 3160 | 3818 | 6321 |
| 24.9 | 1800 | 2915 | 3599 | 5829 |
| 49.8 | 1676 | 2537 | 3364 | 5308 |
| 74.7 | 1577 | 2371 | 3155 | 4741 |
| 99.6 | 1462 | 2173 | 2925 | 4347 |
| 124.5 | 1364 | 2040 | 2727 | 4080 |



Controls

VAV Units Only—Sequence of Operation

Supply Air Pressure Control

Inlet Guide Vane Control. Inlet guide vanes are driven by a modulating 2-10 vdc signal from the VAV Module. A pressure transducer measures duct static pressure, and the inlet guide vanes are modulated to maintain the supply air static pressure within an adjustable user-defined range. The range is determined by the supply air pressure setpoint and supply air pressure deadband, which are set through a unit mounted potentiometer.

Inlet guide vane assemblies installed on the supply fan inlets regulate fan capacity and limit horsepower at lower system air requirements. When in any position other than full open, the vanes pre-spin intake air in the same direction as supply fan rotation. As the vanes approach the full-closed position, the amount of "spin" induced by the vanes increases at the same time that intake airflow and fan horsepower diminish. The inlet guide vanes will close when the supply fan is shut down.

Supply Air Static Pressure Limit. The opening of the inlet guide vanes and VAV boxes are coordinated, with respect to time, during unit start up and transition to/from Occupied/Unoccupied modes to prevent overpressurization of the supply air ductwork. However, if for any reason the supply air pressure exceeds the fixed supply air static pressure limit of 3.5" W.C., the supply fan is shut down and the inlet guide vanes are closed. The unit is then allowed to restart three times. If the overpressurization condition occurs on the fourth time, the unit is shut down and a manual reset diagnostic is set and displayed at any of the remote panels with LED status lights or communicated to the Integrated Comfort system.

Variable Frequency Drives (VFD) Control. Variable frequency drives are driven by a modulating 2-10 vdc signal from the VAV module. A pressure transducer measures duct static pressure, and the VFD is modulated to maintain the supply air static pressure within an adjustable user-defined range. The range is determined by the supply air pressure setpoint and supply air pressure deadband, which are set through a unit mounted potentiometer. Variable frequency drives provide supply fan motor speed modulation. The drive will accelerate or decelerate as required to maintain the supply static pressure setpoint. When subjected to high ambient return conditions the VFD shall reduce its output frequency to maintain operation. Bypass control is offered to provide full nominal airflow in the event of drive failure.

Supply Air Temperature Controls

Cooling/Economizer. During occupied cooling mode of operation, the economizer (if available) and primary cooling are used to control the supply air temperature. The supply air temperature setpoint is user-defined at the unit mounted VAV Setpoint Potentiometer or at the remote panel. If the enthalpy of the outside air is appropriate to use "free cooling," the economizer will be used first to attempt to satisfy the supply setpoint.

On units with economizer, a call for cooling will modulate the fresh air dampers open. The rate of economizer modulation is based on deviation of the discharge temperature from setpoint, i.e., the further away from setpoint, the faster the fresh air damper will open. Note that the economizer is only allowed to function freely if ambient conditions are below the enthalpy control setting or below the return air enthalpy if unit has comparative enthalpy installed. If outside air is not suitable for "economizing," the fresh air dampers drive to the minimum open position. A field adjustable potentiometer on the Economizer Actuator, Tracer™, or a remote potentiometer can provide the input to establish the minimum damper position.

At outdoor air conditions above the enthalpy control setting, primary cooling only is used and the fresh air dampers remain at minimum position.

If the unit does not include an economizer, primary cooling only is used to satisfy cooling requirements.

Supply Air Setpoint Reset. Supply air reset can be used to adjust the supply air temperature setpoint on the basis of a zone temperature, return air temperature, or on outdoor air temperature. Supply air reset adjustment is available on the unit mounted VAV Setpoint Potentiometer for supply air cooling control.

a. Reset Based on Outdoor Air Temperature. Outdoor air cooling reset is sometimes used in applications where the outdoor temperature has a large effect on building load. When the outside air temperature is low and the building cooling load is low, the supply air setpoint can be raised, thereby preventing subcooling of critical zones. This reset can lower usage of primary cooling and result in a reduction in primary cooling energy usage.

There are two user-defined parameters that are adjustable through the VAV Setpoint Potentiometer: reset temperature setpoint and reset amount. The amount of reset applied is dependent upon how far the outdoor air temperature is below the supply air reset setpoint. The amount is zero where they are equal and increases linearly toward the value set at the reset amount input. The maximum value is 20°F. If the outdoor air temperature is more than 20°F below the reset temperature setpoint the amount of reset is equal to the reset amount setpoint.

b. Reset Based On Zone Or Return Temperature. Zone or return reset is applied to the zone(s) in a building that tend to overcool or overheat. The supply air temperature setpoint is adjusted based on the temperature of the critical zone(s) or the return air temperature. This can have the effect of improving comfort and/or lowering energy usage. The user-defined parameters are the same as for outdoor air reset.

Logic for zone or return reset control is the same except that the origins of the temperature inputs are the zone sensor or return sensor respectively. The amount of reset applied is dependent upon how far the zone or return air temperature is below the supply air reset setpoint. The amount is zero where they are equal and increases linearly toward the value set at the reset amount potentiometer on the VAV Setpoint potentiometer. The maximum value is 3°F. If the return or zone temperature is more than 3°F below the reset temperature setpoint the amount of reset is equal to the reset amount setpoint.

Zone Temperature Control

Unoccupied Zone Heating and Cooling. During Unoccupied mode, the unit is operated as a CV unit. Inlet guide vanes and VAV boxes are driven full open. The unit controls zone temperature to the Unoccupied zone cooling and heating (heating units only) setpoints.

Daytime Warm-up. During occupied mode, if the zone temperature falls to a temperature three degrees below the Morning Warm-up setpoint, Daytime Warm-up is initiated. The system changes to CV heating (full unit airflow), the VAV boxes are fully opened and the CV heating algorithm is in control until the Morning Warm-up setpoint is reached. The unit is then returned to VAV cooling mode. The Morning Warm-up setpoint is set at the unit mounted VAV Setpoint potentiometer or at a remote panel.

Morning Warm-up (MWU). Morning warm-up control (MWU) is activated whenever the unit switches from unoccupied to occupied and the zone temperature is at least 1.5°F below the MWU setpoint. When MWU is activated the VAV box output will be energized for at least 6 minutes to drive all boxes open, the inlet guide vanes are driven full open, and full heat (gas or electric) is energized. When MWU is activated the economizer damper is driven fully closed. When the zone temperature meets or exceeds the MWU setpoint minus 1.5°F, the heat will be turned or staged down. When the zone temperature meets or exceeds the MWU setpoint then MWU will be terminated and the unit will switch over to VAV cooling.

CV Units Only—Sequence of Operation

Occupied Zone Temperature Control

Cooling/Economizer. During occupied cooling mode, the economizer (if provided) and primary cooling are used to control zone temperature. If the enthalpy of outside air is appropriate to use "free cooling," the economizer will be used first to attempt to satisfy the cooling zone temperature setpoint; then primary cooling will be staged up as necessary.

On units with economizer, a call for cooling will modulate the fresh air dampers open. The rate of economizer modulation is based on deviation of the zone temperature from setpoint, i.e., the further away from setpoint, the faster the fresh air damper will open. First stage of cooling will be allowed to start after the economizer reaches full open.

Note that the economizer is allowed to function freely only if ambient conditions are below the enthalpy control setting or below the return air enthalpy if unit has comparative enthalpy. If outside air is not suitable for "economizing," the fresh air dampers drive to the minimum open position. A field adjustable potentiometer on the Economizer Actuator, Tracer or a remote potentiometer can provide the input to establish the minimum damper position.

At outdoor air temperatures above the enthalpy control setting, primary cooling only is used and the outdoor air dampers remain at minimum position.

If the unit does not include an economizer, primary cooling only is used to satisfy cooling requirements.

Heating

Gas Heating. When heating is required the RTRM initiates the heating cycle through the ignition control module(s) (IGN). The IGN relay brings on the combustion fan motor. The ignition control module(s) begin the ignition process by preheating the hot surface ignitor(s). After the hot surface ignitor is preheated the gas valve is opened to ignite first stage. If ignition does not take place the IGN(s) will attempt to ignite 2 more times before locking out. When ignition does occur the hot surface ignitor is deenergized and then functions as a flame sensor. The RTRM will energize the supply fan contactor 45 seconds after the initiation of the heat cycle. If more capacity is needed to satisfy the heating setpoint, the RTRM will call for more heat by driving the combustion blower motor to high speed.

When the space temperature rises above the heating setpoint, the RTRM terminates the heat cycle.

Electric Heating. When heat is required, the RTRM initiates first stage heating by energizing the first stage electric heat contactor. The first stage electric heater bank(s) will be energized if the appropriate limits are closed. The RTRM will cycle first stage heat on and off as required to maintain zone temperature. If first stage cannot satisfy the requirement, the RTRM will energize the second stage electric heat contactor(s) if the appropriate limits are closed. The RTRM will cycle second stage on and off as required while keeping stage one energized.

The supply fan is energized approximately 1 second before the electric heat contactors. When the space temperature rises above the heating setpoint, the RTRM deenergizes the supply fan and all electric heat contactors.

Supply Air Tempering. This feature is available only with Tracer™ or with systems using programmable zone sensors (CV only with economizer). For gas and electric heat units in the Heat mode but not actively heating, if the supply air temperature drops to 10°F below the occupied zone heating temperature setpoint, heat will be brought on to maintain a minimum supply air temperature. The heat is dropped if the supply air temperature rises to 10°F above the occupied zone heating temperature setpoint.

Auto Changeover. When the System Mode is “Auto,” the mode will change to cooling or heating as necessary to satisfy the zone cooling and heating setpoints. The zone cooling and heating setpoints can be as close as 2°F apart.

Unoccupied Zone Temperature Control Cooling and Heating. Both cooling or heating modes can be selected to maintain Unoccupied zone temperature setpoints. For Unoccupied periods, heating or primary cooling operation can be selectively locked out at the remote panels or TRACER.

Conventional Thermostat Interface. Conventional Thermostat Interface (CTI) is a standard part of the RTRM. The CTI will allow only two steps of heating or cooling. The CTI provides zone temperature control only and is mutually exclusive of the Trane Communications Interface (TCI).

Note: *If a conventional thermostat is used with a unit that has modulating gas heat, the heat will not perform as intended).*

Control Sequences of Operation Common to Both VAV and CV Units

Ventilation override (VOM). Applying 24 volts to one of the three Ventilation Override inputs manually activates ventilation override. One input is provided to request the pressurize mode, the second input to request the purge mode, and the third input to request the exhaust mode.

Note: *Ventilation override exhaust mode is not available for the exhaust fan with fresh air tracking power exhaust. VOM is available for the exhaust fan without fresh air tracking power exhaust.*

If more than one mode is requested at the same time, the pressurize request will have priority followed by purge. When any ventilation override mode is active, all heating and cooling is turned off. For the case where the unit is required to turn off, the emergency stop input is used. The ICS can also initiate any ventilation override mode.

Coil Freeze Protection FROSTAT™. The FROSTAT system eliminates the need for hot gas bypass and adds a suction line surface temperature sensor to determine if the coil is in a condition of impending frost. If impending frost is detected primary cooling capacity is shed as necessary to prevent icing. All compressors are turned off after they have met their minimum 3 minute on times. The supply fan is forced on until the FROSTAT device no longer senses a frosting condition or for 60 seconds after the last compressor is shut off, whichever is longer.

Occupied/Unoccupied Switching.

There are 3 ways to switch Occupied/Unoccupied:

1. NSB Panel
2. Electronic time clock or field-supplied contact closure
3. TRACER

TRACER

Night Setback Sensors . Trane's night setback sensors are programmable with a time clock function that provides communication to the rooftop unit through a 2-wire communications link. The desired transition times are programmed at the night setback sensor and communicated to the unit.

Night setback (unoccupied mode) is operated through the time clock provided in the sensors with night setback. When the time clock switches to night setback operation, the outdoor air dampers close and heating/cooling can be enabled or disabled. As the building load changes, the night setback sensor communicates the need for the rooftop heating/cooling (if enabled) function and the evaporator fan. The rooftop unit will cycle through the evening as heating/cooling (if enabled)

is required in the space. When the time clock switches from night setback to occupied mode, all heating/cooling functions begin normal operation.

When using the night setback options with a VAV heating/cooling rooftop, airflow must be maintained through the rooftop unit. This can be accomplished by electrically tying the VAV boxes to the VAV heat relay contacts on the Low voltage terminal board or by using changeover thermostats. Either of these methods will assure adequate airflow through the unit and satisfactory temperature control of the building.

Timed override Activation—ICS. When this function is initiated by pushing the override button on the ICS sensor, TRACER will switch the unit to the occupied mode. Unit operation (occupied mode) during timed override is terminated by a signal from TRACER.

Timed override Activation—Non-ICS. When this function is initiated by the push of an override button on the programmable zone sensor, the unit will switch to the occupied mode. Automatic Cancellation of the Timed override Mode occurs after three hours of operation.

Comparative Enthalpy Control of Economizer. The Economizer Actuator receives inputs from optional return air humidity and temperature sensors and determines whether or not it is feasible to economize. If the outdoor air enthalpy is greater than the return air enthalpy then it is not feasible to economize and the economizer damper will not open past its minimum position.

Fan Failure Switch. The fan failure switch will disable all unit functions and "flash" the Service LED on the zone sensor.

Emergency Stop Input . A binary input is provided on the RTRM for installation of field provided switch or contacts for immediate shutdown of all unit functions. The binary input is brought out to Low Voltage Terminal Board One (LTB1).

Table 79. Mode and Priority

| Affected Function | Mode and Priority | | |
|-------------------|--------------------|--------------------|--------------------|
| | Pressurize 1 | Purge 2 | Exhaust 3 |
| Heat/Cool | off | off | off |
| IGV/VFD | open/full speed | open/full speed | open/full speed |
| Supply Fan | on | on | off |
| Exhaust Fan | off | on | n/a ⁽¹⁾ |
| Economizer | open | open | closed |
| VAV Boxes | forced open | forced open | normal operation |

⁽¹⁾ Ventilation override exhaust mode is not available for the exhaust fan with fresh air tracking power exhaust. VOM is available for the exhaust fan **without** fresh air tracking power exhaust.



Electrical Data

Electrical Service Sizing

To correctly size electrical service wiring for your unit, find the appropriate calculations listed below. Each type of unit has its own set of calculations for MCA (Minimum Circuit Ampacity), MOP (Maximum Overcurrent Protection), and RDE (Recommended Dual Element fuse size). Read the load definitions that follow and then find the appropriate set of calculations based on your unit type.

Set 1 is for cooling only and cooling with gas heat units, and set 2 is for cooling with electric heat units.

Load Definitions: (To determine load values, see the Electrical Service Sizing Data Tables.)

LOAD1 = CURRENT OF THE LARGEST MOTOR (COMPRESSOR OR FAN MOTOR)

LOAD2 = SUM OF THE CURRENTS OF ALL REMAINING MOTORS

LOAD3 = CURRENT OF ELECTRIC HEATERS

LOAD4 = ANY OTHER LOAD RATED AT 1 AMP OR MORE

Set 1. Cooling Only Rooftop Units and Cooling with Gas Heat Rooftop Units.

$$\text{MCA} = (1.25 \times \text{LOAD1}) + \text{LOAD2} + \text{LOAD4}$$

$$\text{MOP} = (2.25 \times \text{LOAD1}) + \text{LOAD2} + \text{LOAD4}$$

Select a fuse rating equal to the MOP value. If the MOP value does not equal a standard fuse size as listed in NEC 240-6, select the next lower standard fuse rating. NOTE: If selected MOP is less than the MCA, then reselect the lowest standard maximum fuse size which is equal to or larger than the MCA, provided the reselected fuse size does not exceed 800 amps.

$$\text{RDE} = (1.5 \times \text{LOAD1}) + \text{LOAD2} + \text{LOAD4}$$

Select a fuse rating equal to the RDE value. If the RDE value does not equal a standard fuse size as listed in NEC 240-6, select the next higher standard fuse rating.

Note: *If the selected RDE is greater than the selected MOP value, then reselect the RDE value to equal the MOP value.*

(Keep in mind when determining LOADS that crankcase heaters are disabled in the cooling mode).

$$\text{DSS} = 1.15 \times (\text{LOAD1} + \text{LOAD2} + \text{LOAD4})$$

Select a disconnect switch size equal to or larger than the DSS value calculated.

Set 2. Rooftop units with Electric Heat.

To arrive at the correct MCA, MOP, and RDE values for these units, you must perform two sets of calculations. First calculate the MCA, MOP, and RDE values as if the unit was in cooling mode (use the equations given in Set 1). Then calculate the MCA, MOP, and RDE values as if the unit was in the heating mode as follows.

(Keep in mind when determining LOADS that the compressors and condenser fans don't run while the unit is in the heating mode and crankcase heaters are disabled in the cooling mode.)

For units using heaters less than 50 kw.

$$\text{MCA} = 1.25 \times (\text{LOAD1} + \text{LOAD2} + \text{LOAD4}) + (1.25 \times \text{LOAD3})$$

For units using heaters equal to or greater than 50 kw.

$$MCA = 1.25 \times (LOAD1 + LOAD2 + LOAD4) + LOAD3$$

The nameplate MCA value will be the larger of the cooling mode MCA value or the heating mode MCA value calculated above.

$$MOP = (2.25 \times LOAD1) + LOAD2 + LOAD3 + LOAD4$$

The selection MOP value will be the larger of the cooling mode MOP value or the heating mode MOP value calculated above.

Select a fuse rating equal to the MOP value. If the MOP value does not equal a standard fuse size as listed in NEC 240-6, select the next lower standard fuse rating.

Note: *If selected MOP is less than the MCA, then reselect the lowest standard maximum fuse size which is equal to or larger than the MCA, provided the reselected fuse size does not exceed 800 amps.*

$$RDE = (1.5 \times LOAD1) + LOAD2 + LOAD3 + LOAD4$$

The selection RDE value will be the larger of the cooling mode RDE value or the heating mode RDE value calculated above.

Select a fuse rating equal to the RDE value. If the RDE value does not equal a standard fuse size as listed in NEC 240-6, select the next higher standard fuse rating.

Note: *If the selected RDE is greater than the selected MOP value, then reselect the RDE value to equal the MOP value.*

$$DSS = 1.15 \times (LOAD1 + LOAD2 + LOAD3 + LOAD4)$$

Note: *Keep in mind when determining LOADS that the compressors and condenser fans don't run while the unit is in the heating mode.*

The selection DSS value will be the larger of the cooling mode DSS or the heating mode DSS calculated above.

Select a disconnect switch size equal to or larger than the DSS value calculated.

Table 80. Electrical Service Sizing Data — Electric Heat Module (Electric Heat Only)

| Models: TED/TEH 330–600 Electric Heat FLA | | | | | | |
|---|----------------------|-----------|--------|--------|--------|---------|
| Nominal Unit Size (Tons) | Nominal Unit Voltage | KW Heater | | | | |
| | | 36 FLA | 54 FLA | 72 FLA | 90 FLA | 108 FLA |
| 27½-35 | 208 | 74.9 | 112.4 | — | — | — |
| | 230 | 86.6 | 129.9 | — | — | — |
| | 460 | 43.3 | 65.0 | 86.6 | 108.3 | — |
| | 575 | — | 52.0 | 69.3 | 86.6 | — |
| 40-50 | 208 | — | 112.4 | — | — | — |
| | 230 | — | 129.9 | — | — | — |
| | 460 | — | 65.0 | 86.6 | 108.3 | 129.9 |
| | 575 | — | 52.0 | 69.3 | 86.6 | 103.9 |

Notes:

1. All FLA in this table are based on heater operating at 208, 240, 480, and 600 volts.

Table 82. Electrical Service Sizing Data — Crankcase Heaters — (Heating Mode Only)—60Hz

| Nominal Unit Size (Tons) | FLA Add Unit Voltage | | | |
|--------------------------|----------------------|-----|-----|-----|
| | 200 | 230 | 460 | 575 |
| 27½ - 35 | 2 | 2 | 1 | 1 |
| 40, 50 | 3 | 3 | 2 | 2 |

Table 83. Electrical Service Sizing Data—50Hz

| Model | Electrical Characteristics | Compressor | | | Fan Motors | | | | | | | | |
|--------------|----------------------------|------------|--------------|------------|------------|------|-----------|----------|-----------|---------|----------|----------|-----------|
| | | No./Ton | RLA (Ea.) | LRA (Ea.) | Supply | | Condenser | | | Exhaust | | | |
| | | | | | HP(kW) | FLA | No. | HP(kW) | FLA (Ea.) | 50% No. | 100% No. | HP (kW) | FLA (Ea.) |
| TC/TE/YC*275 | 380-415/50/3 | 1/10, 1/15 | 18.1/27.3 | 110/174 | 5(3.7) | 13.1 | 3 | .75(.56) | 4.4 | 1 | 2 | .75(.56) | 1.7 |
| TC/TE/YC*305 | 380-415/50/3 | 2/15 | 27.3 | 174 | 5(3.7) | 13.1 | 3 | .75(.56) | 4.4 | 1 | 2 | .75(.56) | 1.7 |
| TC/TE/YC*350 | 380-415/50/3 | 2/15 | 27.3 | 174 | 5(3.7) | 13.1 | 3 | .75(.56) | 4.4 | 1 | 2 | .75(.56) | 1.7 |
| TC/TE/YC*400 | 380-415/50/3 | 2/15, 1/10 | 27.3 18.1 | 174 110 | 7.5(5.6) | 16.6 | 4 | .75(.56) | 4.4 | 1 | 2 | 1(.75) | 2.5 |
| TC/TE/YC*500 | 380-415/50/3 | 3/15 | 27.3 | 174 | 7.5(5.6) | 16.6 | 4 | .75(.56) | 4.4 | 1 | 2 | 1(.75) | 2.5 |

Notes:

1. All customer wiring and devices must be installed in accordance with local and national electrical codes.
2. Allowable voltage range for the 380V unit is 342-418V, allowable voltage range for the 415V unit is 373-456.

Table 84. Electrical Service Sizing Data – Electric Heat Module (Electric Heat Units Only)—50Hz

| Models: TED/TEH 275 thru 500 Electric Heat FLA | | | | | | |
|--|----------------------|----------------------|-------|-------|-------|-------|
| Nominal Unit Size (Tons) | Nominal Unit Voltage | KW Heater (380/415V) | | | | |
| | | 23/27 | 34/40 | 45/54 | 56/67 | 68/81 |
| 23-29 | 380 | 34.5 | 51.1 | 68.9 | 85.5 | – |
| | 415 | 37.6 | 55.6 | – | – | – |
| 33, 42 | 380 | – | 51.1 | 68.9 | 85.5 | 103.4 |
| | 415 | – | 55.6 | 75.1 | 93.2 | 112.7 |

Notes:

1. All FLA in this table are based on heater operating at 380 or 415 volts as shown above.

Table 85. Electrical Service Sizing Data — Crankcase Heaters — (Heating Mode Only)—50Hz

| Nominal Unit Size (Tons) | FLA Add Unit Voltage | |
|--------------------------|----------------------|-----|
| | 380 | 415 |
| 23 - 29 | 1 | 1 |
| 33 - 42 | 2 | 2 |

Dimensional Data

Fresh Air, Power Exhaust Hoods

Figure 10. Side view showing fresh air and power exhaust hoods for downflow configuration

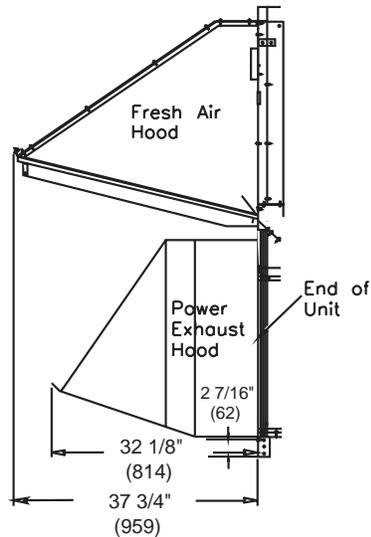
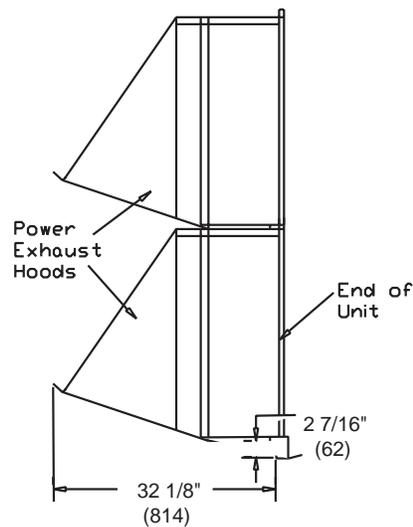


Figure 11. Side view showing power exhaust hoods for horizontal configuration



Note: The two Horizontal Power Exhaust Hoods and the three Horizontal Fresh Air Hoods are located side by side. The Fresh Air Hoods (not shown) extend only 23 15/16" from the end of the unit.

Figure 12. 60 Hz 27½-35, 50 Hz 23-29 Tons (TC, TE, YC Low Heat)

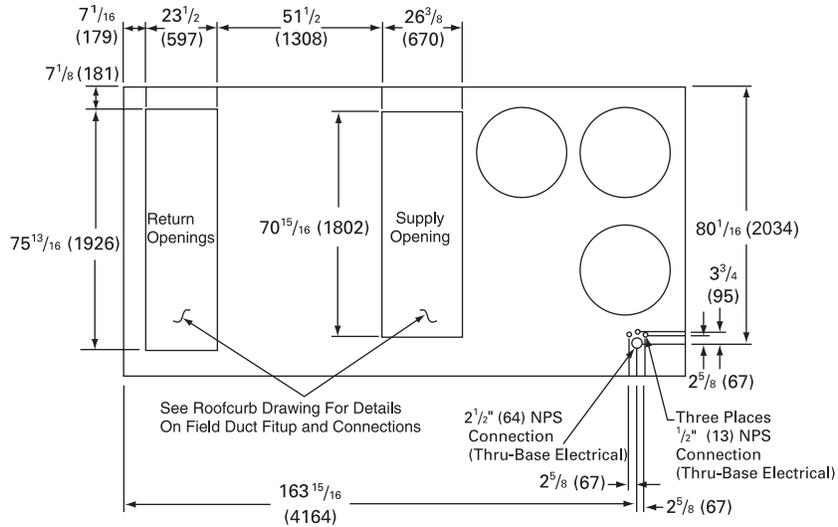


Figure 13. Rear view showing duct openings for horizontal units

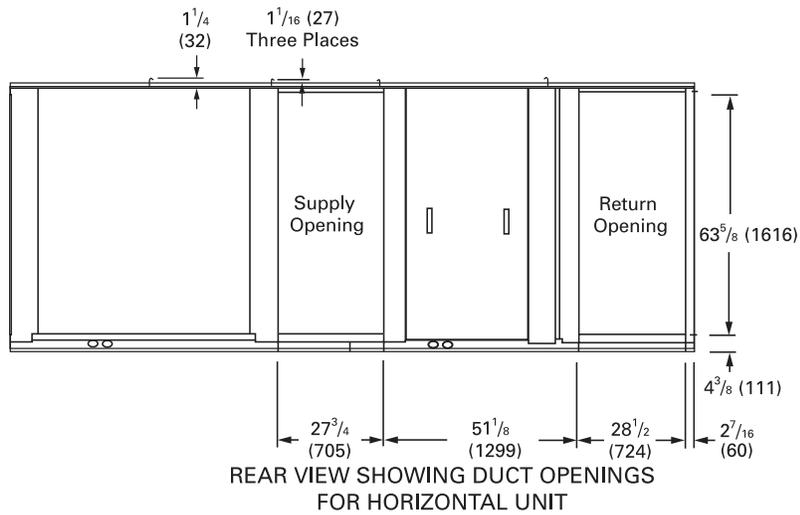


Figure 16. 60 Hz 27½-35, 50 Hz 23-29 Tons (YC High Heat)

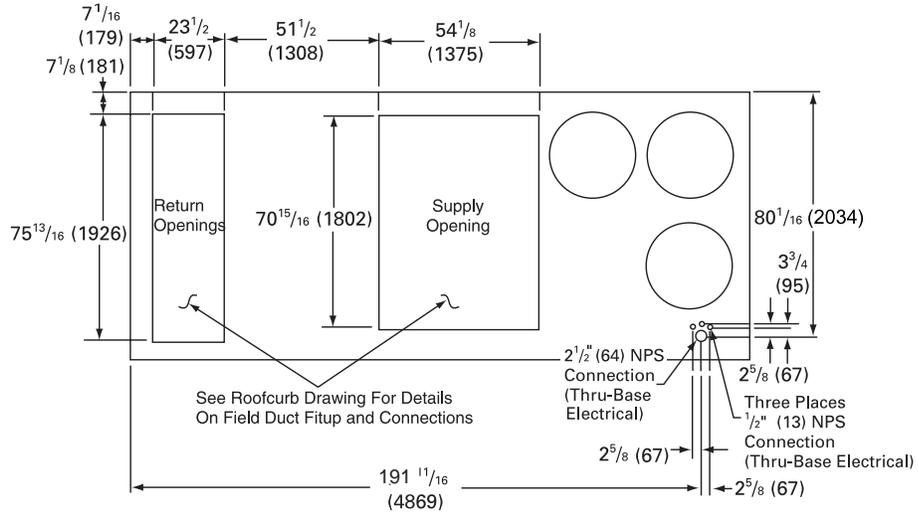


Figure 17. Duct openings, 60 Hz 27½-35, 50 Hz 23-29 Tons (YC High Heat)

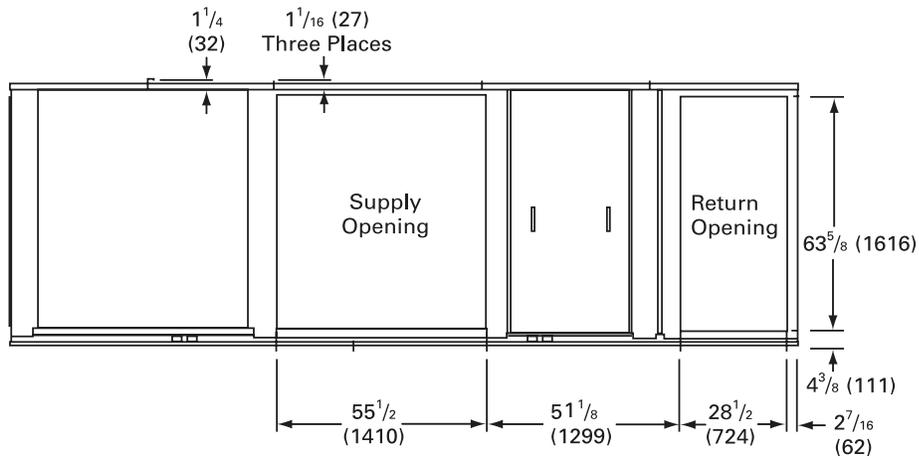


Figure 18. 60 Hz 27½-35, 50 Hz 23-29 Tons (YC High Heat)

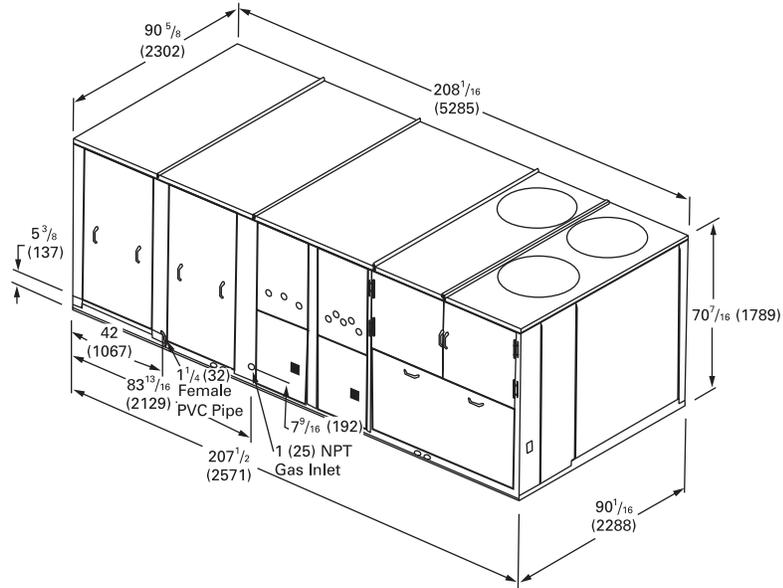
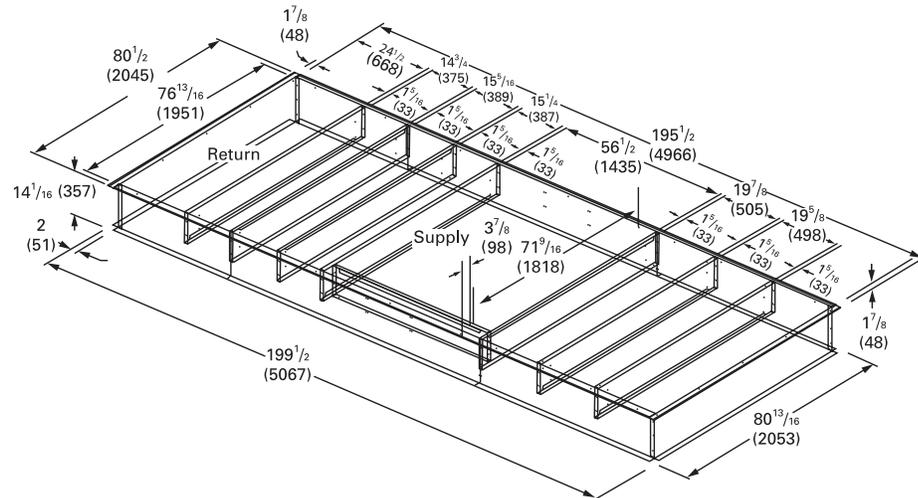


Figure 19. Curb Assembly, 60 Hz 27½-35, 50 Hz 23-29 Tons (YC High Heat)



Note: Dimensions in () are mm, 1" = 25.4 mm.

Field Installed Sensors—Variable Air Volume VAV

Figure 24. Single Setpoint Sensor with System Function Lights (BAYSENS021*)

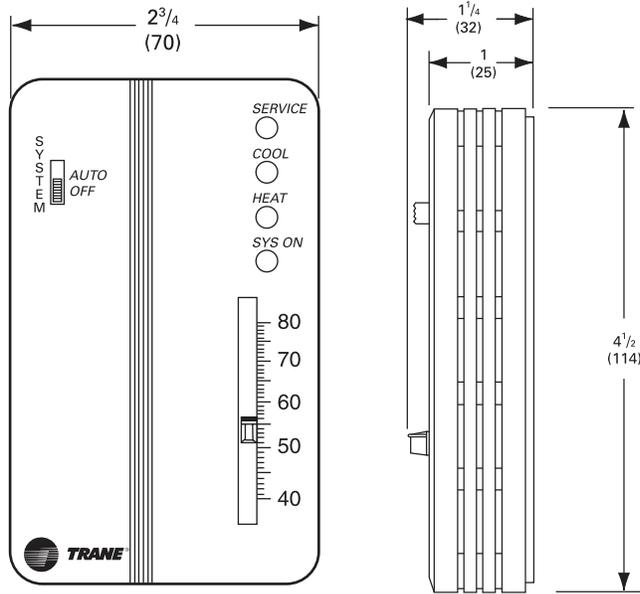
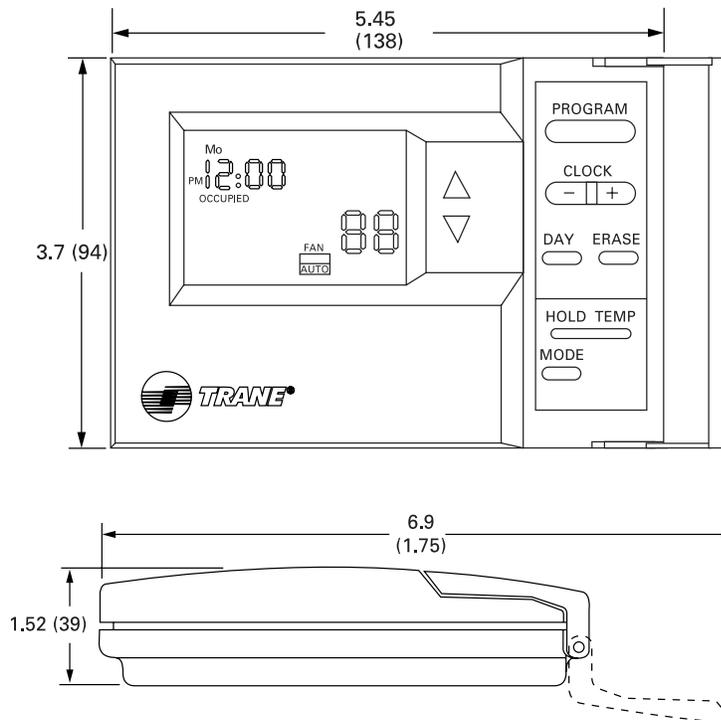


Figure 25. Programmable Night-Setback Sensor (BAYSENS020*)



Note: Remote sensors are available for use with all zone sensors to provide remote sensing capabilities.

Field Installed Sensors—Constant Volume CV

Figure 26. Programmable Night-Setback Sensor (BAYSENS019*)

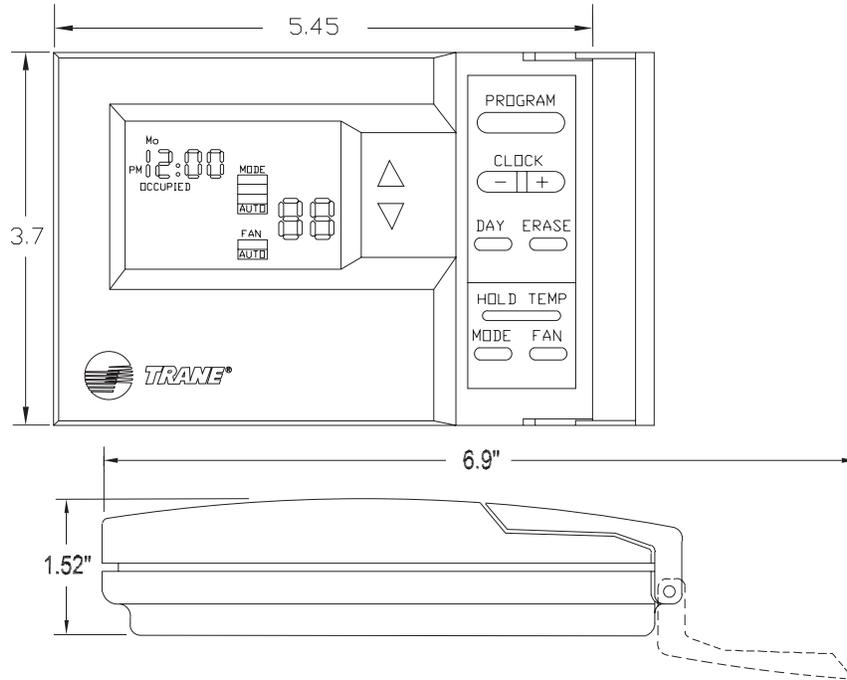
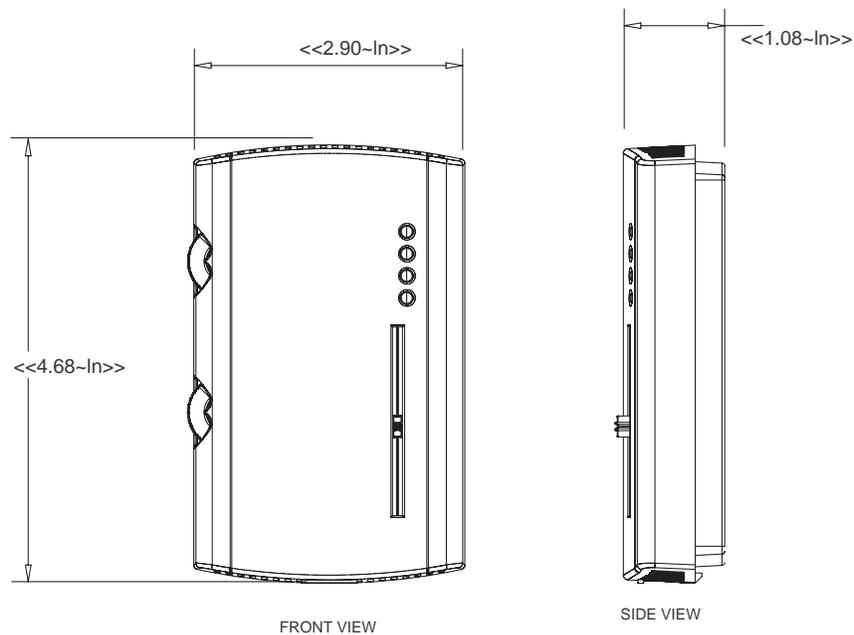


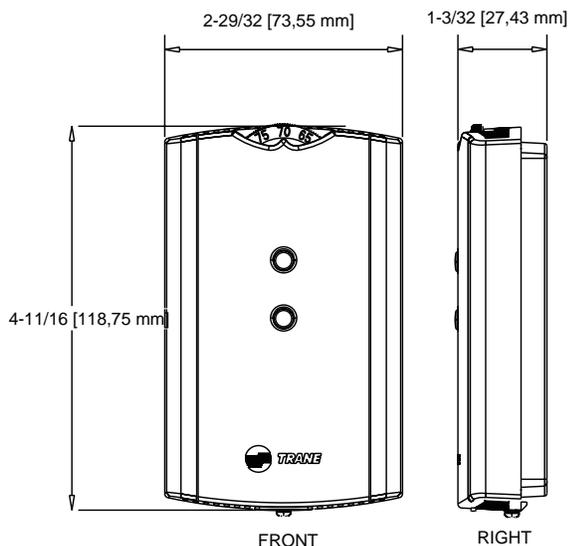
Figure 27. Dual Setpoint, Manual/Automatic Changeover Sensor with system function lights (BAYSENS110*), without LED status indicators (BAYSENS108*), single setpoint without LED status indicators (BAYSENS106*)



Note: Remote sensors are available for use with all zone sensors to provide remote sensing capabilities.

Integrated Comfort™ System Sensors—CV and VAV

Figure 28. Zone Temperature Sensor with timed override button and local setpoint adjustment (BAYSENS074)



Note: Remote sensors are available for use with all zone sensors to provide remote sensing capabilities.

Figure 29. Zone Temperature Sensor with timed override buttons (BAYSENS073*) also available sensor only (BAYSENS077*)

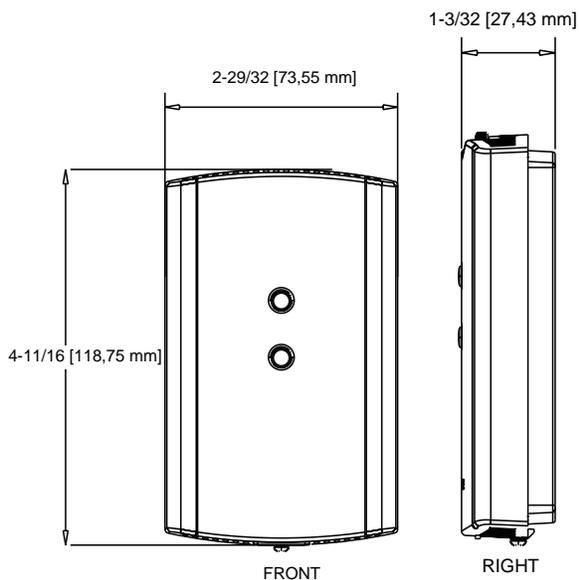
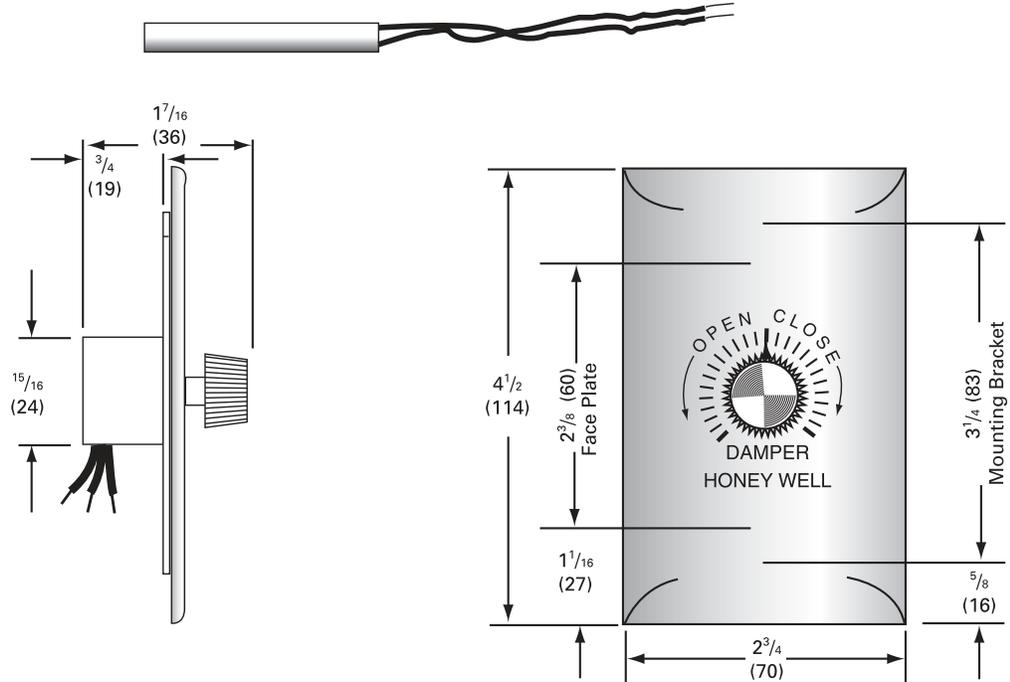


Figure 30. Temperature Sensor (BAYSENS016*) (top) and Remote Minimum Position Potentiometer Control (BAYSTAT023*) (bottom)



Dimensional Data and Weights

Figure 31. Wall-Mounted CO₂ Sensor (BAYCO2K005*),
Duct-Mounted CO₂ Sensor (not pictured) (BAYCO2K006*)

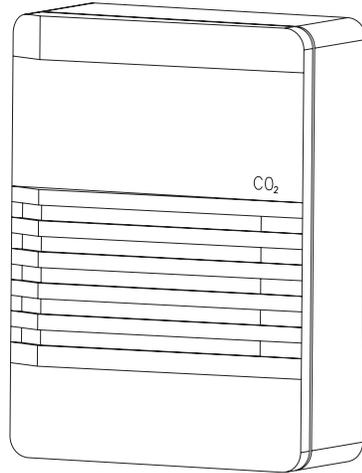


Table 86. Approximate Units Operating Weights — lbs./kg^{1,2,3}

| Unit Model | Basic Unit Weights ^{1,2,3} | | | |
|------------|-------------------------------------|--------------|-----------|-----------|
| | YC Low Heat | YC High Heat | TC | TE |
| **D330/275 | 3695/1676 | 4075/1848 | 3565/1617 | 3585/1626 |
| **H330/275 | 3735/1694 | 4165/1889 | 3605/1635 | 3625/1644 |
| **D360/305 | 3775/1712 | 4155/1885 | 3645/1653 | 3665/1662 |
| **H360/305 | 3815/1730 | 4245/1925 | 3685/1671 | 3705/1681 |
| **D420/350 | 3860/1751 | 4240/1923 | 3730/1692 | 3750/1701 |
| **H420/350 | 3900/1769 | 4330/1964 | 3770/1710 | 3790/1719 |
| **D480/400 | 4810/2182 | 4930/2236 | 4585/2080 | 4610/2091 |
| **H480/400 | 4905/2225 | 5030/2282 | 4655/2111 | 4680/2123 |
| **D600/500 | 4980/2259 | 5100/2313 | 4755/2157 | 4780/2168 |
| **D600/500 | 5075/2302 | 5200/2359 | 4825/2189 | 4850/2200 |

Notes:

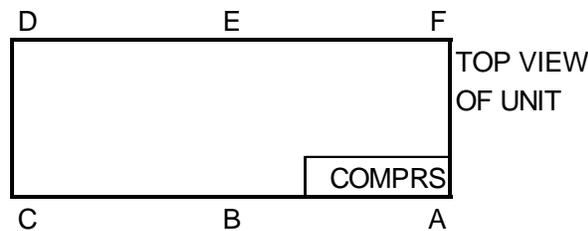
1. Basic unit weight includes minimum horsepower supply fan motor and standard efficiency 2-row condenser coil.
2. Optional high efficiency motor weights are in addition to the standard motor weights included in the basic unit weight (see component weights [Table 88, p. 128](#)).
3. Optional high efficiency 3-row condenser coil weights are in addition to the standard
4. 2-row coil weight included in the basic unit weight (see component weights [Table 88](#)).

Table 87. Standard Efficiency with 2-Row Outdoor Coil — Point Loading Average Weight^{1,2} — lbs./kg

| Model | A | B | C | D | E | F |
|------------|---------|---------|---------|---------|---------|---------|
| **D330/275 | 899/408 | 693/314 | 717/325 | 723/328 | 571/259 | 471/214 |
| **H330/275 | 920/417 | 712/323 | 741/336 | 731/332 | 580/263 | 481/218 |
| **D360/305 | 908/412 | 714/324 | 752/341 | 718/326 | 578/262 | 486/220 |
| **H360/305 | 969/440 | 730/331 | 739/335 | 706/320 | 547/248 | 554/251 |
| **D420/350 | 937/425 | 726/329 | 754/342 | 744/337 | 590/268 | 490/222 |
| **H420/350 | 912/414 | 903/410 | 665/302 | 737/334 | 558/253 | 554/251 |
| **D480/400 | 928/421 | 919/417 | 909/412 | 718/326 | 725/329 | 732/332 |
| **H480/400 | 949/430 | 939/426 | 929/421 | 730/331 | 738/335 | 745/338 |
| **D600/500 | 961/436 | 955/433 | 950/431 | 741/336 | 745/338 | 749/340 |
| **H600/500 | 982/445 | 976/443 | 970/440 | 753/342 | 758/344 | 762/346 |

Notes:

1. Point Loading is identified with corner A being the corner with the compressors. As you move clockwise around the unit as viewed from the top, mid-point B, corner C, corner D, mid-point E and corner F.
2. Point load calculations provided are based on the unit weight for YC high heat gas models.





Weights

Table 88. Approximate Operating Weights¹— Optional Components — lbs./kg

| Unit Model | Baro. Relief | Power Exhaust | Hi Eff. Supply Fan Motor ² | 0-25% Man Damper | Econ. | Inlet Guide Vanes | Var. Freq. Drives (VFD's) | | Serv Valves | Thru-the base Elec. | Non-Fused Discon. Switch | Factory. GFI with Discon. Switch | Hi Eff Cond Coil ³ | Roof Curb | |
|------------|--------------|---------------|---------------------------------------|------------------|---------|-------------------|---------------------------|--------|-------------|---------------------|--------------------------|----------------------------------|-------------------------------|-----------|---------|
| | | | | | | | W/O | With | | | | | | Lo | Hi |
| | | | | | | | Bypass | | | | | | | | |
| **D330/275 | 110/50 | 165/74 | 20/9 | 50/23 | 260/117 | 55/25 | 85/39 | 115/52 | 18/8 | 6/3 | 30/14 | 85/38 | 104/47 | 310/141 | 330/150 |
| **H330/300 | 145/65 | 200/90 | 20/9 | 50/23 | 285/128 | 55/25 | 85/39 | 115/52 | 18/8 | 6/3 | 30/14 | 85/38 | 104/47 | 310/141 | 330/150 |
| **D360/305 | 110/50 | 165/74 | 20/9 | 50/23 | 260/117 | 55/25 | 85/39 | 115/52 | 18/8 | 6/3 | 30/14 | 85/38 | 104/47 | 310/141 | 330/150 |
| **H330/305 | 145/65 | 200/90 | 20/9 | 50/23 | 285/128 | 55/25 | 85/39 | 115/52 | 18/8 | 6/3 | 30/14 | 85/38 | 104/47 | 310/141 | 330/150 |
| **D420/350 | 110/50 | 165/74 | 20/9 | 50/23 | 260/117 | 55/25 | 85/39 | 115/52 | 18/8 | 6/3 | 30/14 | 85/38 | 104/47 | 310/141 | 330/150 |
| **H420/350 | 145/65 | 200/90 | 20/9 | 50/23 | 285/128 | 55/25 | 85/39 | 115/52 | 18/8 | 6/3 | 30/14 | 85/38 | 104/47 | 310/141 | 330/150 |
| **D480/400 | 110/50 | 165/74 | 44/20 | 50/23 | 290/131 | 70/32 | 115/52 | 150/68 | 18/8 | 6/3 | 30/14 | 85/38 | 162/73 | 365/169 | 365/169 |
| **H480/400 | 145/65 | 200/90 | 44/20 | 50/23 | 300/135 | 70/32 | 115/52 | 150/68 | 18/8 | 6/3 | 30/14 | 85/38 | 162/73 | 365/169 | 365/169 |
| **D600/500 | 110/50 | 165/74 | 44/20 | 50/23 | 290/131 | 70/32 | 115/52 | 150/68 | 18/8 | 6/3 | 30/14 | 85/38 | 162/73 | 365/169 | 365/169 |
| **H600/500 | 145/65 | 200/90 | 44/20 | 50/23 | 300/135 | 70/32 | 115/52 | 150/68 | 18/8 | 6/3 | 30/14 | 85/38 | 162/73 | 365/169 | 365/169 |

Notes:

1. Basic unit weight includes minimum horsepower supply fan motor and standard efficiency 2-row condenser coil.
2. When an optional high efficiency supply fan motor is selected, the weight shown should be added to the basic unit weight.
3. When an optional high efficiency condenser coil is selected, the weight shown should be added to the basic unit weight.

Table 89. Minimum Operating Clearances for Unit Installation

| | Econo/Exhaust End | Condenser Coil ² End/Side | Service Side Access |
|------------------------------|-------------------|--------------------------------------|---------------------|
| Single Unit ¹ | 6 Feet (1.82 m) | 8 Feet/4 Feet (2.43/1.21 m) | 4 Feet (1.21 m) |
| Multiple Unit ^{1,3} | 12 Feet (3.65 m) | 16 Feet/8 Feet (4.87/2.43 m) | 8 Feet (2.43 m) |

Notes:

1. Horizontal and Downflow Units, all sizes.
2. Condenser coil is located at the end and side of the unit.
3. Clearances on multiple unit installations are distances between units.



Mechanical Specifications

General

The units shall be dedicated downflow or horizontal airflow. The operating range shall be between 115°F and 0°F in cooling as standard from the factory for all units. Cooling performance shall be rated in accordance with ARI testing procedures. All units shall be factory assembled, internally wired, fully charged with HCFC-22 (with an option for R-407C) and 100% run tested to check cooling operation, fan and blower rotation and control sequence before leaving the factory. Wiring internal to the unit shall be numbered for simplified identification. Units shall be UL listed and labeled, classified in accordance to UL 1995/CAN/CSA No. 236-M90 for Central Cooling Air Conditioners. Canadian units shall be CSA Certified.

Casing

Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel. All components shall be mounted in a weather resistant steel cabinet with a painted exterior. Where top cover seams exist, they shall be double hemmed and gasket sealed to prevent water leakage. Cabinet construction shall allow for all maintenance on one side of the unit. Service panels shall have handles and shall be removable while providing a water and air tight seal. Control box access shall be hinged. The indoor air section shall be completely insulated with fire resistant, permanent, odorless, foil faced glass fiber material. The base of the unit shall have provisions for crane lifting.

Filters

Two inch, throwaway filters shall be standard on all size units. Two inch "high efficiency", and four inch "high efficiency" filters shall be optional.

Compressors

Trane 3-D™ Scroll compressors have a simple mechanical design with only three major moving parts. Scroll type compression provides inherently low vibration. The 3-D Scroll provides a completely enclosed compression chamber which leads to increased efficiency. Exhaustive testing on the 3-D Scroll, including start up with the shell full of liquid, has proven that slugging does not fail involutes. Direct-drive, 3600 rpm, suction gas-cooled hermetic motor. Trane 3-D Scroll compressor includes centrifugal oil pump, oil level sightglass and oil charging valve. Each compressor shall have crankcase heaters installed, properly sized to minimize the amount of liquid refrigerant present in the oil sump during off cycles.

Refrigerant Circuits

Each refrigerant circuit shall have independent thermostatic expansion devices, service pressure ports and refrigerant line filter driers factory-installed as standard. An area shall be provided for replacement suction line driers.

Evaporator and Condenser Coils

Condenser coils shall have 3/8" copper tubes mechanically bonded to lanced aluminum plate fins. Evaporator coils shall be 1/2" internally finned copper tubes mechanically bonded to high performance aluminum plate fins. All coils shall be leak tested at the factory to ensure pressure integrity. All coils shall be leak tested to 200 psig and pressure tested to 450 psig. All dual circuit evaporator coils shall be of intermingled configuration. Sloped condensate drain pans are standard.

Outdoor Fans

The outdoor fan shall be direct-drive, statically and dynamically balanced, draw through in the vertical discharge position. The fan motor(s) shall be permanently lubricated and have built-in thermal overload protection.

Indoor Fan

Units shall have belt driven, FC, centrifugal fans with fixed motor sheaves. All motors shall be circuit breaker protected. All indoor fan motors meet the U.S. Energy Policy Act of 1992 (EPACT).

Electric Heaters

Electric heat shall be available for factory installation within basic unit. Electric heater elements shall be constructed of heavy-duty nickel chromium elements internally delta connected for 240 volt, wye connected for 480 and 600 volt. Staging shall be achieved through the rooftop refrigeration module (RTRM). Each heater package shall have automatically reset high limit control operating through heating element contactors. All heaters shall be individually fused from factory, where required, and meet all NEC and CEC requirements. Power assemblies shall provide single-point connection. Electric heat shall be UL listed or CSA certified.

Gas Heating Section

The heating section shall have a drum and tube heat exchanger(s) design with primary and secondary surfaces of corrosion resistant aluminized steel or optional stainless steel (all modulating gas heat units shall have stainless steel).

A forced combustion blower shall supply premixed fuel to a single burner ignited by a pilotless hot surface ignition system. In order to provide reliable operation, a regulated gas valve shall be used that requires blower operation to initiate gas flow. On an initial call for heat, the combustion blower shall purge the heat exchanger(s) 45 seconds before ignition. After three unsuccessful ignition attempts, the entire heating system shall be locked out until manually reset at the thermostat.

Two stage gas heat units shall be suitable for use with natural gas or propane (field installed kit). Modulating gas heat units shall be suitable for use with natural gas only. Both two stage and modulating gas heat units comply with California requirements for low NOx emissions.

Modulating gas turn down ratio on high fire units is accomplished by allowing the furnaces to act independently of one another. The modulating bank is activated first and is allowed to modulate itself to meet the heating needs. If the modulating bank is unable to meet the need at high fire, the second bank is turned on and then the first bank again modulates to the appropriate level. This system creates a nearly seamless range of capacity from low fire on the modulating bank to high fire of both furnaces together."

Controls

Unit shall be completely factory wired with necessary controls and terminal block for power wiring. Units shall provide an external location for mounting fused disconnect device. ReliaTel controls shall be provided for all 24 volt control functions. The resident control algorithms shall make all heating, cooling and/or ventilating decisions in response to electronic signals from sensors measuring indoor and outdoor temperatures. The control algorithm maintains accurate temperature control, minimizes drift from set point and provides better building comfort. ReliaTel controls shall provide anti-short cycle timing and time delay between compressors to provide a higher level of machine protection.

Control Options

Inlet Guide Vanes shall be installed on each fan inlet to regulate capacity and limit horsepower at lower system requirements. When in any position other than full open they shall pre-spin intake air in the same direction as fan rotation. The inlet guide vanes shall close when supply fan is off, except in night setback.

The inlet guide vane actuator motor shall be driven by a modulating dc signal from the unit controls. A pressure transducer shall measure duct static pressure and modulate the inlet guide vanes to maintain the required supply air static pressure within a predetermined range.

Variable Frequency Drives (VFDs)

VFDs shall be factory installed and tested to provide supply fan motor speed modulation. The VFD shall receive a 2-10 VDC signal from the unit controls based upon supply static pressure and shall cause the drive to accelerate or decelerate as required to maintain the supply static pressure setpoint. When subjected to high ambient return conditions the VFD shall reduce its output frequency to maintain operation. Bypass control to provide full nominal air flow in the event of drive failure shall be optional.

Ventilation Override

Ventilation Override shall allow a binary input from the fire/life safety panel to cause the unit to override standard operation and assume one of two factory preset ventilation sequences, three factory preset ventilation sequences, exhaust, pressurization or purge. The three sequences shall be selectable based on a binary select input.

Trane Communication Interface (TCI)

Shall be provided to interface with the Trane Integrated Comfort™ System and shall be available field or factory-installed. The TCI shall allow control and monitoring of the rooftop unit via a two-wire communication link.

The following alarm and diagnostic information shall be available:

RTRM Originated Data

- Unit operating mode
- Unit failure status
 - Cooling failure
 - Heating failure
 - Emergency service stop indication
 - Supply fan proving
 - Timed override activation
 - High temperature thermostat status
- Zone temperature
- Supply air temperature
- Cooling status (all stages)
- Stage activated or not
- Stage locked out by RTRM
- HPC status for that stage
- Compressor disable inputs
- Heating status
- Number of stages activated
- High temperature limit status
- Economizer status
- Enthalpy favorability status

- Requested minimum position
- Damper position
- Dry bulb/enthalpy input status
- Outside air temperature
- Outside relative humidity
- Sensor Failure
 - Humidity sensor
 - OAT sensor
 - SAT sensor
 - RAT sensor
 - Zone temperature sensor
 - Mode input
 - Cooling/heating setpoints from sensors
 - Static pressure transducer
 - Unit mounted potentiometer
 - SAT from potentiometer
 - Air reset setpoint from potentiometer
- Unit Configuration data
 - Gas or electric heat
 - Economizer present
- High temp input status
- Local setpoint
- Local mode setting
- Inlet Guide Vane position
- Clogged filter service indicator
- CO₂ setpoint
- CO₂ value

Tracer Originated Data

- Command operating mode
- Host controllable functions:
 - Supply fan
 - Economizer
 - Cooling stages enabled
 - Heating stages enabled
 - Emergency shutdown
- Minimum damper position
- Heating setpoint
- Cooling setpoint
- Supply air tempering enable/disable
- Slave mode (CV only)
- Tracer/Local operation
- SAT setpoint
- Reset setpoint
- Reset amount
- MWU setpoint
- MWU enable/disable
- SAT Reset type select
- Static pressure setpoint
- Static pressure deadband

- Daytime warm-up enable/disable
- Power exhaust setpoint

LonTalk Communication Interface (LCI-R)

The field or factory-installed ReliaTel® LonTalk Communication Interface (LCI-R) will be provided to interface with the Trane Integrated Comfort System or LonTalk capable third party building management networks. The LCI-R will allow control and monitoring of the rooftop unit via a two-wire communication link.

Outside Air

Manual Outside Air

A manually controllable outside air damper shall be adjustable for up to 25 percent outside air. Manual damper is set at desired position at unit start up.

Economizer

Economizer shall be factory installed. The assembly includes: fully modulating 0-100 percent motor and dampers, minimum position setting, preset linkage, wiring harness, and fixed dry bulb control. Solid state enthalpy and differential enthalpy control shall be a factory or field installed option.

Exhaust Air

100% Power Exhaust Fan

Power exhaust shall be available on all units and shall be factory installed. It shall assist the barometric relief damper in maintaining building pressurization.

50% Power Exhaust Fan

Power exhaust shall be available on all units and shall be factory installed. It shall assist the barometric relief damper in maintaining building pressurization.

100% Fresh Air Tracking Power Exhaust

Modulating power exhaust shall be available on all units and shall be factory installed. It shall assist with maintaining building pressurization by exhausting a proportional amount of the entering fresh air.

50% Fresh Air Tracking Power Exhaust

Modulating power exhaust shall be available on the on all units and shall be factory installed. It shall assist with maintaining building pressurization by exhausting a proportional amount of the entering fresh air.

Barometric Relief

The barometric relief damper shall be optional with the economizer. Option shall provide a pressure operated damper for the purpose of space pressure equalization and be gravity closing to prohibit entrance of outside air during the equipment "off" cycle.

Unit Options

Modulating Gas

Modulating Gas Heaters shall be made from grades of stainless steel suitable for condensing situations. The heater shall have a turn down ratio of 5 to 1 for low heat and 8 to 1 to 10 to 1 for high heat.

Alternative Refrigerant - R-407C

An option of R-407C shall be provided as an alternative refrigerant. This option shall be factory installed and must be ordered with a high efficiency condenser coil (see digit 29, [p. 25](#) and [p. 27](#)).

Service Valves

Service valves shall be provided factory installed and include suction, liquid, and discharge 3-way shutoff valves.

Through-The-Base Electrical Provision

An electrical service entrance shall be provided which allows access to route all high and low voltage electrical wiring inside the curb, through the bottom of the outdoor section of the unit and into the control box area.

Non-Fused Disconnect Switch

A factory installed non-fused disconnect switch with external handle shall be provided and shall satisfy NEC requirements for a service disconnect. The non-fused disconnect shall be mounted inside the unit control box.

GFI Convenience Outlet (Factory Powered)

A 15A, 115V Ground Fault Interrupter convenience outlet shall be factory installed. It shall be wired and powered from a factory mounted transformer. Unit mounted non-fused disconnect with external handle shall be furnished with factory powered outlet.

GFI Convenience Outlet (Field Powered)

A 15A, 115V Ground Fault Interrupter convenience outlet shall be factory installed and shall be powered by customer provided 115V circuit.

Hinged Service Access

Filter access panel and supply fan access panel shall be hinged for ease of unit service.

Condenser Coil Guards

Factory installed condenser vinyl coated wire mesh coil guards shall be available to provide full area protection against debris and vandalism.

Stainless Steel Drain Pans

Sloped stainless steel evaporator coil drain pans are durable, long-lasting and highly corrosion resistant.

Black Epoxy Pre-Coating for Condenser Coil

A thermoset vinyl coating is bonded to the aluminum fin stock prior to the fin stamping process. The pre-coated coils are an economical option for protection in mildly corrosive environments.

High Efficiency Condenser Coil with or without Black Epoxy Pre-Coating

The High Efficiency Condenser Coil option shall provide an additional row of condenser coil to increase unit performance and energy efficiency. High Efficiency Condenser Coil shall have 3/8" copper tubes mechanically bonded to lanced aluminum plate fins.

Discharge Air Sensing

Provides true discharge air sensing in heating and cooling models. This sensor is a status indicator readable through Tracer, Tracker or LCI-R. Discharge air sensing is standard with Variable Air Volume (VAV) units, optional with Constant Volume (CV) units.

Clogged Filter Indication

This optional factory installed differential pressure switch allows dirty filter indication at the zone sensor with service LED. When closed, the dirty filter switch will light the service LED on the zone sensor and allow the unit to continue normal operation.

Roof Curb

The roof curb shall be designed to mate with the unit and provide support and a water tight installation when installed properly. The roof curb design shall allow field-fabricated rectangular supply/return ductwork to be connected directly to the curb when used with downflow units. Curb design shall comply with NRCA requirements. Curb shall ship knocked down for field assembly and include wood nailer strips.

Zone Sensors

Shall be provided to interface with the ReliaTel unit controls and shall be available in either manual, automatic programmable with night setback, with system malfunction lights or remote sensor options.

Remote Potentiometer

A remote potentiometer shall be available to remotely adjust the unit economizer minimum position.

High Temperature Thermostats

Field installed, manually resettable high temperature thermostats shall provide input to the unit controls to shut down the system if the temperature sensed at the return is 135 F or at the discharge 240 F.

Reference Enthalpy Kit

Field installed enthalpy kit shall provide inputs for economizer control based upon comparison of the outside air stream to a definable enthalpy reference point. May also be factory installed.

Comparative Enthalpy Kit

Field installed enthalpy kit shall provide inputs for economizer control based upon comparison of the enthalpies of the return and outdoor air streams. Also available factory installed.

LP Conversion Kit

Field installed conversion kit shall provide orifice(s) for simplified conversion to liquefied propane gas. No change of gas valve shall be required.

BAYCO2K005. Wall-mounted CO2 sensor has the ability to monitor space occupancy levels within the building by measuring the parts per million of CO2 (Carbon Dioxide) in the air. As the CO2 levels increase, the outside air damper modulates to meet the CO2 space ventilation requirements.

BAYCO2K006* . Duct-mounted CO2 sensor has the ability to monitor space occupancy levels within the building by measuring the parts per million of CO2 (Carbon Dioxide) in the air. As the CO2 levels increase, the outside air damper modulates to meet the CO2 space ventilation requirements.

BAYICSI004*. Field-installed Trane Communication Interface (TCI).

BAYLTCI003*. Field-installed LonTalk Communication Interface (LCI-R) for Constant Volume (CV) units.

BAYLTCI004*. Field-installed LonTalk Communication Interface (LCI-R) for Variable Air Volume (VAV) units.

BAYSENS106*. Zone Sensor has one temperature setpoint lever, heat, off or cool system switch, fan auto or fan on switch. Manual changeover. These sensors are for CV units only.

BAYSENS108*. Zone Sensor has two temperature setpoint levers, heat, auto, off, or cool system switch, fan auto or fan on switch. Auto changeover. These sensors are used with CV units.

BAYSENS110*. Zone Sensor has two temperature set point levers, heat, auto, off, or cool system switch, fan auto or fan on switch. Status indication LED lights, System on, Heat, Cool, and Service are provided. These sensors are used with CV units.

BAYSENS073*. Zone temperature sensor with timed override buttons used with Tracer™ Integrated Comfort system.

BAYSENS074*. Zone temperature sensor with local temperature adjustment control and timed override buttons used with Tracer Integrated Comfort system. May also be used for Morning Warm-up setpoint and sensor.

BAYSENS016*. Temperature Sensor is a bullet or pencil type sensor that could be used for temperature input such as return air duct temperature.

BAYSENS077*. Remote Sensor can be used for remote zone temperature sensing capabilities when zone sensors are used as remote panels or as a morning warm-up sensor for use with VAV units or as a zone sensor with Tracer Integrated Comfort system.

BAYSENS019* and BAYSENS020*. Electronic programmable sensors with auto or manual changeover with seven day programming. Keyboard selection of heat, cool, auto fan or on. All programmable sensors have System on, Heat, Cool, Service LED/LCD indicators as standard. Night setback sensors have two occupied, and two unoccupied programs per day. Sensors are available for CV zone temperature control and VAV zone temperature control.

BAYSENS021*. Zone Sensor with supply air single temperature setpoint and AUTO/OFF system switch. Status indication LED lights, System ON, Heat, Cool, and Service are provided. Sensors are available to be used with VAV units.

BAYSTAT023*. Remote Minimum Position Potentiometer is used to remotely specify the minimum economizer position.



www.trane.com

For more information, contact your local Trane office or e-mail us at comfort@trane.com

| | |
|-------------------------|---------------------------|
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Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.