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# MEMORANDUM

**DATE:** May 30, 2023

**TO:** Michael Goodwin, First Industrial, L.P.

**FROM:** Jason Lui, Associate/Senior Noise Specialist

**SUBJECT:** Noise and Vibration Impact Analysis Memorandum for the First Hathaway Logistics Warehouse Project in Banning, California

## INTRODUCTION

This noise and vibration impact analysis evaluates the potential noise and vibration impacts and reduction measures associated with the First Hathaway Logistics Warehouse Project (project) in Banning, California. This report is intended to satisfy the City of Banning's (City) requirements and the California Environmental Quality Act for a project-specific noise and vibration impact analysis by examining the impacts of the proposed uses on the project site and evaluating the reduction measures that the project requires.

## PROJECT LOCATION

The approximately 94.86-acre project site is located southeast of the North Hathaway Street and Morongo Road intersection in Banning, Riverside County. The project site is composed of six parcels (Assessor's Parcel Numbers 532-110-001, -002, -003, -008, -009, and -010) and does not require a General Plan Amendment or a zone change because the proposed warehouse development is a permitted use in the existing Business Park (BP) land use and zoning designation. Figure 1 shows the project location and vicinity (all figures are provided in Attachment B).

## PROJECT DESCRIPTION

The proposed project includes the construction of a 1,420,722-square-foot warehouse distribution building with truck docks, trailer and passenger car parking, and associated roadways and infrastructure improvements. Roadway improvements include the widening of Hathaway Street and the construction of Nicolet Street, Wilson Street, and First Industrial Way. The main building would be accessed by five driveways: three located on the extension of Nicolet Street, one on Hathaway Street, and one on the extension of Wilson Street. There would be two parcels located on the south side of the future extension of Nicolet Street: one would be used for passenger vehicle parking with two driveways on Nicolet Street, and the other would be used for trailer parking with two driveways located on Nicolet Street. Figure 2 shows the site plan. It is expected that construction of the project would begin in January 2024 and be completed in July 2025.

## CHARACTERISTICS OF SOUND

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

### Measurement of Sound

Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike the linear scale (e.g., inches or pounds), decibels are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 decibels (dB) is 10 times more intense than 0 dB, 20 dB is 100 times more intense than 0 dB, and 30 dB is 1,000 times more intense than 0 dB. Thirty decibels (30 dB) represents a 1,000 times as much acoustic energy as 0 dB. The decibel scale increases on a logarithmic scale, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with increasing distance from the noise source. For a single-point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations), the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source (noise in a relatively flat environment with absorptive vegetation) decreases 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level ($L_{eq}$) is the total sound energy of time-weighted average noise over a sample period. However, the predominant rating scales for human communities in the State of California are the $L_{eq}$ and Community Noise Equivalent Level (CNEL) or the day-night average noise level ($L_{dn}$) based on A-weighted decibels (dBA). CNEL is the time-varying noise over a 24-hour period, with a 5 dBA

weighting factor applied to the hourly $L_{eq}$ for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours), and a 10 dBA weighting factor applied to noises occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). $L_{dn}$ is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and $L_{dn}$ are within 1 dBA of each other and are normally interchangeable. The City uses the CNEL noise scale for long-term noise impact assessment.

Other noise rating scales of importance when assessing the annoyance factor include the maximum instantaneous noise level ($L_{max}$), which is the highest sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by $L_{max}$, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the $L_{10}$ noise level represents the noise level exceeded 10 percent of the time during a stated period. The $L_{50}$ noise level represents the median noise level (half the time the noise level exceeds this level, and half the time it is less than this level). The $L_{90}$ noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the $L_{eq}$ and $L_{50}$ are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

## Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear (the threshold of pain). A sound level of 160–165 dBA will result in dizziness or loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less developed area. Table A lists definitions of acoustical terms, and Table B shows common sound levels and their sources.

## Table A: Definitions of Acoustical Terms

| Term | Definitions |
|---|---|
| Decibel, dB | A unit of measurement that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio. |
| Frequency, Hz | Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., number of cycles per second). |
| A-Weighted Sound Level, dBA | The sound level obtained by use of A-weighting. The A-weighting filter deemphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. (All sound levels in this report are A-weighted, unless reported otherwise.) |
| $L_{01}$, $L_{10}$, $L_{50}$, $L_{90}$ | The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1%, 10%, 50%, and 90% of a stated time period. |
| Equivalent Continuous Noise Level, $L_{eq}$ | The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound. |
| Community Noise Equivalent Level, CNEL | The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dBA to sound levels occurring in the evening from 7:00 PM to 10:00 PM and after the addition of 10 dBA to sound levels occurring in the night between 10:00 PM and 7:00 AM. |
| Day/Night Noise Level, $L_{dn}$ | The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dBA to sound levels occurring in the night between 10:00 PM and 7:00 AM. |
| $L_{max}$, $L_{min}$ | The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging. |
| Ambient Noise Level | The all-encompassing noise associated with a given environment at a specified time; usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant. |
| Intrusive | The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level. |

Source: *Handbook of Acoustical Measurements and Noise Control* (Harris 1991).

### Table B: Common Sound Levels and Their Noise Sources

| Noise Source | Sound Level (dBA) | Noise Environments | Subjective Evaluations |
|---|---|---|---|
| Near Jet Engine | 140 | Deafening | 128 times as loud |
| Civil Defense Siren | 130 | Threshold of Pain | 64 times as loud |
| Hard Rock Band | 120 | Threshold of Feeling | 32 times as loud |
| Accelerating Motorcycle at a Few Feet Away | 110 | Very Loud | 16 times as loud |
| Pile Driver; Noisy Urban Street/Heavy City Traffic | 100 | Very Loud | 8 times as loud |
| Ambulance Siren; Food Blender | 95 | Very Loud | — |
| Garbage Disposal | 90 | Very Loud | 4 times as loud |
| Freight Cars; Living Room Music | 85 | Loud | — |
| Pneumatic Drill; Vacuum Cleaner | 80 | Loud | 2 times as loud |
| Busy Restaurant | 75 | Moderately Loud | — |
| Near Freeway Auto Traffic | 70 | Moderately Loud | — |
| Average Office | 60 | Quiet | One-half as loud |
| Suburban Street | 55 | Quiet | — |
| Light Traffic; Soft Radio Music in Apartment | 50 | Quiet | One-quarter as loud |
| Large Transformer | 45 | Quiet | — |
| Average Residence without Stereo Playing | 40 | Faint | One-eighth as loud |
| Soft Whisper | 30 | Faint | — |
| Rustling Leaves | 20 | Very Faint | — |
| Human Breathing | 10 | Very Faint | Threshold of Hearing |
| — | 0 | Very Faint | — |

Source: Compiled by LSA Associates, Inc. (2015).
dBA = A-weighted decibels

## FUNDAMENTALS OF VIBRATION

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible, but without the effects associated with the shaking of a building there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items sitting on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Although the perceptibility threshold is approximately 65 vibration velocity decibels (VdB), human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. A vibration level that causes annoyance is well below the damage risk threshold for typical buildings.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet (ft) from the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 ft (FTA 2018). When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, both construction of the project and the freight train operations could result in ground-borne vibration that may be perceptible and annoying.

Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for train-induced ground-borne vibration to cause even cosmetic building damage, it is not

uncommon for construction processes (e.g., blasting and pile driving) to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS velocity is best for characterizing human response to building vibration, and PPV is used to characterize potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. The vibration velocity level in decibels is defined as the following:

$$L_v = 20 \log_{10} [V/V_{ref}]$$

where "$L_v$" is the VdB, "V" is the RMS velocity amplitude, and "$V_{ref}$" is the reference velocity amplitude, or $1 \times 10^{-6}$ inches/second (in/sec) used in the United States.

## REGULATORY SETTING

### Federal Guidelines

#### *Federal Transit Administration*

Vibration standards included in the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (2018) were used in this analysis because the City of Banning does not have vibration standards. Table C provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building, while Table D lists the potential vibration building damage criteria associated with construction activities.

### Table C: Interpretation of Vibration Criteria for Detailed Analysis

| Land Use | Maximum $L_v$ (VdB)[1] | Description of Use |
|---|---|---|
| Workshop | 90 | Vibration that is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration. |
| Office | 84 | Vibration that can be felt. Appropriate for offices and similar areas not as sensitive to vibration. |
| Residential Day | 78 | Vibration that is barely felt. Adequate for computer equipment and low-power optical microscopes (up to 20×). |
| Residential Night and Operating Rooms | 72 | Vibration is not felt, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power microscopes (100×) and other equipment of low sensitivity. |

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] As measured in ⅓-octave bands of frequency over the frequency range 8 to 80 Hertz.
FTA = Federal Transit Administration
$L_v$ = velocity in decibels
VdB = vibration velocity decibels

### Table D: Construction Vibration Damage Criteria

| Building Category | PPV (in/sec) | Approximate $L_V$ (VdB)[1] |
|---|---|---|
| Reinforced concrete, steel, or timber (no plaster) | 0.50 | 102 |
| Engineered concrete and masonry (no plaster) | 0.30 | 98 |
| Non-engineered timber and masonry buildings | 0.20 | 94 |
| Buildings extremely susceptible to vibration damage | 0.12 | 90 |

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

[1] RMS vibration velocity in decibels (VdB) re 1 µin/sec.

µin/sec = microinches per second
FTA = Federal Transit Administration
in/sec = inches per second
$L_V$ = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

## Local Regulations

### *City of Banning*

**General Plan Noise Element.** Chapter V, Environmental Hazards, of the City's General Plan contains the Noise Element that has established allowable exterior ambient noise levels for various land uses, and contains policies and actions required to meet the City's noise-related goals. The allowable exterior ambient noise levels for each land use are summarized in the City's land use compatibility categories for community noise environments, as shown in Table E. Applicable goals, policies, and programs for the development project are listed below.

**Goal:** A noise environment that complements the community's residential character and its land uses.

- **Policy 1:** The City shall protect noise sensitive land uses, including residential neighborhoods, schools, hospitals, libraries, churches, resorts, and community open space, from potentially significant sources of community noise.

## Table E: Land Use Compatibility for Community Noise Environments

| Land Uses | CNEL (dBA) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
| Residential - Single Family Dwellings, Duplex, Mobile Homes | A | B | | | C | | D |
| Residential – Multiple Family | A | | B | | C | | D |
| Transient Lodging: Hotels and Motels | A | | B | | C | | D |
| School Classrooms, Libraries, Churches, Hospitals, Nursing Homes and Convalescent Hospitals | A | | B | | C | | D |
| Auditoriums, Concert Halls, Amphitheaters | B | | | | C | | |
| Sports Arenas, Outdoor Spectator Sports | B | | | | C | | |
| Playgrounds, Neighborhood Parks | A | | | C | | D | |
| Golf Courses, Riding Stables, Water Recreation, Cemeteries | A | | | | C | | D |
| Office Buildings, Business, Commercial and Professional | A | | | B | | D | |
| Industrial, Manufacturing, Utilities, Agriculture | A | | | | B | D | |

Source: *California Department of Health Services, "Guidelines for the Preparation and Content of the Noise Element of the General Plan," 1990*

A **Normally Acceptable**: With no special noise reduction requirements assuming standard construction.

B **Conditionally Acceptable**: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design.

C **Normally Unacceptable**: New construction is discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

D **Clearly Unacceptable**: New construction or development should generally not be undertaken.

- **Program 1.A:** The City shall require building setbacks, the installation of wall and window insulation, sound walls, earthen berms, and/or other mitigation measures in areas exceeding the City's noise limit standards for private development projects as they occur.
- **Program 1.B**: The City shall maintain and enforce its Noise Control Ordinances that establish community-wide noise standards and identify measures designed to resolve noise complaints.
- **Program 1.C:** The City shall use the development review process to assure the use of buffers between sensitive receptors and incompatible land uses.

  - **Program 1.D:** The City shall require that commercial compactors, loading zones, and large trash bins be located at a sufficient distance from residential properties to reduce noise impacts to its acceptable standard.

- **Policy 2:** The relationship between land use designations in the Land Use Element and changes in the circulation pattern of the City, as well as individual developments, shall be monitored and mitigated.
  - **Program 2.A:** The City shall develop guidelines and minimal criteria requirements for noise analyses for proposed development projects. Studies shall evaluate project impacts and the effectiveness of proposed mitigation measures.

- **Policy 6:** All development proposals within the noise impact area of the Interstate and the railroad shall mitigate both noise levels and vibration to acceptable levels through the preparation of focused studies and analysis in the development review and environmental review process.

- **Policy 8:** The City shall impose and integrate special design features into proposed development that minimize impacts associated with the operation of air conditioning and heating equipment, onsite traffic, and use of parking, loading and trash storage facilities.

**Municipal Code.** Sections 8.44.070 and 8.44.080 of the City's Municipal Code have established exterior maximum noise levels for residential and non-residential (commercial and industrial) uses. Table F shows the City's exterior maximum noise levels.

### Table F: City of Banning Maximum Noise Level Standards

| Zone Use | Time | Base Ambient Noise Level (dBA) | $L_{25}$[1] (15 min) | $L_8$[2] (5 min) | $L_2$[3] (1 min) | $L_{max}$[4] |
|---|---|---|---|---|---|---|
| Residential | 10:00 PM to 7:00 AM | 45 | 50 | 55 | 60 | 65 |
| | 7:00 AM to 10:00 PM | 55 | 60 | 65 | 70 | 75 |
| Industrial and Commercial | Anytime | 75 | -- | -- | -- | -- |

Source: Municipal Code (City of Banning 2021).

[1] The exterior noise standard for a cumulative period of 15 minutes in any hour.

[2] The exterior noise standard for a cumulative period of 5 minutes in any hour.

[3] The exterior noise standard for a cumulative period of 1 minute in any hour.

[4] The exterior maximum noise level that is not permitted.

dBA = A-weighted decibels

$L_{max}$ = maximum instantaneous noise level

min = minute/minutes

Section 8.44.090(E) of the City's Municipal Code permits construction activities to exceed the maximum noise levels between the hours of 7:00 a.m. and 6:00 p.m., as shown in Table F. However, the City prohibits construction activities to exceed 55 dBA for more than 15 minutes per hour as measured in the interior of the nearest occupied residence or school.

Section 8.44.090(E) of the City's Municipal Code prohibits the operation of any machinery, equipment, device, pump, fan, compressor, air conditioning apparatus, or similar mechanical device

that would cause the noise level at the property line of the property upon which the equipment or machinery is operated to exceed the base ambient noise level by 5 dBA.

## EXISTING SETTING

### Land Uses in the Project Vicinity

Land uses surrounding the project site include:

- **North:** Vacant land
- **East:** Vacant land
- **South:** A Caltrans materials and staging yard (Caltrans Banning Maintenance Station), vacant land, and commercial uses
- **West:** Residential uses

### Overview of the Existing Noise Environment

The primary existing noise sources in the project area are transportation facilities. Traffic on Interstate 10 (I-10), Hathaway Street, Ramsey Street, and other roadways in the vicinity of the project is a steady source of ambient noise. Intermittent noise from the Union Pacific Railroad (UPRR) located south of I-10 also contributes to the ambient noise in the project area.

### Ambient Noise Measurements

#### *Short-Term Noise Measurements*

Short-term (20-minute) noise level measurements were conducted on November 10, 2021, using a Larson Davis Model 831 Type 1 sound level meter. Table G shows the results of the short-term noise level measurements along with a description of the measurement locations and noise sources that occurred during the measurement. As shown in Table G, the measured average noise levels in the project area range from 58.7 to 64.8 dBA $L_{eq}$, and the instantaneous maximum noise levels range from 65.8 to 77.6 dBA $L_{max}$. Short-term noise level measurement survey sheets are provided in Attachment C. Figure 3 shows the short-term monitoring locations.

#### *Long-Term Noise Level Measurement*

Five long-term (24-hour) noise level measurements were conducted from November 9, 2021, to November 10, 2021, using Larson Davis Spark 706RC dosimeters. Table H summarizes the results of the long-term noise level measurements along with a description of the measurement locations and noise sources that occurred during the measurements. As shown in Table H, the daytime noise levels ranged from 56.6 to 74.5 dBA $L_{eq}$, and nighttime noise levels ranged from 49.7 to 70.3 dBA $L_{eq}$. Also, the daytime maximum instantaneous noise levels ranged from 68.4 to 92.9 dBA $L_{max}$, and the nighttime maximum instantaneous noise levels ranged from 64.7 to 88.3 dBA $L_{max}$. Also, the calculated CNEL levels at LT-1, LT-2, LT-3, LT-4, and LT-5 were 68.9 dBA, 67.4 dBA, 64.1 dBA, 75.1 dBA, and 75.0 dBA, respectively. Long-term noise level measurement survey sheets along with the detailed hourly $L_{eq}$, $L_{max}$, and minimum measured sound level ($L_{min}$) results are provided in Attachment C. Figure 3 shows the long-term monitoring locations.

## Table G: Short-Term Ambient Noise Level Measurements

| Monitor No. | Location | Start Time | Noise Level (dBA) | | | Noise Source(s) |
|---|---|---|---|---|---|---|
| | | | $L_{eq}$ | $L_{max}$ | $L_{min}$ | |
| ST-1 | 331 North Hathaway Street. On the south side of the single-family residence on the sidewalk north of Jacinto View Road. | 12:40 PM | 58.7 | 65.8 | 54.1 | Traffic on I-10. Some train noise. |
| ST-2 | 1679 East Ramsey Street, Quality Tile Works. At the northwestern corner of the property, approximately 15 ft north and 6 ft west of the chain-linked fence. | 12:13 PM | 62.4 | 66.7 | 57.4 | Traffic on I-10. |
| ST-3 | 1233 East Ramsey Street. In front of Cruz Tires Truck Repair near the east driveway. | 1:31 PM | 64.8 | 77.6 | 58.2 | Traffic on I-10 and Ramsey Street. Some train noise. Truck idling nearby. One loud motorcycle on Ramsey Street. |

Source: Compiled by LSA Associates, Inc. (2023).
dBA = A-weighted decibels
ft = feet
I-10 = Interstate 10
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum measured sound level
$L_{min}$ = minimum measured sound level

## Table H: Long-Term Ambient Noise Monitoring Results

| Monitor No. | Location | Noise Level (dBA) | | | | | Noise Sources |
|---|---|---|---|---|---|---|---|
| | | Daytime | | Nighttime | | CNEL | |
| | | $L_{eq}$ | $L_{max}$ | $L_{eq}$ | $L_{max}$ | | |
| LT-1 | 2033 East Ramsey Street, Caltrans Banning Maintenance Station. At the northwestern corner of the facility on a powerline pole. | 62.0-67.9 (65.2)[1] | 68.4-83.5 | 57.9-64.5 (62.8)[2] | 64.7-73.9 | 68.9 | Traffic on I-10 and Ramsey Street. |
| LT-2 | 555 North Hathaway Street. On a light pole. Approximately 24 ft from the Hathaway Street centerline. | 59.4-66.9 (65.2)[1] | 78.6-91.2 | 49.7-66.4 (59.7)[2] | 70.2-84.7 | 67.4 | Traffic on Hathaway Street. |
| LT-3 | 1582 East Nicolet Street. On a powerline pole in front of a single-family residence. Approximately 25 ft from the Nicolet Street centerline. | 56.6-60.0 (58.4)[1] | 69.9-83.0 | 53.5-60.2 (57.5)[2] | 66.3-83.2 | 64.1 | Traffic on Hathaway Street and light traffic on Nicolet Street. |
| LT-4 | 1387 East Ramsey Street, Calvary Church of God In Christ. On a powerline pole on the north side of Ramsey Street. Approximately 25 ft from the Ramsey Street centerline. | 67.0-74.5 (72.5)[1] | 81.4-92.5 | 64.8-69.5 (68.5)[2] | 77.3-88.3 | 75.1 | Traffic on I-10 and Ramsey Street. |
| LT-5 | 932 East Ramsey Street, Country Inn. On the third palm tree closest to Ramsey Street. Approximately 55 ft from the Ramsey Street centerline. | 67.9-73.0 (71.5)[1] | 80.0-92.9 | 66.0-70.3 (68.1)[2] | 78.5-83.3 | 75.0 | Traffic on I-10 and Ramsey Street. |

Source: Compiled by LSA (2023).
Note: Long-term (24-hour) noise level measurements were conducted from November 9, 2021, to November 10, 2021.
[1] Average daytime noise level.
[2] Average nighttime noise level.
Caltrans = California Department of Transportation
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
ft = feet
I-10 = Interstate 10
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level

### Existing Aircraft Noise

The nearest airport to the project site is Banning Municipal Airport, which is 0.3 mile south of the project site. Based on the Riverside County Airport Land Use Compatibility Plan (ALUC 2004), the project site is outside the 55 CNEL airport noise contour. Industrial uses are normally acceptable up to 70 dBA CNEL based on the City's land use compatibility for community noise environments shown in Table E. In addition, there are no private airstrips within the vicinity of the project site. Therefore, the proposed project would not expose people working in the project area to excessive noise levels, and this topic is not further discussed.

### Existing Train Noise

The UPRR line, which also carries Amtrak trains, is located south of the project site and south of I-10. The train crossing data from the Federal Railroad Administration Office of Safety Analysis show that there are a total of 34 freight and passenger trains per day. Noise generated from train operations would be captured in the short-term and long-term noise level measurements.

### Existing Traffic Noise

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to evaluate traffic-related noise conditions along roadway segments in the project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. The existing average daily traffic (ADT) volumes were calculated based on existing ADT volumes obtained from the *First Hathaway Logistics Center Local Transportation Analysis* (Stantec 2022). The standard vehicle mix for Southern California roadways was used for traffic on these roadway segments. Table I provides the existing traffic noise levels in the project vicinity. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between the traffic and the location where the noise contours are drawn. Attachment D provides the specific assumptions used in developing these noise levels and model printouts.

## IMPACTS

### Short-Term Construction Noise Impacts

Two types of short-term noise impacts would occur during project construction: (a) construction crew commutes and transport of construction equipment and materials, and (b) construction activities.

#### *Construction Crew Commutes and Transport of Construction Equipment and Materials*

The first type of short-term noise impacts would be from construction crew commutes and the transport of construction equipment and materials to the project site and would incrementally raise noise levels on roadways leading to the site. The pieces of construction equipment for construction activities would move on site, would remain for the duration of each construction phase, and would not add to the daily traffic volume in the project vicinity. Although there would be a relatively high single-event noise exposure potential causing intermittent noise nuisance (passing trucks at 50 ft would generate up to a maximum of 84 dBA), the effect on longer-term ambient noise levels would be small because the number of daily construction-related vehicle trips is small compared to existing

## Table I: Existing Traffic Noise Levels

| Roadway Segment | ADT | Centerline to 70 dBA CNEL (ft) | Centerline to 65 dBA CNEL (ft) | Centerline to 60 dBA CNEL (ft) | CNEL (dBA) 50 ft from Centerline of Outermost Lane |
|---|---|---|---|---|---|
| Hathaway Street south of Wilson Street | 490 | < 50 | < 50 | < 50 | 53.5 |
| Hathaway Street north of George Street | 2,280 | < 50 | < 50 | 70 | 60.1 |
| Hathaway Street between George Street and Nicolet Street | 2,300 | < 50 | < 50 | 69 | 60.7 |
| Hathaway Street between Nicolet Street and Williams Street | 2,340 | < 50 | < 50 | 70 | 60.8 |
| Hathaway Street between Williams Street and Ramsey Street | 2,285 | < 50 | < 50 | 68 | 61.2 |
| Hathaway Street between George Street and Nicolet Street | 2,300 | < 50 | < 50 | 69 | 60.7 |
| Hargrave Street between Nicolet Street and Williams Street | 4,000 | < 50 | < 50 | < 50 | 58.7 |
| Hargrave Street between Williams Street and Ramsey Street | 5,090 | < 50 | < 50 | 60 | 59.8 |
| Hargrave Street between Ramsey Street and I-10 WB | 8,555 | < 50 | 77 | 164 | 66.5 |
| Hargrave Street between I-10 WB and I-10 EB | 6,495 | < 50 | 64 | 137 | 65.3 |
| George Street west of Hathaway Street | 480 | < 50 | < 50 | < 50 | 49.5 |
| Nicolet Street west of Hargrave Street | 910 | < 50 | < 50 | < 50 | 52.3 |
| Nicolet Street between Hargrave Street and Hathaway Street | 530 | < 50 | < 50 | < 50 | 49.9 |
| Williams Street west of Hargrave Street | 1,150 | < 50 | < 50 | < 50 | 53.3 |
| Williams Street between Hargrave Street and Hathaway Street | 490 | < 50 | < 50 | < 50 | 49.6 |
| Ramsey Street west of Hargrave Street | 4,690 | < 50 | 54 | 111 | 63.4 |
| Ramsey Street between Hargrave Street and Hathaway Street | 4,575 | < 50 | 53 | 109 | 63.3 |
| Ramsey Street east of Hathaway Street | 2,440 | < 50 | < 50 | 73 | 60.6 |

Source: Compiled by LSA (2023).
Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
EB = eastbound
ft = feet
WB = westbound

daily traffic volume on Hathaway Street and Ramsey Street. Construction of the proposed project would generate up to 1,495 passenger car equivalent (PCE) daily trips based on the estimated project construction schedule and the number of construction trips provided by the California Emissions Estimator Model (CalEEMod, Version 2022.1) results contained in Attachment C of the *First Hathaway Logistics Warehouse Project Air Quality, Greenhouse Gas Emissions, and Energy Impact Analysis Memorandum* (LSA 2023). Roadways that would be used to access the project site are Hathaway Street and Ramsey Street. Based on Table I, Hathaway Street and Ramsey Street have estimated existing daily traffic volumes of 2,280 and 2,440, respectively, near the project site. Based on the information above, construction-related traffic would increase noise by up to 2.0 dBA. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, no short-term, construction-related impacts associated with worker commutes and transport of construction equipment and material to the project site would occur, and no noise reduction measures would be required.

### *Construction Activities*

The second type of short-term noise impact is related to noise generated from construction activities. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. The construction of the proposed warehouse building anticipates demolition, site preparation, grading, building construction, on-site paving, and

architectural coating phases of construction. The construction roadways and infrastructure improvements anticipate grubbing and land clearing; grading and excavation; drainage, utilities, and sub-grade; and road paving. These various sequential phases change the character of the noise generated on a project site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table J lists the $L_{max}$ recommended for noise impact assessments for typical construction equipment included in the FHWA *Highway Construction Noise Handbook* (2006), based on a distance of 50 feet between the equipment and a noise receptor.

## Table J: Typical Construction Equipment Noise Levels

| Equipment Description | Acoustical Usage Factor[1] (%) | Maximum Noise Level ($L_{max}$) at 50 feet[2] |
|---|---|---|
| Backhoe | 40 | 80 |
| Compactor (ground) | 20 | 80 |
| Compressor | 40 | 80 |
| Crane | 16 | 85 |
| Dozer | 40 | 85 |
| Dump Truck | 40 | 84 |
| Excavator | 40 | 85 |
| Flatbed Truck | 40 | 84 |
| Man Lift (Forklift) | 20 | 85 |
| Front-End Loader | 40 | 80 |
| Generator | 50 | 82 |
| Generator (<25 KVA, VMS signs) | 50 | 70 |
| Grader | 40 | 85 |
| Jackhammer | 20 | 85 |
| Pavement Scarifier | 20 | 85 |
| Paver | 50 | 85 |
| Pickup Truck | 40 | 55 |
| Pneumatic Tools | 50 | 85 |
| Pump | 50 | 77 |
| Rock Drill | 20 | 85 |
| Roller | 20 | 85 |
| Scraper | 40 | 85 |
| Tractor | 40 | 84 |
| Welder/Torch | 40 | 73 |

Source: Table 9.1, *FHWA Highway Construction Noise Handbook* (FHWA 2006).
Note: The noise levels reported in this table are rounded to the nearest whole number.
[1] Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] Maximum noise levels were developed based on Specification 721.560 from the CA/T program to be consistent with the City of Boston, Massachusetts, Noise Code for the "Big Dig" project.
CA/T = Central Artery/Tunnel
FHWA = Federal Highway Administration
$L_{max}$ = maximum instantaneous noise level

Table K lists the anticipated construction equipment for each construction phase based on the CalEEMod (Version 2022.1) results contained in Attachment C of the *First Hathaway Logistics Warehouse Project Air Quality, Greenhouse Gas Emissions, and Energy Impact Analysis Memorandum* (LSA 2023). Table K shows the combined noise level at 50 feet (ft) from all of the equipment in each phase as well as the $L_{eq}$ noise level for each equipment at 50 ft based on the quantity, reference instantaneous maximum ($L_{max}$) noise level at 50 ft, and the acoustical usage factor.

## Table K: Summary of Construction Phase, Equipment, and Noise Levels

| Construction Phase | Construction Equipment | Quantity | Reference Noise Level at 50 ft (dBA $L_{max}$) | Acoustical Usage Factor[1] (%) | Noise Level at 50 ft (dBA $L_{eq}$) | Combined Noise Level at 50 ft (dBA $L_{eq}$) |
|---|---|---|---|---|---|---|
| **Warehouse Construction** | | | | | | |
| Demolition | Concrete Saw | 1 | 90 | 20 | 83.0 | 89.2 |
| | Excavator | 3 | 85 | 40 | 85.8 | |
| | Bulldozer | 2 | 85 | 40 | 84.0 | |
| Site Preparation | Bulldozer | 3 | 85 | 40 | 85.8 | 87.3 |
| | Front-End Loader | 4 | 80 | 40 | 82.0 | |
| Grading | Excavator | 2 | 85 | 40 | 84.0 | 89.2 |
| | Grader | 1 | 85 | 40 | 81.0 | |
| | Bulldozer | 1 | 85 | 40 | 81.0 | |
| | Scraper | 2 | 85 | 40 | 84.0 | |
| | Front-End Loader | 2 | 80 | 40 | 79.0 | |
| Building Construction | Crane | 1 | 85 | 16 | 77.0 | 86.5 |
| | Forklift | 3 | 85 | 20 | 82.8 | |
| | Generator | 1 | 82 | 50 | 79.0 | |
| | Front-End Loader | 3 | 80 | 40 | 80.8 | |
| | Welder | 1 | 73 | 40 | 69.0 | |
| On-Site Paving | Paver | 2 | 85 | 50 | 85.0 | 87.6 |
| | Paving Equipment | 2 | 85 | 20 | 81.0 | |
| | Roller | 2 | 85 | 20 | 81.0 | |
| Architectural Coating | Air Compressor | 1 | 80 | 40 | 76.0 | 76.0 |
| **Roadways and Infrastructure Improvements** | | | | | | |
| Grubbing and Land Clearing | Tractor | 1 | 84 | 40 | 80.0 | 83.7 |
| | Excavator | 1 | 85 | 40 | 81.0 | |
| | Signal Boards | 2 | 70 | 50 | 70.0 | |
| Grading and Excavation | Tractor | 1 | 84 | 40 | 80.0 | 90.8 |
| | Excavator | 3 | 85 | 40 | 85.8 | |
| | Grader | 1 | 85 | 40 | 81.0 | |
| | Roller | 2 | 85 | 20 | 81.0 | |
| | Dozer | 1 | 85 | 40 | 81.0 | |
| | Scraper | 2 | 85 | 40 | 84.0 | |
| | Signal Boards | 2 | 70 | 50 | 70.0 | |
| | Front-End Loader | 2 | 80 | 40 | 79.0 | |
| Drainage, Utilities, and Sub-Grade | Air Compressor | 1 | 80 | 40 | 76.0 | 88.4 |
| | Generator | 1 | 82 | 50 | 79.0 | |
| | Grader | 1 | 85 | 40 | 81.0 | |
| | Compactor | 1 | 80 | 20 | 73.0 | |
| | Pumps | 1 | 77 | 50 | 74.0 | |
| | Man Lift | 1 | 85 | 20 | 78.0 | |
| | Scraper | 2 | 85 | 40 | 84.0 | |
| | Signal Boards | 2 | 70 | 50 | 70.0 | |
| | Front-End Loader | 2 | 80 | 40 | 79.0 | |
| Road Paving | Paver | 1 | 85 | 50 | 82.0 | 87.0 |
| | Pavement Scarifier | 1 | 85 | 20 | 78.0 | |
| | Roller | 3 | 85 | 20 | 82.8 | |
| | Signal Boards | 2 | 70 | 50 | 70.0 | |
| | Front-End Loader | 2 | 80 | 40 | 79.0 | |

Source: Compiled by LSA (2023).

[1] The acoustical usage factor is the percentage of time during a construction noise operation that a piece of construction equipment operates at full power.

dBA = A-weighted decibels
ft = foot/feet
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level

As shown in Table K, noise levels would reach up to 89.2 dBA $L_{eq}$ at a distance of 50 ft for the construction of the proposed warehouse building, and noise levels would reach up to 90.8 dBA at a distance of 50 feet for the construction of roadways and infrastructure improvements.

The closest residential building from the construction of the proposed warehouse building is located west of the project site and is approximately 1,465 ft from the center of the project site. In addition, the closest residential building from the construction of roadways and infrastructure improvements is west of the project site and approximately 45 ft from the centerline of Hathaway Street. At a distance of 1,465 ft, noise levels would attenuate by 29.3 dBA compared to the noise level measured at 50 ft from the source. At a distance of 45 ft, noise levels would increase by 0.9 dBA compared to the noise level measured at 50 ft from the source.

Also, the interior noise level was calculated based on the calculated exterior construction noise level and an exterior-to-interior noise reduction of 20 dBA (FHWA 2011). Based on the information above, the closest residential building from the construction of the proposed warehouse building would be exposed to an interior construction noise level of 39.9 dBA $L_{eq}$ (89.2 dBA – 29.3 dBA – 20 dBA = 39.9 dBA), and the closest residential building from the construction of roadways and infrastructure improvements would be exposed to an interior construction noise level of 71.7 dBA $L_{eq}$ (90.8 dBA + 0.9 dBA – 20 dBA = 71.7 dBA). This noise level would not exceed the City's construction noise standard of 55 dBA for more than 15 minutes per hour for the construction of the proposed warehouse building. However, this noise level would exceed the City's construction noise standard of 55 dBA for more than 15 minutes per hour for the construction of roadways and infrastructure improvements. Because there is driveway access onto Hathaway Street, it is not feasible to attenuate noise levels generated from the construction of Hathaway Street and infrastructure improvements with temporary construction barriers. Compliance with the City's permitted hours of construction pursuant to Section 8.44.090(E) of the City's Municipal Code would ensure construction noise would not be generated during the more sensitive nighttime hours. Therefore, construction noise impacts would occur because noise reduction measures such as temporary construction barriers are not feasible due to driveway access onto Hathaway Street.

### Short-Term Construction Vibration Impacts

This construction vibration impact analysis discusses the level of human annoyance using vibration levels in RMS velocity (VdB) and assesses the potential for building damage using vibration levels in PPV (in/sec). Vibration levels calculated in RMS velocity are best for characterizing human response to building vibration, whereas vibration levels in PPV are best for characterizing damage potential.

Table L shows the reference vibration levels at a distance of 25 ft for each type of standard construction equipment from the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). Construction of the proposed warehouse building and the construction of roadways and infrastructure improvements are expected to require the use of large bulldozers, loaded trucks, and jackhammers, which would generate ground-borne vibration levels of up to 87 VdB (0.089 PPV [in/sec]), 86 VdB (0.076 PPV [in/sec]), and 79 VdB (0.035 PPV [in/sec]), respectively, when measured at 25 ft.

## Table L: Vibration Source Amplitudes for Construction Equipment

| Equipment | Reference PPV/$L_V$ at 25 ft | |
|---|---|---|
| | PPV (in/sec) | $L_V$ (VdB)[1] |
| Pile Driver (Impact), Typical | 0.644 | 104 |
| Pile Driver (Sonic), Typical | 0.170 | 93 |
| Vibratory Roller | 0.210 | 94 |
| Hoe Ram | 0.089 | 87 |
| **Large Bulldozer**[2] | **0.089** | **87** |
| Caisson Drilling | 0.089 | 87 |
| **Loaded Trucks**[2] | **0.076** | **86** |
| **Jackhammer** | **0.035** | **79** |
| Small Bulldozer | 0.003 | 58 |

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.

[2] The equipment shown in **bold** is expected to be used on site.

µin/sec = microinches per second
ft = feet
FTA = Federal Transit Administration
in/sec = inches per second
$L_V$ = vibration velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

The greatest vibration levels are anticipated to occur during the site preparation and grading phase. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts normally occur within the buildings.

The formula for vibration transmission is provided below:

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30\ Log\ (D/25)$$

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

Table M lists the projected vibration levels from various construction equipment associated with the construction of the proposed warehouse building and the construction of roadways and infrastructure improvements expected to be used on the project site from the center of the project site to the nearest buildings in the project vicinity. As shown in Table M, the closest industrial and commercial buildings south of the project site and residential buildings west of the project site are approximately 800 ft, 1,875 ft, and 1,465 ft, respectively, from the center of the project site for the construction of the proposed warehouse building. These buildings would experience a vibration level of up to 42 VdB. This vibration level would not result in community annoyance because it would not exceed the FTA community annoyance threshold of 84 VdB for uses that are not as sensitive to vibration and 78 VdB for daytime residences.

## Table M: Potential Construction Vibration Annoyance

| Land Use | Direction | Equipment/ Activity | Reference Vibration Level (VdB) at 25 ft | Distance to Structure (ft)[1] | Vibration Level (VdB) |
|---|---|---|---|---|---|
| **Warehouse Construction** | | | | | |
| Industrial (Caltrans Banning Maintenance Station) | South | Large bulldozers | 87 | 800 | 42 |
| | | Loaded trucks | 86 | 800 | 41 |
| | | Jackhammer | 79 | 800 | 34 |
| Commercial (1679 East Ramsey Street) | South | Large bulldozers | 87 | 1,875 | 31 |
| | | Loaded trucks | 86 | 1,875 | 30 |
| | | Jackhammer | 79 | 1,875 | 23 |
| Residences | West | Large bulldozers | 87 | 1,465 | 34 |
| | | Loaded trucks | 86 | 1,465 | 33 |
| | | Jackhammer | 79 | 1,465 | 26 |
| **Roadways and Infrastructure Improvements** | | | | | |
| Residences | West | Large bulldozers | 87 | 45 | 79 |
| | | Loaded trucks | 86 | 45 | 78 |
| | | Jackhammer | 79 | 45 | 71 |

Source: Compiled by LSA (2023).
Note: The FTA-recommended annoyance thresholds of 84 VdB for offices (and other similar areas not as sensitive to vibration) and 78 VdB for daytime residences were used to assess potential construction vibration annoyance.
[1] For the construction of the proposed warehouse building, the distance is from the center of the project site to the building structure. For the construction of roadways and infrastructure improvements, the distance is from the roadway centerline.
Caltrans = California Department of Transportation
ft = feet
FTA = Federal Transit Administration
VdB = vibration velocity decibels

For the construction of roadways and infrastructure improvements, the closest residential building west of the project site is approximately 45 ft from the Hathaway Street centerline. These buildings would experience a vibration level of up to 79 VdB. This vibration level would have the potential to result in community annoyance because it would exceed the FTA community annoyance threshold of 78 VdB for daytime residences. However, vibration generated from project construction activities is temporary and would stop once project construction is completed. Other building structures that surround the project site would experience lower vibration levels because they are farther away.

Similarly, Table N lists the projected vibration levels from various construction equipment associated with the construction of the proposed warehouse building and the construction of roadways and infrastructure improvements expected to be used on the project site at the project construction boundary to the nearest buildings in the project vicinity. As shown in Table N, the industrial and commercial buildings south of the project site and residential buildings west of the project site are approximately 215 ft, 825 ft, and 95 ft, respectively, from the project construction boundary for the construction of the proposed warehouse building. For the construction of roadways and infrastructure improvements, the closest residential building west of the project site is approximately 40 ft from the construction boundary of Hathaway Street. These buildings would experience a vibration level of up to 0.044 PPV (in/sec). This vibration level would not result in building damage because industrial, commercial, and residential buildings would be constructed equivalent to non-engineered timber and masonry, and vibration levels would not exceed the FTA vibration damage threshold of 0.20 PPV (in/sec). Other building structures that surround the project site would experience lower vibration levels because they are farther away and would be constructed

## Table N: Potential Construction Vibration Damage

| Land Use | Direction | Equipment/ Activity | Reference Vibration Level at 25 ft PPV (in/sec) | Distance to Structure (ft)[1] | Vibration Level PPV (in/sec) |
|---|---|---|---|---|---|
| **Warehouse Construction** | | | | | |
| Industrial (Caltrans Banning Maintenance Station) | South | Large bulldozers | 0.089 | 215 | 0.004 |
| | | Loaded trucks | 0.076 | 215 | 0.003 |
| | | Jackhammer | 0.035 | 215 | 0.001 |
| Commercial (1679 East Ramsey Street) | South | Large bulldozers | 0.089 | 825 | 0.000 |
| | | Loaded trucks | 0.076 | 825 | 0.000 |
| | | Jackhammer | 0.035 | 825 | 0.000 |
| Residences | West | Large bulldozers | 0.089 | 95 | 0.012 |
| | | Loaded trucks | 0.076 | 95 | 0.010 |
| | | Jackhammer | 0.035 | 95 | 0.005 |
| **Roadways and Infrastructure Improvements** | | | | | |
| Residences | West | Large bulldozers | 0.089 | 40 | 0.044 |
| | | Loaded trucks | 0.076 | 40 | 0.038 |
| | | Jackhammer | 0.035 | 40 | 0.017 |

Source: Compiled by LSA (2023).
Note: The FTA-recommended building damage threshold is 0.20 PPV [in/sec]) at the receiving non-engineered timber and masonry building.
[1] Distance from the project construction boundary to the building structure.
Caltrans = California Department of Transportation
ft = feet
FTA = Federal Transit Administration
in/sec = inches per second
PPV = peak particle velocity
VdB = vibration velocity decibels

equivalent to or better than non-engineered timber and masonry. Therefore, no construction vibration impacts would occur during project construction, and no vibration reduction measures are required.

### Long Term Traffic Noise Impacts

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77 108) was used to evaluate traffic-related noise conditions along roadway segments in the project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. The existing (2021), opening year (2023), and cumulative (2023) without and with project ADT volumes were obtained from the *First Hathaway Logistics Center Local Transportation Analysis* (Stantec 2022). The standard vehicle mix for Southern California roadways was used for traffic on these roadway segments. Tables O, P, and Q provide the traffic noise levels for the existing (2021), opening year (2023), and cumulative (2023) without and with project, respectively. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the location where the noise contours are drawn. Attachment D provides the specific assumptions used in developing these noise levels and model printouts.

Tables O, P, and Q show that the project-related traffic noise increase would be up to 2.1 dBA. Noise level increases less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, no traffic noise impacts from project-related traffic on off-site sensitive receptors would occur, and no noise reduction measures are required.

## Table O: Existing Without and With Project Traffic Noise Levels

| Roadway Segment | Without Project Traffic Conditions | | | | | With Project Traffic Conditions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ADT | Centerline to 70 dBA CNEL (ft) | Centerline to 65 dBA CNEL (ft) | Centerline to 60 dBA CNEL (ft) | CNEL (dBA) 50 ft from Centerline of Outermost Lane | ADT | Centerline to 70 dBA CNEL (ft) | Centerline to 65 dBA CNEL (ft) | Centerline to 60 dBA CNEL (ft) | CNEL (dBA) 50 ft from Centerline of Outermost Lane | Increase from Baseline Conditions |
| Hathaway Street south of Wilson Street | 490 | < 50 | < 50 | < 50 | 53.5 | 720 | < 50 | < 50 | < 50 | 55.1 | 0.0 |
| Hathaway Street north of George Street | 2,280 | < 50 | < 50 | 70 | 60.1 | 2,520 | < 50 | < 50 | 75 | 60.6 | 0.5 |
| Hathaway Street between George Street and Nicolet Street | 2,300 | < 50 | < 50 | 69 | 60.7 | 2,915 | < 50 | < 50 | 81 | 61.7 | 1.0 |
| Hathaway Street between Nicolet Street and Williams Street | 2,340 | < 50 | < 50 | 70 | 60.8 | 3,640 | < 50 | < 50 | 93 | 62.7 | 1.9 |
| Hathaway Street between Williams Street and Ramsey Street | 2,285 | < 50 | < 50 | 68 | 61.2 | 3,555 | < 50 | < 50 | 91 | 63.1 | 1.9 |
| Hathaway Street between George Street and Nicolet Street | 2,300 | < 50 | < 50 | 69 | 60.7 | 2,915 | < 50 | < 50 | 81 | 61.7 | 1.0 |
| Hargrave Street between Nicolet Street and Williams Street | 4,000 | < 50 | < 50 | < 50 | 58.7 | 4,270 | < 50 | < 50 | 54 | 59.0 | 0.3 |
| Hargrave Street between Williams Street and Ramsey Street | 5,090 | < 50 | < 50 | 60 | 59.8 | 5,360 | < 50 | < 50 | 62 | 60.0 | 0.2 |
| Hargrave Street between Ramsey Street and I-10 WB | 8,555 | < 50 | 77 | 164 | 66.5 | 9,405 | < 50 | 82 | 175 | 66.9 | 0.4 |
| Hargrave Street between I-10 WB and I-10 EB | 6,495 | < 50 | 64 | 137 | 65.3 | 6,810 | < 50 | 66 | 141 | 65.5 | 0.2 |
| George Street west of Hathaway Street | 480 | < 50 | < 50 | < 50 | 49.5 | 580 | < 50 | < 50 | < 50 | 50.3 | 0.8 |
| Nicolet Street west of Hargrave Street | 910 | < 50 | < 50 | < 50 | 52.3 | 940 | < 50 | < 50 | < 50 | 52.4 | 0.1 |
| Nicolet Street between Hargrave Street and Hathaway Street | 530 | < 50 | < 50 | < 50 | 49.9 | 830 | < 50 | < 50 | < 50 | 51.9 | 2.0 |
| Williams Street west of Hargrave Street | 1,150 | < 50 | < 50 | < 50 | 53.3 | 1,180 | < 50 | < 50 | < 50 | 53.4 | 0.1 |
| Williams Street between Hargrave Street and Hathaway Street | 490 | < 50 | < 50 | < 50 | 49.6 | 520 | < 50 | < 50 | < 50 | 49.9 | 0.3 |
| Ramsey Street west of Hargrave Street | 4,690 | < 50 | 54 | 111 | 63.4 | 4,770 | < 50 | 54 | 112 | 63.5 | 0.1 |
| Ramsey Street between Hargrave Street and Hathaway Street | 4,575 | < 50 | 53 | 109 | 63.3 | 5,240 | < 50 | 57 | 119 | 63.9 | 0.6 |
| Ramsey Street east of Hathaway Street | 2,440 | < 50 | < 50 | 73 | 60.6 | 3,040 | < 50 | < 50 | 84 | 61.5 | 0.9 |

Source: Compiled by LSA (2023).
Note: Traffic noise within 50 ft of the roadway centerline should be evaluated with site-specific information.
ADT = average daily traffic dBA = A-weighted decibels ft = feet WB = westbound
CNEL = Community Noise Equivalent Level EB = eastbound I-10 = Interstate 10

## Table P: Opening Year (2023) Without and With Project Traffic Noise Levels

| Roadway Segment | Without Project Traffic Conditions | | | | | With Project Traffic Conditions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ADT | Centerline to 70 dBA CNEL (ft) | Centerline to 65 dBA CNEL (ft) | Centerline to 60 dBA CNEL (ft) | CNEL (dBA) 50 ft from Centerline of Outermost Lane | ADT | Centerline to 70 dBA CNEL (ft) | Centerline to 65 dBA CNEL (ft) | Centerline to 60 dBA CNEL (ft) | CNEL (dBA) 50 ft from Centerline of Outermost Lane | Increase from Baseline Conditions |
| Hathaway Street south of Wilson Street | 2,070 | < 50 | < 50 | 66 | 59.7 | 2,300 | < 50 | < 50 | 71 | 60.2 | 0.5 |
| Hathaway Street north of George Street | 2,380 | < 50 | < 50 | 72 | 60.3 | 2,620 | < 50 | < 50 | 77 | 60.7 | 0.4 |
| Hathaway Street between George Street and Nicolet Street | 2,400 | < 50 | < 50 | 71 | 60.8 | 3,015 | < 50 | < 50 | 83 | 61.8 | 1.0 |
| Hathaway Street between Nicolet Street and Williams Street | 2,440 | < 50 | < 50 | 72 | 61.0 | 3,740 | < 50 | < 50 | 95 | 62.9 | 1.9 |
| Hathaway Street between Williams Street and Ramsey Street | 2,375 | < 50 | < 50 | 70 | 61.4 | 3,645 | < 50 | < 50 | 93 | 63.2 | 1.8 |
| Hathaway Street between George Street and Nicolet Street | 2,400 | < 50 | < 50 | 71 | 60.8 | 3,015 | < 50 | < 50 | 83 | 61.8 | 1.0 |
| Hargrave Street between Nicolet Street and Williams Street | 4,130 | < 50 | < 50 | 52 | 58.9 | 4,430 | < 50 | < 50 | 55 | 59.2 | 0.3 |
| Hargrave Street between Williams Street and Ramsey Street | 5,005 | < 50 | < 50 | 59 | 59.7 | 5,560 | < 50 | < 50 | 63 | 60.2 | 0.5 |
| Hargrave Street between Ramsey Street and I-10 WB | 8,610 | < 50 | 77 | 165 | 66.5 | 9,750 | < 50 | 84 | 179 | 67.0 | 0.5 |
| Hargrave Street between I-10 WB and I-10 EB | 6,760 | < 50 | 66 | 140 | 65.4 | 7,075 | < 50 | 68 | 145 | 65.6 | 0.2 |
| George Street west of Hathaway Street | 510 | < 50 | < 50 | < 50 | 49.8 | 610 | < 50 | < 50 | < 50 | 50.6 | 0.8 |
| Nicolet Street west of Hargrave Street | 940 | < 50 | < 50 | < 50 | 52.4 | 970 | < 50 | < 50 | < 50 | 52.6 | 0.2 |
| Nicolet Street between Hargrave Street and Hathaway Street | 520 | < 50 | < 50 | < 50 | 49.9 | 850 | < 50 | < 50 | < 50 | 52.0 | 2.1 |
| Williams Street west of Hargrave Street | 1,200 | < 50 | < 50 | < 50 | 53.5 | 1,230 | < 50 | < 50 | < 50 | 53.6 | 0.1 |
| Williams Street between Hargrave Street and Hathaway Street | 475 | < 50 | < 50 | < 50 | 49.5 | 535 | < 50 | < 50 | < 50 | 50.0 | 0.5 |
| Ramsey Street west of Hargrave Street | 4,880 | < 50 | 55 | 114 | 63.6 | 4,960 | < 50 | 55 | 115 | 63.7 | 0.1 |
| Ramsey Street between Hargrave Street and Hathaway Street | 4,475 | < 50 | < 50 | 108 | 63.2 | 5,425 | < 50 | 59 | 122 | 64.1 | 0.9 |
| Ramsey Street east of Hathaway Street | 2,010 | < 50 | < 50 | 65 | 59.7 | 3,140 | < 50 | < 50 | 86 | 61.7 | 2.0 |

Source: Compiled by LSA (2023).
Note: Traffic noise within 50 ft of the roadway centerline should be evaluated with site-specific information.
ADT = average daily traffic dBA = A-weighted decibels ft = feet WB = westbound
CNEL = Community Noise Equivalent Level EB = eastbound I-10 = Interstate 10

## Table Q: Cumulative (2023) Traffic Noise Levels Without and With Project

| Roadway Segment | Without Project Traffic Conditions | | | | | With Project Traffic Conditions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ADT | Centerline to 70 dBA CNEL (ft) | Centerline to 65 dBA CNEL (ft) | Centerline to 60 dBA CNEL (ft) | CNEL (dBA) 50 ft from Centerline of Outermost Lane | ADT | Centerline to 70 dBA CNEL (ft) | Centerline to 65 dBA CNEL (ft) | Centerline to 60 dBA CNEL (ft) | CNEL (dBA) 50 ft from Centerline of Outermost Lane | Increase from Baseline Conditions |
| Hathaway Street south of Wilson Street | 3,640 | < 50 | < 50 | 94 | 62.2 | 3,870 | < 50 | < 50 | 98 | 62.4 | 0.2 |
| Hathaway Street north of George Street | 3,920 | < 50 | < 50 | 99 | 62.5 | 4,180 | < 50 | < 50 | 103 | 62.8 | 0.3 |
| Hathaway Street between George Street and Nicolet Street | 3,930 | < 50 | < 50 | 98 | 63.0 | 4,545 | < 50 | < 50 | 108 | 63.6 | 0.6 |
| Hathaway Street between Nicolet Street and Williams Street | 3,940 | < 50 | < 50 | 98 | 63.1 | 5,240 | < 50 | 56 | 119 | 64.3 | 1.2 |
| Hathaway Street between Williams Street and Ramsey Street | 3,845 | < 50 | < 50 | 96 | 63.5 | 5,115 | < 50 | 54 | 116 | 64.7 | 1.2 |
| Hathaway Street between George Street and Nicolet Street | 3,930 | < 50 | < 50 | 98 | 63.0 | 4,545 | < 50 | < 50 | 108 | 63.6 | 0.6 |
| Hargrave Street between Nicolet Street and Williams Street | 4,280 | < 50 | < 50 | 54 | 59.0 | 4,550 | < 50 | < 50 | 56 | 59.3 | 0.3 |
| Hargrave Street between Williams Street and Ramsey Street | 6,280 | < 50 | < 50 | 69 | 60.7 | 6,550 | < 50 | < 50 | 70 | 60.9 | 0.2 |
| Hargrave Street between Ramsey Street and I-10 WB | 10,930 | < 50 | 90 | 193 | 67.5 | 11,780 | < 50 | 95 | 203 | 67.8 | 0.3 |
| Hargrave Street between I-10 WB and I-10 EB | 8,775 | < 50 | 78 | 167 | 66.6 | 9,090 | < 50 | 80 | 171 | 66.7 | 0.1 |
| George Street west of Hathaway Street | 540 | < 50 | < 50 | < 50 | 50.0 | 640 | < 50 | < 50 | < 50 | 50.8 | 0.8 |
| Nicolet Street west of Hargrave Street | 1,030 | < 50 | < 50 | < 50 | 52.8 | 1,060 | < 50 | < 50 | < 50 | 53.0 | 0.2 |
| Nicolet Street between Hargrave Street and Hathaway Street | 575 | < 50 | < 50 | < 50 | 50.3 | 890 | < 50 | < 50 | < 50 | 52.2 | 1.9 |
| Williams Street west of Hargrave Street | 1,290 | < 50 | < 50 | < 50 | 53.8 | 1,320 | < 50 | < 50 | < 50 | 53.9 | 0.1 |
| Williams Street between Hargrave Street and Hathaway Street | 565 | < 50 | < 50 | < 50 | 50.2 | 595 | < 50 | < 50 | < 50 | 50.4 | 0.2 |
| Ramsey Street west of Hargrave Street | 5,480 | < 50 | 59 | 123 | 64.1 | 5,560 | < 50 | 59 | 124 | 64.2 | 0.1 |
| Ramsey Street between Hargrave Street and Hathaway Street | 5,750 | < 50 | 61 | 127 | 64.3 | 6,415 | < 50 | 65 | 136 | 64.8 | 0.5 |
| Ramsey Street east of Hathaway Street | 3,130 | < 50 | < 50 | 85 | 61.7 | 3,730 | < 50 | < 50 | 96 | 62.4 | 0.7 |

Source: Compiled by LSA (2020).
Note: Traffic noise within 50 ft of the roadway centerline should be evaluated with site-specific information.
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
EB = eastbound
ft = feet
I-10 = Interstate 10
WB = westbound

## Long-Term Off-Site Stationary Noise Impacts

Delivery trucks/truck loading and unloading activities, automobile and truck parking activities, and heating, ventilation, and air conditioning (HVAC) equipment associated with the project would potentially affect the existing off-site sensitive land uses. The following provides a detailed noise analysis and discussion of each stationary noise source.

### *Truck Deliveries and Truck Loading and Unloading Activities*

Truck delivery and truck loading/unloading activities for the proposed project would take place on the north and south sides of the proposed warehouse building, as shown on Figure 2. These activities would take place both during daytime and nighttime hours. Noise levels generated from these activities include truck movement, docking at loading dock doors, backup alarms, air brakes, idling, and loading and unloading activities. These activities would result in a maximum noise similar to noise readings from truck delivery and truck loading and unloading activities for other projects, which would generate a noise level of 75 dBA $L_{max}$ at 20 ft based on measurements conducted by LSA (LSA 2016). At a distance of 50 feet, noise levels would be 67 dBA $L_{eq}$. Although a typical truck unloading process takes an average of 15–20 minutes, this maximum noise level occurs in a much shorter period of time (less than 5 minutes). It is estimated that there would be up to 28 and 12[1] truck deliveries and truck loading/unloading activities per hour during daytime and nighttime hours, respectively, based on the project trip generation from the *First Hathaway Logistics Center Local Transportation Analysis* (Stantec 2022). With each automobile generating a noise level of 66.4 dBA $L_{eq}$ at 50 ft for a cumulative period of 140 minutes during daytime hours and 60 minutes during nighttime hours in any hour, noise generated from these activities would reach up to 70.7 dBA $L_{eq}$ and 67.0 dBA $L_{eq}$ at 50 ft, respectively.

The proposed industrial building would provide a noise level reduction of 3 dBA because the proposed industrial building would partially shield truck delivery and truck loading/unloading activities at the residences west of the project site.

### *Parking Lot Activity*

The proposed project would include surface parking for automobiles and trucks. Noise generated from parking lot activities would include noise generated by vehicles traveling at slow speeds, engine start-up noise, car door slams, car horns, car alarms, and tire squeals. Car door slams would have a sound power level of 98.1 based on the SoundPLAN model. This noise level would be equivalent to 66.5 dBA $L_{eq}$ at a distance of 50 ft. Noise levels generated from car door slams would be representative of parking activities. It is estimated there would be up to 127 and 66[2] automobile parking activities during daytime and nighttime hours, respectively, based on the project trip generation from the *First Hathaway Logistics Center Local Transportation Analysis* (Stantec 2022). With each automobile generating a noise level of 66.5 dBA $L_{eq}$ at 50 ft for a cumulative period of 35 minutes in any hour during daytime hours and 20 minutes in any hour during nighttime hours,

---

1 The nighttime truck delivery and truck loading and unloading activities were calculated based on the daily truck trips of 310 minus the a.m. and p.m. peak-hour truck trips of 28 and 14, respectively, divided by 22 hours.

2 The nighttime automobile parking activities were calculated based on the daily trips of 1,660 minus the a.m. and p.m. peak-hour trips of 84 and 127, respectively, divided by 22 hours.

noise generated from these activities would reach up to 64.2 dBA $L_{eq}$ and 61.7 dBA $L_{eq}$ at 50 ft, respectively.

Noise generated from truck parking activities would include noise generated by trucks maneuvering their trailers, truck engine noise, air brakes, and backup alarms. Representative parking activities would generate a noise level of 76.3 dBA $L_8$ at 20 ft, based on measurements conducted by LSA (LSA 2016). At a distance of 50 ft, noise levels would be 68.2 dBA $L_8$. It is estimated there would be up to 28 and 12[1] trucks during daytime and nighttime hours, respectively, based on the project trip generation from the *First Hathaway Logistics Center Local Transportation Analysis* (Stantec 2022). With each truck generating a noise level of 76.3 dBA $L_8$ at 20 ft for a cumulative period of 10 minutes in any hour during daytime hours and 5 minutes in any hour during nighttime hours, noise generated from these activities would reach up to 60.4 dBA $L_{eq}$ and 57.4 dBA $L_{eq}$ at 50 ft, respectively.

### *Heating, Ventilation, and Air Conditioning Equipment*

The proposed project would include up to two rooftop HVAC units each at the northwest, northeast, southwest, and southeast corners of the building for the office portion of the warehouse (a total of eight rooftop HVAC units) based on the project plan set. The HVAC equipment could operate 24 hours per day. The specifications of the HVAC equipment, including the reference noise level, are provided in Attachment E. Each rooftop HVAC unit would generate a noise level of 62.4 dBA $L_{eq}$ at a distance of 50 ft. Each group of two HVAC units operating simultaneously at each location would generate a noise level of 65.4 dBA $L_{eq}$ at a distance of 50 ft.

### *Stationary Noise Impacts Summary*

Table R shows the daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) individual stationary noise source from truck delivery and truck loading and unloading activities, automobile and truck parking activities, and rooftop HVAC equipment at land uses surrounding the project site as well as the distance attenuation, noise reduction from shielding, and the combined stationary noise level at each property line.

**Residential Land Uses.** Table R shows that the closest residential property line to the west would have combined daytime and nighttime stationary noise levels of 54.8 and 53.6 dBA $L_{eq}$, respectively. The daytime stationary noise level of 54.8 dBA $L_{eq}$ would not exceed the City's exterior daytime 30-minute ($L_{50}$) noise standard of 55 dBA. The nighttime stationary noise level of 53.6 dBA $L_{eq}$ would exceed the City's exterior nighttime 30-minute ($L_{50}$) noise standard of 45 dBA. Although nighttime noise levels would exceed the City's exterior nighttime 30-minute ($L_{50}$) noise standard, measured average nighttime ambient noise levels at LT-3 was 57.5 dBA $L_{eq}$, which is representative of the ambient noise levels at the residences west of the project site. It should be noted that the average nighttime ambient noise level of 57.5 dBA $L_{eq}$ is considered relatively high under existing conditions without the project. Therefore, stationary noise sources during project operation would increase ambient noise levels by 1.5 dBA. A noise level increase of less than 3 dBA would not be perceptible

[1] The nighttime truck parking activities were calculated based on the daily trip of 310 minus the a.m. and p.m. peak-hour trips of 28 and 14, respectively, divided by 22 hours.

## Table R: Daytime and Nighttime Stationary Noise Levels

| Land Use | Direction | Noise Source | Reference Noise Level at 50 ft (dBA $L_{eq}$) | Distance from Source to Receptor (ft) | Distance Attenuation (dBA) | Shielding (dBA) | Noise Level (dBA $L_{eq}$) | Combined Noise Level (dBA $L_{eq}$) |
|---|---|---|---|---|---|---|---|---|
| Industrial | South | Truck Delivery[1] | 70.7/67.0[2] | 315 | 16.0 | 0 | 54.7/51.0[2] | 65.3/62.3[2] |
| | | Auto Parking | 64.2/61.7[2] | 440 | 18.9 | 0 | 45.3/42.8[2] | |
| | | Truck Parking | 60.4/57.4[2] | 30 | -4.4 | 0 | 64.8/61.8[2] | |
| | | HVAC (Northwest) | 65.4 | 1,375 | 28.8 | 0 | 36.6 | |
| | | HVAC (Northeast) | 65.4 | 1,105 | 26.9 | 0 | 38.5 | |
| | | HVAC (Southeast) | 65.4 | 510 | 20.2 | 0 | 45.2 | |
| | | HVAC (Southwest) | 65.4 | 960 | 25.7 | 0 | 39.7 | |
| Commercial | South | Truck Delivery[1] | 70.7/67.0[2] | 1,550 | 29.8 | 0 | 40.9/37.2[2] | 45.2/43.3[2] |
| | | Auto Parking | 64.2/61.7[2] | 925 | 25.3 | 0 | 38.9/36.4[2] | |
| | | Truck Parking | 60.4/57.4[2] | 1,020 | 26.2 | 0 | 34.2/31.2[2] | |
| | | HVAC (Northwest) | 65.4 | 2,015 | 32.1 | 0 | 33.3 | |
| | | HVAC (Northeast) | 65.4 | 2,685 | 34.6 | 0 | 30.8 | |
| | | HVAC (Southeast) | 65.4 | 2,185 | 32.8 | 0 | 32.6 | |
| | | HVAC (Southwest) | 65.4 | 1,286 | 28.2 | 0 | 37.2 | |
| Residential | West | Truck Delivery[1] | 70.7/67.0[2] | 1,395 | 28.9 | 3[3] | 38.8/35.1[2] | 54.8/53.6[2] |
| | | Auto Parking | 64.2/61.7[2] | 215 | 12.7 | 0 | 51.5/49.0[2] | |
| | | Truck Parking | 60.4/57.4[2] | 465 | 19.4 | 0 | 41.0/38.0[2] | |
| | | HVAC (Northwest) | 65.4 | 360 | 17.1 | 0 | 48.3 | |
| | | HVAC (Northeast) | 65.4 | 2,345 | 33.4 | 0 | 32.0 | |
| | | HVAC (Southeast) | 65.4 | 2,340 | 33.4 | 0 | 32.0 | |
| | | HVAC (Southwest) | 65.4 | 350 | 16.9 | 0 | 48.5 | |

Source: Compiled by LSA (2023).

[1] Truck delivery and truck loading and unloading activities.

[2] Daytime/nighttime noise levels.

[3] The proposed industrial building would provide a noise level reduction of 3 dBA because the proposed industrial building would partially shield truck delivery and truck loading/unloading activities.

dBA = A-weighted decibels

ft = feet

HVAC = heating, ventilation, and air conditioning

$L_{eq}$ = equivalent continuous sound level

$L_{max}$ = maximum instantaneous noise level

to the human ear in an outdoor environment. In addition, daytime and nighttime stationary noise levels of 54.8 and 53.6 dBA $L_{eq}$ would not exceed the City's exterior daytime and nighttime maximum noise standards of 75 dBA and 65 dBA, respectively, for residential land uses. Therefore, noise generated from project operations would not be perceptible at the residential property line west of the project site, and no noise reduction measures are required.

**Commercial and Industrial Land Uses.** Table R shows that the combined stationary noise levels would reach up to 65.3 and 62.3 dBA $L_{eq}$ at the closest commercial and industrial property lines, respectively, to the south. These noise levels would not exceed the City's exterior anytime noise standard of 75 dBA for commercial and industrial uses. Therefore, no noise impacts from project operations would occur at commercial and industrial properties adjacent to the project site, and no noise reduction measures are required.

### Long-Term Vibration Impacts

The proposed project would not generate vibration. In addition, vibration levels generated from project-related traffic on the adjacent roadways (Hathaway Street, Ramsey Street, and other roadways in the project area) are unusual for on-road vehicles because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. Therefore, no vibration impacts from project-related operations would occur, and no vibration reduction measures are required.

## REGULATORY COMPLIANCE MEASURES

The following regulatory measure would minimize short-term, construction-related noise impacts resulting from the proposed project:

- The construction contractor shall limit construction-related activities to between the hours of 7:00 a.m. and 6:00 p.m. No construction shall be permitted outside of these hours.

## REDUCTION MEASURES

### Short-Term Construction Noise Impacts

No noise reduction measures are required.

### Short-Term Construction Vibration Impacts

No vibration reduction measures are required.

### Long-Term Aircraft Noise Impacts

No noise reduction measures are required.

### Long-Term Traffic Noise Impacts

No noise reduction measures are required.

### Long-Term Stationary Noise Impacts

No noise reduction measures are required.

## Long-Term Vibration Impacts

No vibration reduction measures are required.

Attachments: A: References
B: Figures 1 through 3
C: Long-Term Noise Level Measurement Results
D: FHWA Highway Traffic Noise Model Printouts
E: HVAC Specifications

# ATTACHMENT A

# REFERENCES

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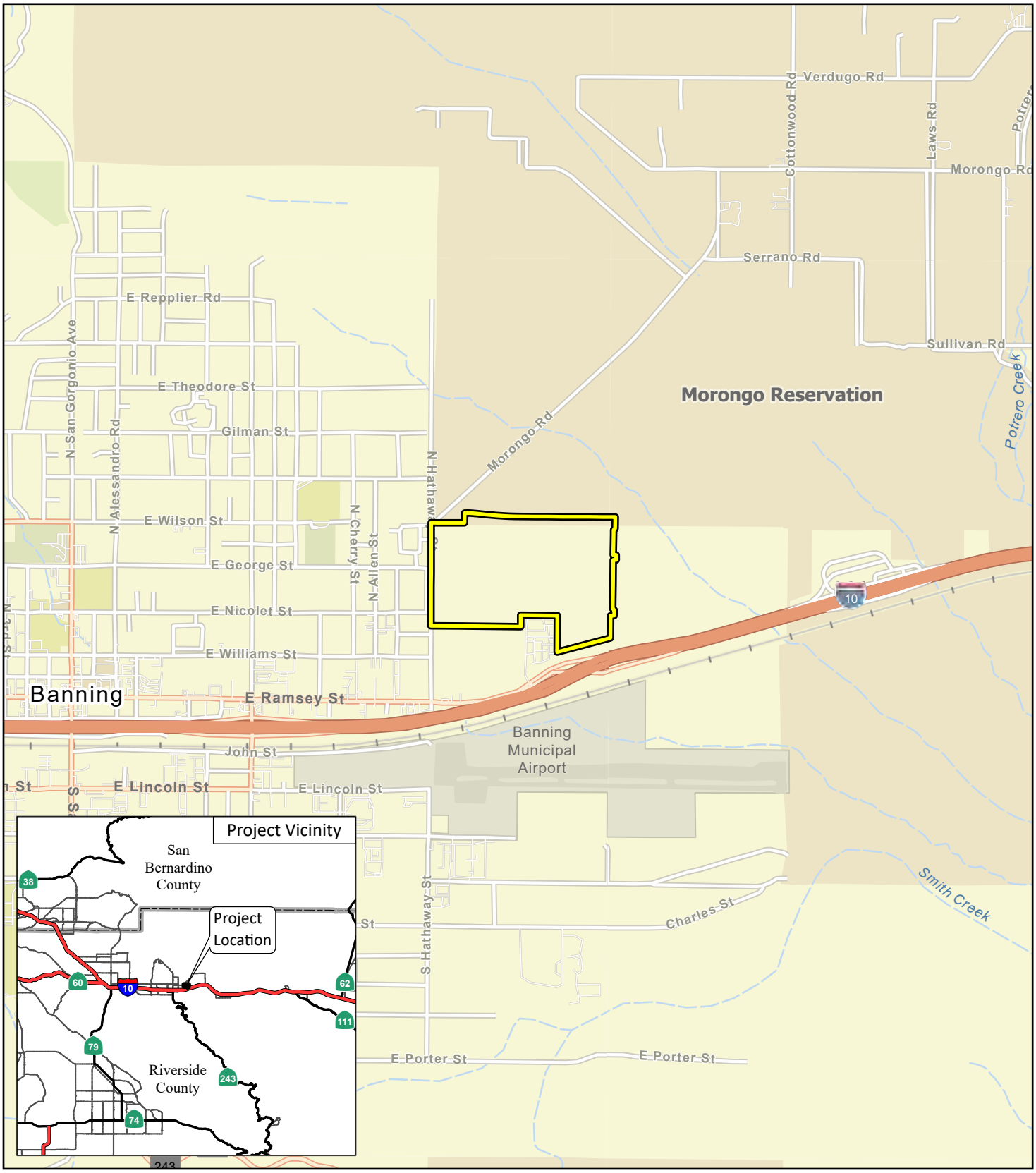
# ATTACHMENT B

# FIGURES 1 THROUGH 3




LEGEND

FIGURE 1

LSA

N

0 1000 2000

FEET

SOURCE: Esri (2023)

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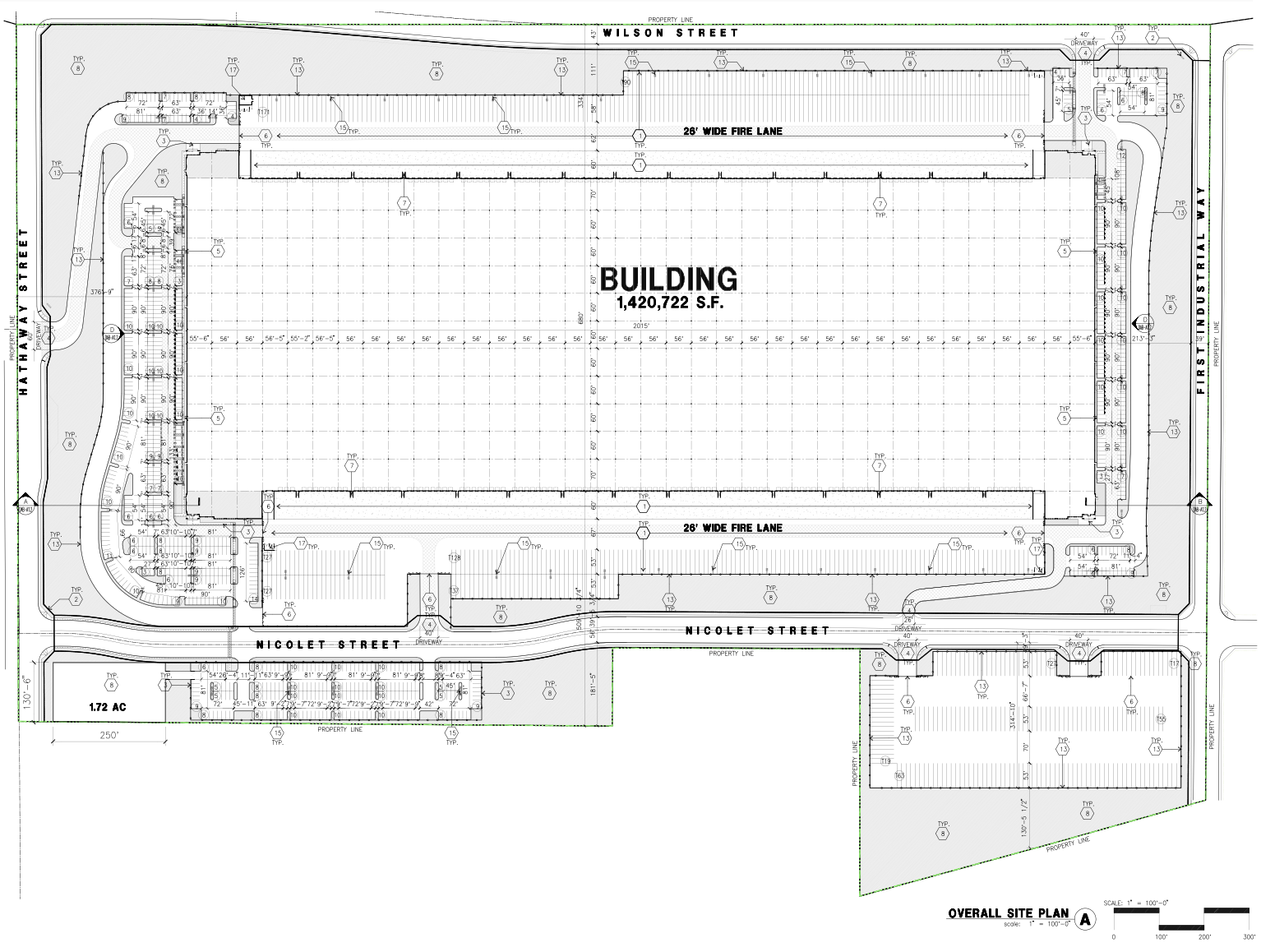
*First Hathaway Logistics Project*

Regional and Project Location




LSA

FIGURE 2

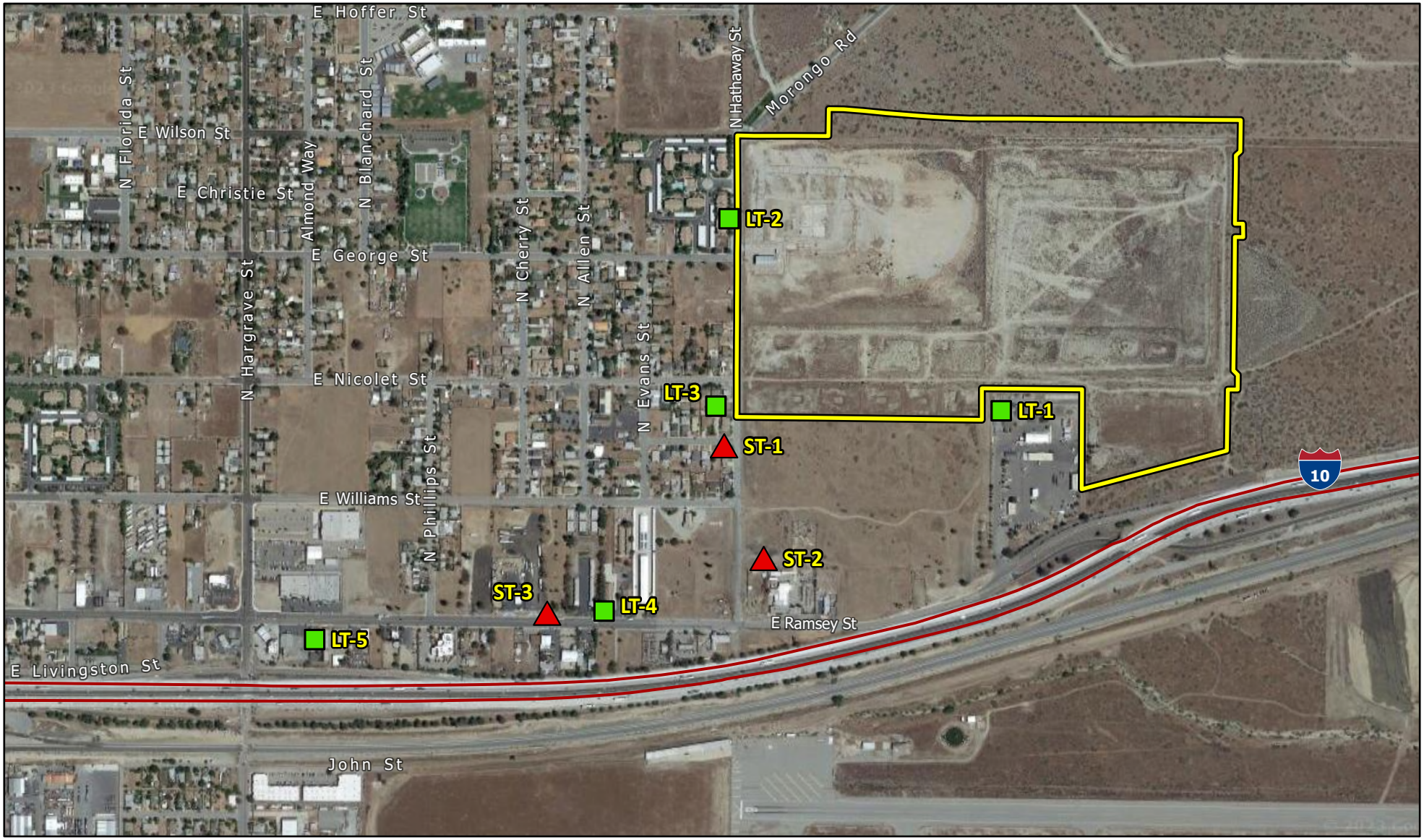
0 200 400
FEET

SOURCE: HPA Architecture

*First Hathaway Logistics Project*

Site Plan

I:\FRT2102\G\Site_Plan.ai (3/6/2023)




LSA

Project Site

Short-term Noise Monitoring

Long-term Noise Monitoring

FIGURE 3

0 375 750

FEET

SOURCE: Google Imagery (2022)

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*First Hathaway Logistics Project*

Noise Monitoring Locations

# ATTACHMENT C

# NOISE LEVEL MEASUREMENT RESULTS

# Noise Measurement Survey

Project Number: FRT2102 Test Personnel: Corey Knips
Project Name: First Hathaway Equipment: Larson Davis 831

Site Number: ST-1 Date: 11/10/21 Time: From 12:40 p.m. To 1:00 p.m.

Site Location: 331 North Hathaway Street. On the south side of the single-family on the sidewalk north of Jacinto View Road.

Primary Noise Sources: Traffic on I-10. Some train noise.

**Measurement Results**

| | dBA |
|---|---|
| Leq | 58.7 |
| Lmax | 65.8 |
| Lmin | 54.1 |
| Lpeak | 107.1 |
| L2 | 61.6 |
| L8 | 60.7 |
| L25 | 59.5 |
| L50 | 58.4 |
| SEL | 90.0 |

Atmospheric Conditions:

| | |
|---|---|
| Maximum Wind Velocity (mph) | 12.1 |
| Average Wind Velocity (mph) | 7.8 |
| Temperature (F) | 81.0 |
| Relative Humidity (%) | 21.9 |
| Comments: | |

Comments:

Traffic Description:

| Roadway | # Lanes | Speeds | NB/EB Counts | | | SB/WB Counts | | |
|---|---|---|---|---|---|---|---|---|
| | | | Auto | MT | HT | Auto | MT | HT |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Diagram:


Location Photo:

# Noise Measurement Survey

Project Number: FRT2102 Test Personnel: Corey Knips

Project Name: First Hathaway Equipment: Larson Davis 831

Site Number: ST-2 Date: 11/10/21 Time: From 12:13 p.m. To 12:33 p.m.

Site Location: 1679 East Ramsey Street. Quality Tile Works. At the northwestern corner of the property. Approximately 15 ft north and 6 ft west of the chain-linked fence.

Primary Noise Sources: Traffic on I-10.

**Measurement Results**

| | dBA |
|---|---|
| Leq | 62.4 |
| Lmax | 66.7 |
| Lmin | 57.4 |
| Lpeak | 107.2 |
| L2 | 65.6 |
| L8 | 64.4 |
| L25 | 63.1 |
| L50 | 62.1 |
| SEL | 93.7 |

Atmospheric Conditions:

| | |
|---|---|
| Maximum Wind Velocity (mph) | 10.9 |
| Average Wind Velocity (mph) | 6.0 |
| Temperature (F) | 83.7 |
| Relative Humidity (%) | 24.3 |
| Comments: | |

Comments:

Traffic Description:

| Roadway | # Lanes | Speeds | NB/EB Counts | | | SB/WB Counts | | |
|---|---|---|---|---|---|---|---|---|
| | | | Auto | MT | HT | Auto | MT | HT |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Diagram:


Location Photo:

# Noise Measurement Survey

Project Number: FRT2102 Test Personnel: Corey Knips

Project Name: First Hathaway Equipment: Larson Davis 831

Site Number: ST-3 Date: 11/10/21 Time: From 1:31 p.m. To 1:51 p.m.

Site Location: 1233 East Ramsey Street. In front of Cruz Tires Truck Repair near the east driveway.

Primary Noise Sources: Traffic on I-10 and Ramsey Street. Some train noise. Truck idling nearby. One loud motorcycle on Ramsey Street.

**Measurement Results**

| | dBA |
|---|---|
| Leq | 64.8 |
| Lmax | 77.6 |
| Lmin | 58.2 |
| Lpeak | 98.8 |
| L2 | 71.2 |
| L8 | 67.8 |
| L25 | 65.0 |
| L50 | 63.1 |
| SEL | 95.6 |

Atmospheric Conditions:

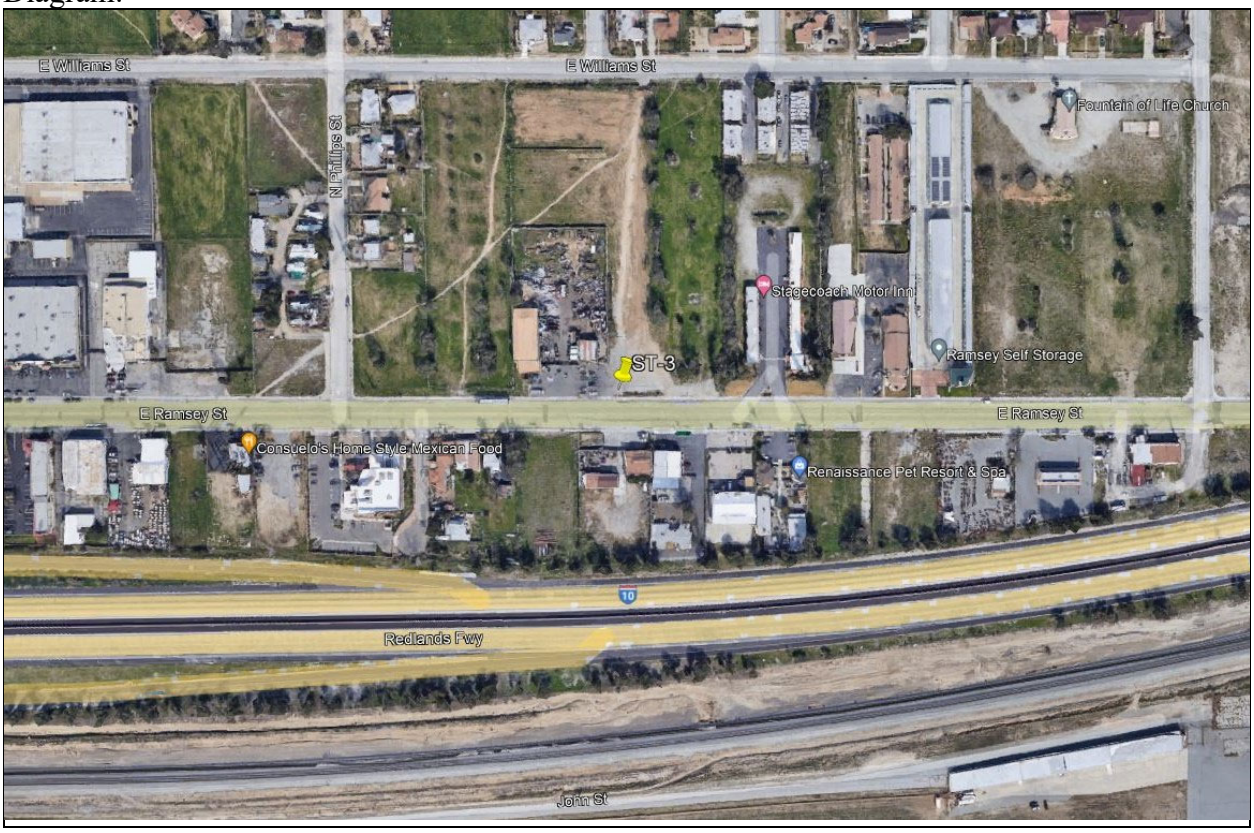
| | |
|---|---|
| Maximum Wind Velocity (mph) | 7.8 |
| Average Wind Velocity (mph) | 2.1 |
| Temperature (F) | 99.3 |
| Relative Humidity (%) | 16.8 |
| Comments: | |

Comments:

Traffic Description:

| Roadway | # Lanes | Speeds | NB/EB Counts | | | SB/WB Counts | | |
|---|---|---|---|---|---|---|---|---|
| | | | Auto | MT | HT | Auto | MT | HT |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Diagram:




Location Photo:

# Noise Measurement Survey – 24 HR

Project Number: FRT2102
Project Name: First Hathaway

Test Personnel: Corey Knips
Equipment: Spark 706RC

Site Number: LT-1 Date: 11/9/21

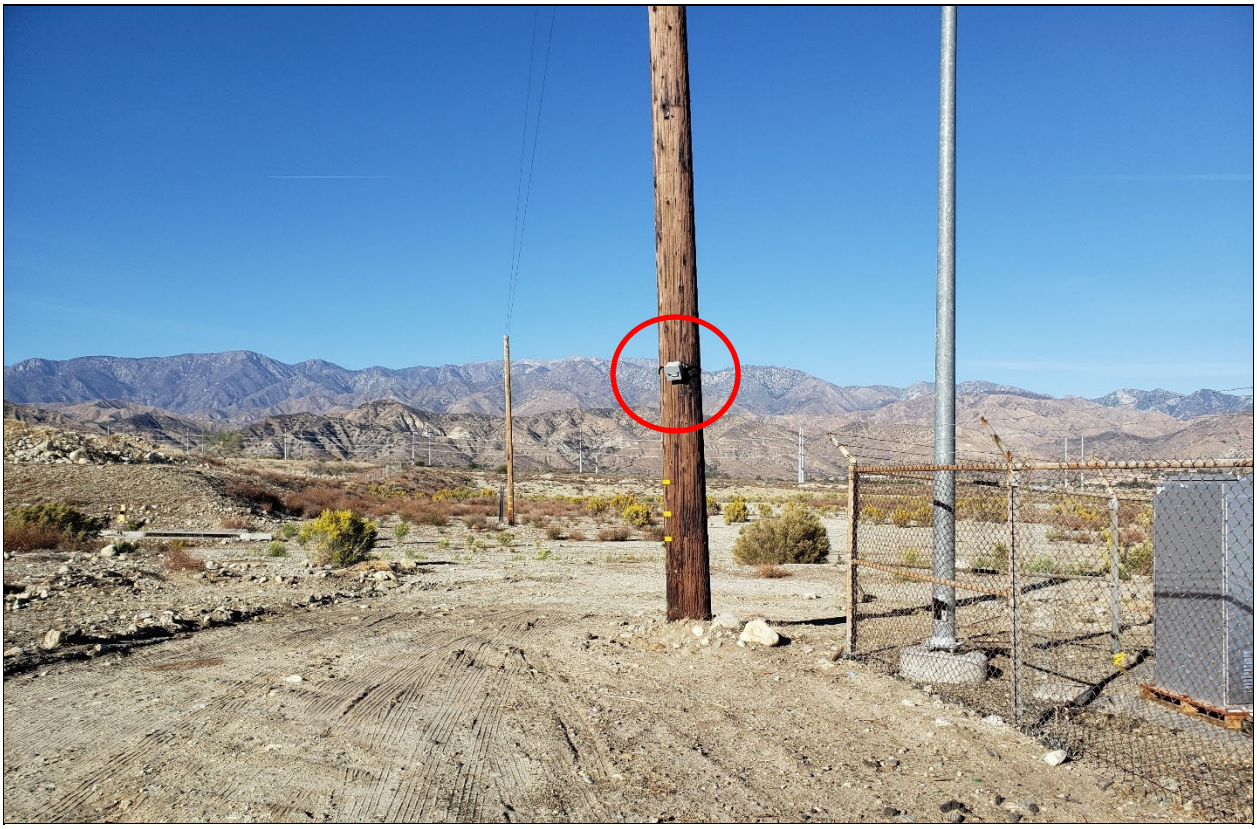
Time: From 7:00 a.m. To 7:00 a.m.

Site Location: 2033 East Ramsey Street. Caltrans Banning Station. At the northwestern corner of the facility on a powerline pole.

Primary Noise Sources: Traffic on I-10 and Ramsey Street.

Comments:

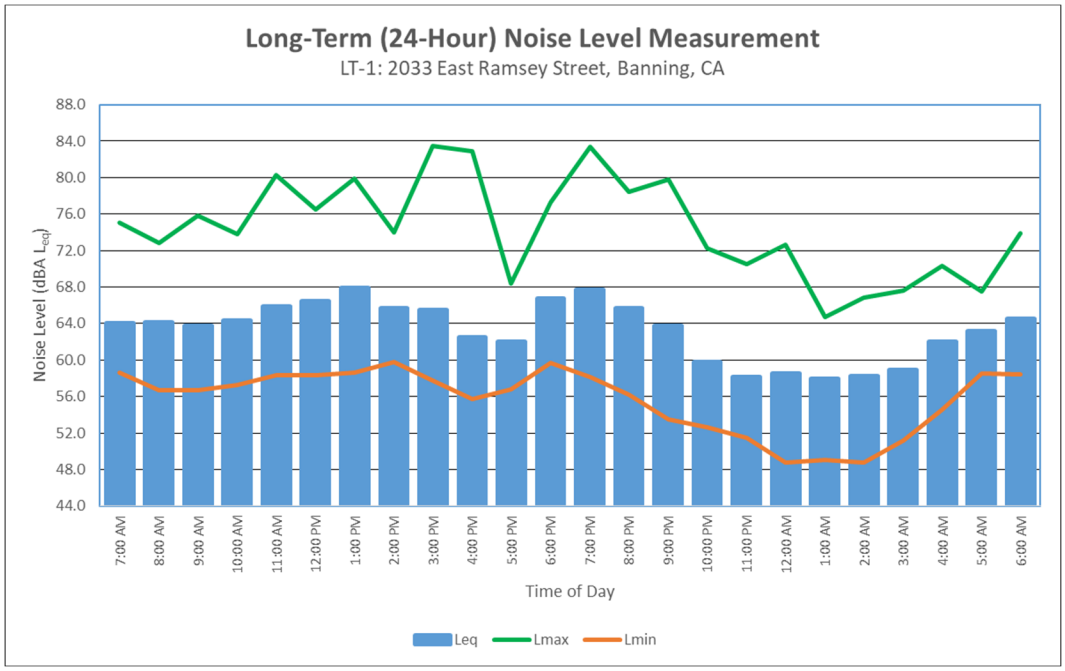
Photo:



## Long-Term (24-Hour) Noise Level Measurement Results at LT-1

| Start Time | Date | Noise Level (dBA) | | |
|---|---|---|---|---|
| | | $L_{eq}$ | $L_{max}$ | $L_{min}$ |
| 7:00 AM | 11/9/21 | 64.1 | 75.1 | 58.6 |
| 8:00 AM | 11/9/21 | 64.2 | 72.8 | 56.7 |
| 9:00 AM | 11/9/21 | 63.8 | 75.8 | 56.7 |
| 10:00 AM | 11/9/21 | 64.4 | 73.8 | 57.3 |
| 11:00 AM | 11/9/21 | 65.9 | 80.3 | 58.3 |
| 12:00 PM | 11/9/21 | 66.4 | 76.5 | 58.3 |
| 1:00 PM | 11/9/21 | 67.9 | 79.9 | 58.6 |
| 2:00 PM | 11/9/21 | 65.6 | 74.0 | 59.8 |
| 3:00 PM | 11/9/21 | 65.5 | 83.5 | 57.8 |
| 4:00 PM | 11/9/21 | 62.5 | 82.9 | 55.7 |
| 5:00 PM | 11/9/21 | 62.0 | 68.4 | 56.8 |
| 6:00 PM | 11/9/21 | 66.8 | 77.3 | 59.7 |
| 7:00 PM | 11/9/21 | 67.7 | 83.4 | 58.1 |
| 8:00 PM | 11/9/21 | 65.7 | 78.4 | 56.2 |
| 9:00 PM | 11/9/21 | 63.8 | 79.8 | 53.5 |
| 10:00 PM | 11/9/21 | 59.8 | 72.3 | 52.6 |
| 11:00 PM | 11/9/21 | 58.1 | 70.5 | 51.5 |
| 12:00 AM | 11/10/21 | 58.5 | 72.6 | 48.8 |
| 1:00 AM | 11/10/21 | 57.9 | 64.7 | 49.1 |
| 2:00 AM | 11/10/21 | 58.3 | 66.8 | 48.8 |
| 3:00 AM | 11/10/21 | 58.9 | 67.6 | 51.2 |
| 4:00 AM | 11/10/21 | 62.0 | 70.3 | 54.6 |
| 5:00 AM | 11/10/21 | 63.1 | 67.5 | 58.5 |
| 6:00 AM | 11/10/21 | 64.5 | 73.9 | 58.4 |

Source: Compiled by LSA Associates, Inc. (2022).
dBA = A-weighted decibel
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level
$L_{min}$ = minimum measured sound level



# Noise Measurement Survey – 24 HR

Project Number: FRT2102
Project Name: First Hathaway

Test Personnel: Corey Knips
Equipment: Spark 706RC

Site Number: LT-2 Date: 11/9/21

Time: From 7:00 a.m. To 7:00 a.m.

Site Location: 555 North Hathaway Street. On a light pole. Approximately 24 ft from Hathaway Street centerline.

Primary Noise Sources: Traffic on Hathaway Street.

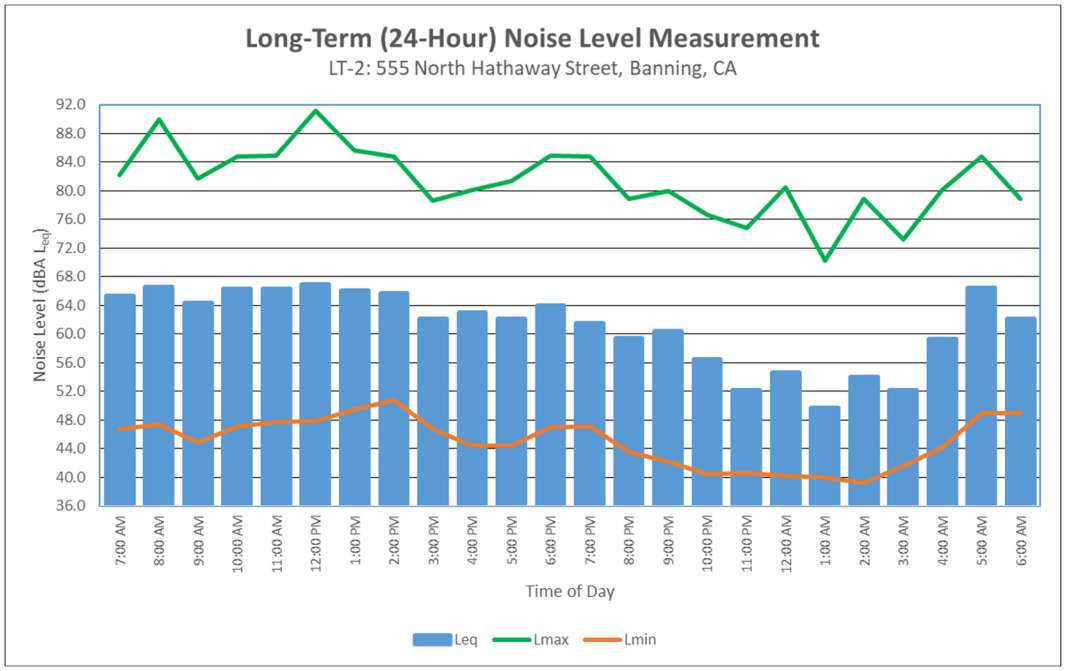
Comments:

Photo:

## Long-Term (24-Hour) Noise Level Measurement Results at LT-2

| Start Time | Date | Noise Level (dBA) | | |
|---|---|---|---|---|
| | | $L_{eq}$ | $L_{max}$ | $L_{min}$ |
| 7:00 AM | 11/9/21 | 65.3 | 82.2 | 46.7 |
| 8:00 AM | 11/9/21 | 66.5 | 89.9 | 47.4 |
| 9:00 AM | 11/9/21 | 64.4 | 81.7 | 44.9 |
| 10:00 AM | 11/9/21 | 66.3 | 84.7 | 47.1 |
| 11:00 AM | 11/9/21 | 66.3 | 84.9 | 47.7 |
| 12:00 PM | 11/9/21 | 66.9 | 91.2 | 47.9 |
| 1:00 PM | 11/9/21 | 66.1 | 85.6 | 49.5 |
| 2:00 PM | 11/9/21 | 65.7 | 84.8 | 50.8 |
| 3:00 PM | 11/9/21 | 62.1 | 78.6 | 46.8 |
| 4:00 PM | 11/9/21 | 63.0 | 80.1 | 44.4 |
| 5:00 PM | 11/9/21 | 62.1 | 81.3 | 44.4 |
| 6:00 PM | 11/9/21 | 64.0 | 84.9 | 47.0 |
| 7:00 PM | 11/9/21 | 61.5 | 84.7 | 47.1 |
| 8:00 PM | 11/9/21 | 59.4 | 78.9 | 43.5 |
| 9:00 PM | 11/9/21 | 60.4 | 79.9 | 42.2 |
| 10:00 PM | 11/9/21 | 56.4 | 76.6 | 40.5 |
| 11:00 PM | 11/9/21 | 52.1 | 74.8 | 40.6 |
| 12:00 AM | 11/10/21 | 54.6 | 80.4 | 40.2 |
| 1:00 AM | 11/10/21 | 49.7 | 70.2 | 40.0 |
| 2:00 AM | 11/10/21 | 54.0 | 78.9 | 39.3 |
| 3:00 AM | 11/10/21 | 52.2 | 73.2 | 41.6 |
| 4:00 AM | 11/10/21 | 59.3 | 80.1 | 44.2 |
| 5:00 AM | 11/10/21 | 66.4 | 84.7 | 49.0 |
| 6:00 AM | 11/10/21 | 62.1 | 78.9 | 48.9 |

Source: Compiled by LSA Associates, Inc. (2022).
dBA = A-weighted decibel
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level
$L_{min}$ = minimum measured sound level



# Noise Measurement Survey – 24 HR

Project Number: FRT2102
Project Name: First Hathaway

Test Personnel: Corey Knips
Equipment: Spark 706RC

Site Number: LT-3 Date: 11/9/21

Time: From 7:00 a.m. To 7:00 a.m.

Site Location: 1582 East Nicolet Street. In front of a single-family residence. On a powerline pole. Approximately 25 ft from Nicolet Street centerline.

Primary Noise Sources: Traffic on Hathaway Street and light traffic on Nicolet Street.

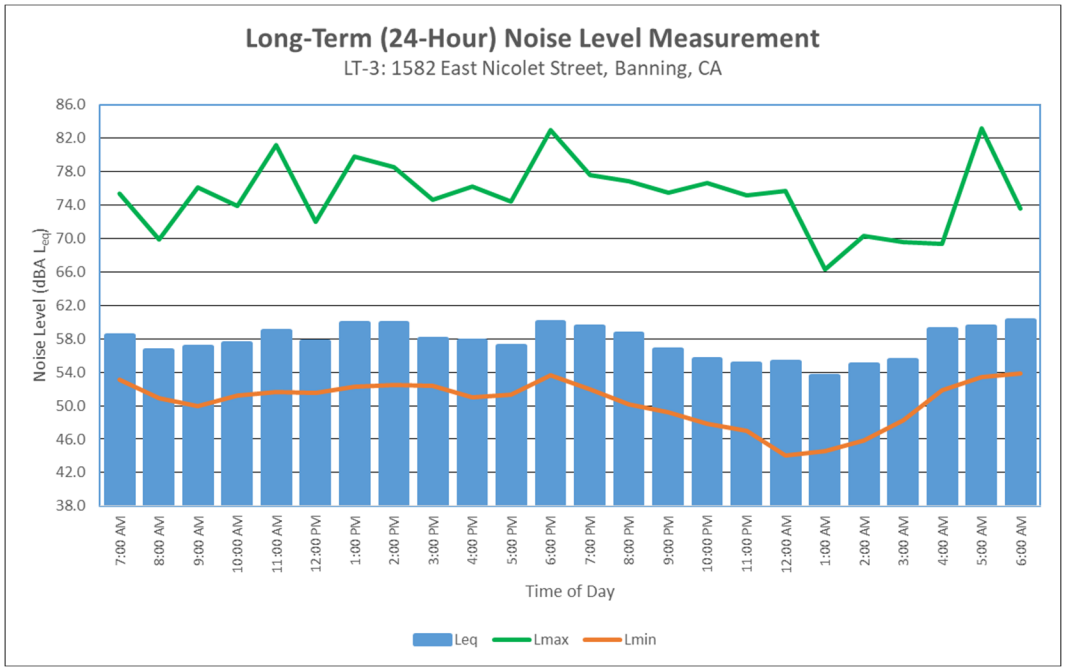
Comments:

Photo:

## Long-Term (24-Hour) Noise Level Measurement Results at LT-3

| Start Time | Date | Noise Level (dBA) | | |
|---|---|---|---|---|
| | | $L_{eq}$ | $L_{max}$ | $L_{min}$ |
| 7:00 AM | 11/9/21 | 58.4 | 75.4 | 53.1 |
| 8:00 AM | 11/9/21 | 56.6 | 69.9 | 50.9 |
| 9:00 AM | 11/9/21 | 57.0 | 76.1 | 50.0 |
| 10:00 AM | 11/9/21 | 57.5 | 73.9 | 51.2 |
| 11:00 AM | 11/9/21 | 59.0 | 81.2 | 51.6 |
| 12:00 PM | 11/9/21 | 57.7 | 72.0 | 51.5 |
| 1:00 PM | 11/9/21 | 59.9 | 79.8 | 52.3 |
| 2:00 PM | 11/9/21 | 59.9 | 78.5 | 52.5 |
| 3:00 PM | 11/9/21 | 58.0 | 74.6 | 52.4 |
| 4:00 PM | 11/9/21 | 57.7 | 76.2 | 51.0 |
| 5:00 PM | 11/9/21 | 57.1 | 74.4 | 51.3 |
| 6:00 PM | 11/9/21 | 60.0 | 83.0 | 53.6 |
| 7:00 PM | 11/9/21 | 59.5 | 77.6 | 52.0 |
| 8:00 PM | 11/9/21 | 58.6 | 76.8 | 50.2 |
| 9:00 PM | 11/9/21 | 56.7 | 75.5 | 49.2 |
| 10:00 PM | 11/9/21 | 55.6 | 76.6 | 47.8 |
| 11:00 PM | 11/9/21 | 55.0 | 75.1 | 47.0 |
| 12:00 AM | 11/10/21 | 55.2 | 75.7 | 44.0 |
| 1:00 AM | 11/10/21 | 53.5 | 66.3 | 44.6 |
| 2:00 AM | 11/10/21 | 54.9 | 70.3 | 45.8 |
| 3:00 AM | 11/10/21 | 55.5 | 69.6 | 48.3 |
| 4:00 AM | 11/10/21 | 59.1 | 69.4 | 51.8 |
| 5:00 AM | 11/10/21 | 59.5 | 83.2 | 53.4 |
| 6:00 AM | 11/10/21 | 60.2 | 73.6 | 53.9 |

Source: Compiled by LSA Associates, Inc. (2022).
dBA = A-weighted decibel
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level
$L_{min}$ = minimum measured sound level



# Noise Measurement Survey – 24 HR

Project Number: FRT2102
Project Name: First Hathaway

Test Personnel: Corey Knips
Equipment: Spark 706RC

Site Number: LT-4 Date: 11/9/21

Time: From 7:00 a.m. To 7:00 a.m.

Site Location: 1387 East Ramsey Street. Calvary Church of God In Christ. On the north side of Ramsey Street. On a powerline pole. Approximately 25 ft from Ramsey Street centerline.

Primary Noise Sources: Traffic on I-10 and Ramsey Street.

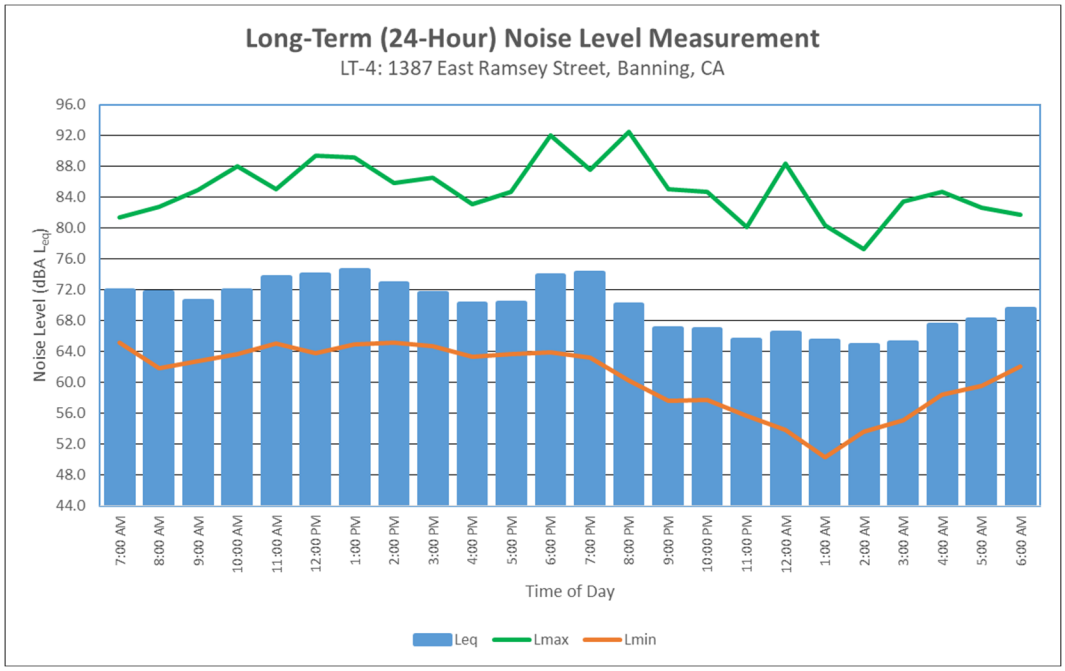
Comments:

Photo:

## Long-Term (24-Hour) Noise Level Measurement Results at LT-4

| Start Time | Date | Noise Level (dBA) | | |
|---|---|---|---|---|
| | | $L_{eq}$ | $L_{max}$ | $L_{min}$ |
| 7:00 AM | 11/9/21 | 72.0 | 81.4 | 65.2 |
| 8:00 AM | 11/9/21 | 71.7 | 82.8 | 61.9 |
| 9:00 AM | 11/9/21 | 70.6 | 84.9 | 62.8 |
| 10:00 AM | 11/9/21 | 71.9 | 88.0 | 63.7 |
| 11:00 AM | 11/9/21 | 73.7 | 85.0 | 65.0 |
| 12:00 PM | 11/9/21 | 74.0 | 89.4 | 63.8 |
| 1:00 PM | 11/9/21 | 74.5 | 89.1 | 64.9 |
| 2:00 PM | 11/9/21 | 72.9 | 85.8 | 65.2 |
| 3:00 PM | 11/9/21 | 71.6 | 86.5 | 64.7 |
| 4:00 PM | 11/9/21 | 70.2 | 83.1 | 63.3 |
| 5:00 PM | 11/9/21 | 70.3 | 84.7 | 63.7 |
| 6:00 PM | 11/9/21 | 73.8 | 92.0 | 63.9 |
| 7:00 PM | 11/9/21 | 74.2 | 87.6 | 63.2 |
| 8:00 PM | 11/9/21 | 70.0 | 92.5 | 60.3 |
| 9:00 PM | 11/9/21 | 67.0 | 85.1 | 57.6 |
| 10:00 PM | 11/9/21 | 66.9 | 84.7 | 57.7 |
| 11:00 PM | 11/9/21 | 65.5 | 80.1 | 55.7 |
| 12:00 AM | 11/10/21 | 66.5 | 88.3 | 53.9 |
| 1:00 AM | 11/10/21 | 65.4 | 80.4 | 50.3 |
| 2:00 AM | 11/10/21 | 64.8 | 77.3 | 53.6 |
| 3:00 AM | 11/10/21 | 65.2 | 83.5 | 55.1 |
| 4:00 AM | 11/10/21 | 67.4 | 84.7 | 58.4 |
| 5:00 AM | 11/10/21 | 68.1 | 82.6 | 59.6 |
| 6:00 AM | 11/10/21 | 69.5 | 81.7 | 62.1 |

Source: Compiled by LSA Associates, Inc. (2022).
dBA = A-weighted decibel
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level
$L_{min}$ = minimum measured sound level



# Noise Measurement Survey – 24 HR

Project Number: FRT2102
Project Name: First Hathaway

Test Personnel: Corey Knips
Equipment: Spark 706RC

Site Number: LT-5 Date: 11/9/21

Time: From 7:00 a.m. To 7:00 a.m.

Site Location: 932 East Ramsey Street. Country Inn. On the third palm tree closest to Ramsey Street. Approximately 55 ft from Ramsey Street centerline.

Primary Noise Sources: Traffic on I-10 and Ramsey Street.

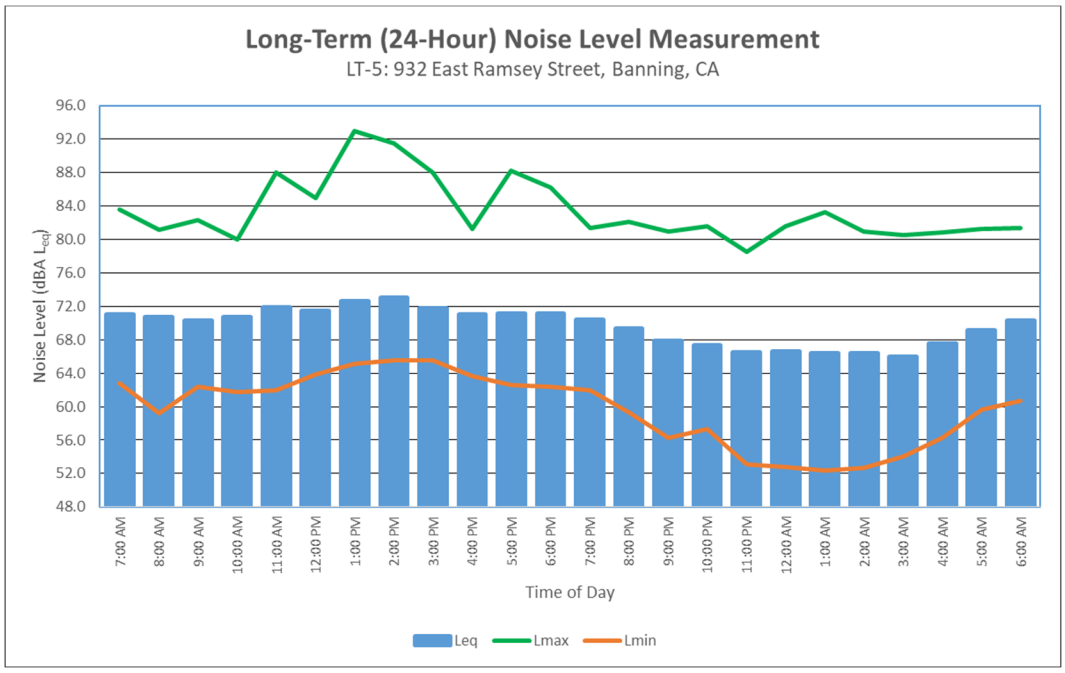
Comments:

Photo:

## Long-Term (24-Hour) Noise Level Measurement Results at LT-4

| Start Time | Date | Noise Level (dBA) | | |
|---|---|---|---|---|
| | | $L_{eq}$ | $L_{max}$ | $L_{min}$ |
| 7:00 AM | 11/9/21 | 72.0 | 81.4 | 65.2 |
| 8:00 AM | 11/9/21 | 71.7 | 82.8 | 61.9 |
| 9:00 AM | 11/9/21 | 70.6 | 84.9 | 62.8 |
| 10:00 AM | 11/9/21 | 71.9 | 88.0 | 63.7 |
| 11:00 AM | 11/9/21 | 73.7 | 85.0 | 65.0 |
| 12:00 PM | 11/9/21 | 74.0 | 89.4 | 63.8 |
| 1:00 PM | 11/9/21 | 74.5 | 89.1 | 64.9 |
| 2:00 PM | 11/9/21 | 72.9 | 85.8 | 65.2 |
| 3:00 PM | 11/9/21 | 71.6 | 86.5 | 64.7 |
| 4:00 PM | 11/9/21 | 70.2 | 83.1 | 63.3 |
| 5:00 PM | 11/9/21 | 70.3 | 84.7 | 63.7 |
| 6:00 PM | 11/9/21 | 73.8 | 92.0 | 63.9 |
| 7:00 PM | 11/9/21 | 74.2 | 87.6 | 63.2 |
| 8:00 PM | 11/9/21 | 70.0 | 92.5 | 60.3 |
| 9:00 PM | 11/9/21 | 67.0 | 85.1 | 57.6 |
| 10:00 PM | 11/9/21 | 66.9 | 84.7 | 57.7 |
| 11:00 PM | 11/9/21 | 65.5 | 80.1 | 55.7 |
| 12:00 AM | 11/10/21 | 66.5 | 88.3 | 53.9 |
| 1:00 AM | 11/10/21 | 65.4 | 80.4 | 50.3 |
| 2:00 AM | 11/10/21 | 64.8 | 77.3 | 53.6 |
| 3:00 AM | 11/10/21 | 65.2 | 83.5 | 55.1 |
| 4:00 AM | 11/10/21 | 67.4 | 84.7 | 58.4 |
| 5:00 AM | 11/10/21 | 68.1 | 82.6 | 59.6 |
| 6:00 AM | 11/10/21 | 69.5 | 81.7 | 62.1 |

Source: Compiled by LSA Associates, Inc. (2022).
dBA = A-weighted decibel
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level
$L_{min}$ = minimum measured sound level



# ATTACHMENT D

# FHWA HIGHWAY TRAFFIC NOISE MODEL PRINTOUTS

TABLE Existing (2021)-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street South of Wilson Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 490  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.46

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 55.7 |

---

TABLE Existing (2021)-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street North of George Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2280  SPEED (MPH): 40  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.14

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 70.4 | 147.2 |

---

TABLE Existing (2021)-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2300  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 69.4 | 147.5 |

---

TABLE Existing (2021)-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2340  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 70.0 | 149.1 |

---

TABLE Existing (2021)-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2285  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 7  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 68.3 | 146.5 |

---

TABLE Existing (2021)-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2300  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 69.4 | 147.5 |

---

TABLE Existing (2021)-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4000  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.72

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 108.3 |

---

TABLE Existing (2021)-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5090  SPEED (MPH): 25  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 59.9 | 127.0 |

---

TABLE Existing (2021)-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Ramsey and I-10 WB
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8555  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 76.9 | 164.1 | 352.8 |

---

TABLE Existing (2021)-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave between I-10 WB and I-10 EB
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6495  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 64.4 | 136.8 | 293.7 |

---

TABLE Existing (2021)-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: George Street West of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 480  SPEED (MPH): 25  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.51

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Existing (2021)-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 910  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.29

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Existing (2021)-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 530  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.94

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Existing (2021)-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1150  SPEED (MPH): 25  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.31

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Existing (2021)-15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 490  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.60

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Existing (2021)-16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4690  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 53.6 | 110.9 | 236.7 |

---

TABLE Existing (2021)-17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4575  SPEED (MPH): 40  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.32

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 52.9 | 109.1 | 232.8 |

---

TABLE Existing (2021)-18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street East of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2440  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.59

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 72.9 | 153.7 |

---

TABLE Existing (2021) With Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street South of Wilson Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 720  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 70.3 |

---

TABLE Existing (2021) With Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street North of George Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2520  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 74.9 | 157.2 |

---

TABLE Existing (2021) With Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2915  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.69

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 80.9 | 172.5 |

---

TABLE Existing (2021) With Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3640  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 93.4 | 199.9 |

---

TABLE Existing (2021) With Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3555  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 7  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.11

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 91.5 | 196.6 |

---

TABLE Existing (2021) With Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2915  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.69

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 80.9 | 172.5 |

---

TABLE Existing (2021) With Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4270  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.01

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 53.6 | 113.1 |

---

TABLE Existing (2021) With Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5360  SPEED (MPH): 25  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 61.9 | 131.4 |

---

TABLE Existing (2021) With Project-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Ramsey and I-10 WB
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9405  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 81.8 | 174.8 | 375.8 |

---

TABLE Existing (2021) With Project-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave between I-10 WB and I-10 EB
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6810  SPEED (MPH): 40  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.46

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 66.4 | 141.1 | 303.1 |

---

TABLE Existing (2021) With Project-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: George Street West of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 580  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.34

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Existing (2021) With Project-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 940  SPEED (MPH): 25  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Existing (2021) With Project-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 830 SPEED (MPH): 25 GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.89

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Existing (2021) With Project-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1180  SPEED (MPH): 25  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.42

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Existing (2021) With Project-15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 520 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Existing (2021) With Project-16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4770  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.50

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 54.2 | 112.1 | 239.3 |

---

TABLE Existing (2021) With Project-17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5240  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.91

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 57.4 | 119.2 | 254.7 |

---

TABLE Existing (2021) With Project-18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street East of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Existing (2021) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3040  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.54

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 83.8 | 177.7 |

---

TABLE Opening Year (2023) -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street South of Wilson Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2070  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 66.3 | 138.2 |

---

TABLE Opening Year (2023) -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street North of George Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2380  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 72.3 | 151.4 |

---

TABLE Opening Year (2023) -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2400  SPEED (MPH): 40  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.84

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 71.4 | 151.7 |

---

TABLE Opening Year (2023) -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2440  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 72.0 | 153.3 |

---

TABLE Opening Year (2023) -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2375  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 7  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 70.1 | 150.3 |

---

TABLE Opening Year (2023) -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2400  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 71.4 | 151.7 |

---

TABLE Opening Year (2023) -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4130  SPEED (MPH): 25  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 52.4 | 110.6 |

---

TABLE Opening Year (2023) -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5005 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.69

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 59.3 | 125.6 |

---

TABLE Opening Year (2023) -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Ramsey and I-10 WB
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8610  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.48

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 77.3 | 164.8 | 354.3 |

---

TABLE Opening Year (2023) -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave between I-10 WB and I-10 EB
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6760  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 66.1 | 140.4 | 301.6 |

---

TABLE Opening Year (2023) -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: George Street West of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 510  SPEED (MPH): 25  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.78

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Opening Year (2023) -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 940  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.43

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Opening Year (2023) -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 520  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.86

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Opening Year (2023) -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1200  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.49

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Opening Year (2023) -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 475  SPEED (MPH): 25  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Opening Year (2023) -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4880  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 54.9 | 113.8 | 243.0 |

---

TABLE Opening Year (2023) -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4475  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.22

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 107.6 | 229.5 |

---

TABLE Opening Year (2023) -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street East of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023)

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2010  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 64.6 | 135.3 |

---

TABLE Opening Year (2023) With Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street South of Wilson Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2300 SPEED (MPH): 40 GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.18

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 70.8 | 148.0 |

---

TABLE Opening Year (2023) With Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street North of George Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2620  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 76.7 | 161.2 |

---

TABLE Opening Year (2023) With Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3015  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 82.7 | 176.4 |

---

TABLE Opening Year (2023) With Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3740  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.86

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 95.1 | 203.5 |

---

TABLE Opening Year (2023) With Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3645  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 7  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.22

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 93.0 | 199.9 |

---

TABLE Opening Year (2023) With Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3015  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 82.7 | 176.4 |

---

TABLE Opening Year (2023) With Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4430  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.16

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 54.8 | 115.9 |

---

TABLE Opening Year (2023) With Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5560  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.15

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 63.4 | 134.6 |

---

TABLE Opening Year (2023) With Project-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Ramsey and I-10 WB
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9750  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.02

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 83.8 | 179.0 | 384.9 |

---

TABLE Opening Year (2023) With Project-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave between I-10 WB and I-10 EB
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7075 SPEED (MPH): 40 GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.63

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 68.0 | 144.7 | 310.9 |

---

TABLE Opening Year (2023) With Project-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: George Street West of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 610  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.55

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Opening Year (2023) With Project-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 970  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.57

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Opening Year (2023) With Project-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 850 SPEED (MPH): 25 GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.00

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Opening Year (2023) With Project-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1230  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.60

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 0.0 |

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TABLE Opening Year (2023) With Project-15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 535 SPEED (MPH): 25 GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.98

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 0.0 |

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TABLE Opening Year (2023) With Project-16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4960  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.67

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 55.5 | 115.0 | 245.6 |

---

TABLE Opening Year (2023) With Project-17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5425 SPEED (MPH): 40 GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.06

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 58.6 | 122.0 | 260.7 |

---

TABLE Opening Year (2023) With Project-18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street East of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Opening Year (2023) With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3140  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.68

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 85.6 | 181.5 |

---

TABLE Cumulative (2023) Without Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street South of Wilson Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3640  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.17

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 94.5 | 200.3 |

---

TABLE Cumulative (2023) Without Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street North of George Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3920  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.49

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 99.1 | 210.3 |

---

TABLE Cumulative (2023) Without Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3930  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.99

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 98.3 | 210.4 |

---

TABLE Cumulative (2023) Without Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3940 SPEED (MPH): 40 GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.08

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 98.4 | 210.7 |

---

TABLE Cumulative (2023) Without Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3845 SPEED (MPH): 40 GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 7 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.46

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 96.4 | 207.2 |

---

TABLE Cumulative (2023) Without Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3930 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 98.3 | 210.4 |

---

TABLE Cumulative (2023) Without Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4280  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.02

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 53.6 | 113.3 |

---

TABLE Cumulative (2023) Without Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6280  SPEED (MPH): 25  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.68

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 68.6 | 145.9 |

---

TABLE Cumulative (2023) Without Project-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Ramsey and I-10 WB
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10930  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 90.3 | 193.1 | 415.3 |

---

TABLE Cumulative (2023) Without Project-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave between I-10 WB and I-10 EB
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8775 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 78.2 | 166.9 | 358.8 |

---

TABLE Cumulative (2023) Without Project-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: George Street West of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 540 SPEED (MPH): 25 GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.03

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Cumulative (2023) Without Project-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1030  SPEED (MPH): 25  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Cumulative (2023) Without Project-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 575 SPEED (MPH): 25 GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.30

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Cumulative (2023) Without Project-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1290  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.81

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 0.0 | 0.0 | 52.0 |

---

TABLE Cumulative (2023) Without Project-15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 565 SPEED (MPH): 25 GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.22

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Cumulative (2023) Without Project-16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5480 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 58.9 | 122.8 | 262.4 |

---

TABLE Cumulative (2023) Without Project-17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5750 SPEED (MPH): 40 GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | | | |
|---|---|---|---|
| | DAY | EVENING | NIGHT |
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.31

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 60.7 | 126.7 | 270.9 |

---

TABLE Cumulative (2023) Without Project-18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street East of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Cumulative (2023) Without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3130  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 85.4 | 181.1 |

---

TABLE Cumulative With Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street South of Wilson Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3870  SPEED (MPH): 40  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.44

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 98.3 | 208.5 |

---

TABLE Cumulative With Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street North of George Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4180  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 19  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 103.3 | 219.5 |

---

TABLE Cumulative With Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4545  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.62

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 108.2 | 231.7 |

---

TABLE Cumulative With Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5240  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 56.1 | 118.7 | 254.6 |

---

TABLE Cumulative With Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5115  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 7  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.69

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 54.4 | 116.5 | 250.5 |

---

TABLE Cumulative With Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hathaway Street Between George Street and Nicolet Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4545  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 13  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.62

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 108.2 | 231.7 |

---

TABLE Cumulative With Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Nicolet Street and Williams Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4550  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.28

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 55.8 | 117.9 |

---

TABLE Cumulative With Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Williams Street and Ramsey Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6550  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.86

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 70.5 | 150.0 |

---

TABLE Cumulative With Project-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave Street between Ramsey and I-10 WB
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11780  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 94.8 | 203.0 | 436.6 |

---

TABLE Cumulative With Project-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Hargrave between I-10 WB and I-10 EB
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9090  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 80.0 | 170.9 | 367.4 |

---

TABLE Cumulative With Project-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: George Street West of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 640  SPEED (MPH): 25  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.76

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Cumulative With Project-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1060  SPEED (MPH): 25  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.95

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Cumulative With Project-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Nicolet Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 890  SPEED (MPH): 25  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.20

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Cumulative With Project-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1320  SPEED (MPH): 25  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.91

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 52.8 |

---

TABLE Cumulative With Project-15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Williams Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 595  SPEED (MPH): 25  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 12  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 |

---

TABLE Cumulative With Project-16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street West of Hargrave Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5560  SPEED (MPH): 40  GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

| | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 59.5 | 123.9 | 265.0 |

---

TABLE Cumulative With Project-17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street Between Hargrave Street and Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6415  SPEED (MPH): 40  GRADE: .5

| TRAFFIC DISTRIBUTION PERCENTAGES | DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.79

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL | | | |
|---|---|---|---|
| 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
| 0.0 | 65.0 | 136.1 | 291.4 |

---

TABLE Cumulative With Project-18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/03/2023
ROADWAY SEGMENT: Ramsey Street East of Hathaway Street
NOTES: First Hathaway Logistics Warehouse - Cumulative With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3730  SPEED (MPH): 40  GRADE: .5

| | TRAFFIC DISTRIBUTION PERCENTAGES DAY | EVENING | NIGHT |
|---|---|---|---|
| AUTOS | 73.60 | 13.60 | 10.22 |
| M-TRUCKS | 0.90 | 0.04 | 0.90 |
| H-TRUCKS | 0.35 | 0.04 | 0.35 |

ACTIVE HALF-WIDTH (FT): 17  SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.43

| DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL 70 CNEL | 65 CNEL | 60 CNEL | 55 CNEL |
|---|---|---|---|
| 0.0 | 0.0 | 95.6 | 203.4 |

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# ATTACHMENT E

# HVAC SPECIFICATIONS

Product Catalog

# Packaged Rooftop Air Conditioners Voyager™ Light Commercial — Cooling, Gas/Electric

12.5 to 25 Tons, 60 Hz

December 2021 **RT-PRC028AH-EN**

# 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.

Voyager™ continues to provide the highest standards in quality and reliability, comfort, ease of service, and the performance of Trane light commercial products.

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

Voyager features cutting edge technologies: reliable 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 products are built to meet your needs.

## Copyright



## Trademarks



## Revision History

Updated General data—25 tons high efficiency table in General Data chapter.

# Table of Contents

# Features and Benefits

***Note:*** *Packaged Rooftop units cooling, heating capacities, and efficiencies are AHRI certified within scope of AHRI Standard 340-360 (I-P) and ANSIZ21.47 and 10 CFR Part 431 pertaining to Commercial Warm Air Furnaces (gas heating units).*

## Standard Features and Available Options

**Table 1. Voyager™ Light Commercial control features — standard and optional**

| | Standard Features | Options[a] | | |
|---|---|---|---|---|
| | | Factory Installed | Factory or Field Installed | Field Installed |
| BACnet® Communications Interface (BCI) | | | X | |
| Discharge Line Thermostat | X | | | |
| Humidity Sensor | | | | X |
| LonTalk® Communications Interface (LCI) | | | X | |
| ReliaTel™ Microprocessor Controls | X | | | |
| ReliaTel™ Options Module | | | X | |
| Thermostat | | | | X |
| Trane® Air-Fi® Wireless Communication Interface | | X | | |
| Trane® Communications Interface (TCI) | | | X | |
| Wireless Zone Sensor | | | | X |
| Zone Sensors and Remote Zone Sensors | | | | X |

(a) Refer to model number description for option availability

**Table 2. Voyager™ Light Commercial features - standard and optional**

| | Standard Features | Options[a] | | |
|---|---|---|---|---|
| | | Factory Installed | Factory or Field Installed | Field Installed |
| 1-year Limited Parts Warranty | X | | | |
| 5-year Limited Compressor Warranty | X | | | |
| 5-year Limited Heat Exchanger Warranty (12½–17½ Tons); 1 Year on 20 and 25 Tons | X | | | |
| 2-in MERV 8 Filters or 2-in MERV 13 Filters with Filter Removal Tool | | X | | |
| 2-in throwaway filters | X | | | |
| 3 Stages of Cooling Capability on 12½–20 Tons, 4 Stages of Cooling Capability on 25 Tons (High Efficiency Units Only) | X | | | |
| Anti-Short Cycle Timer | X | | | |
| Barometric Relief[b] | X | | | |
| Belt Drive Motors | X | | | |
| Clogged Filter/Fan Failure Switch | | | X | |
| $CO_2$ Sensor | | | | X |
| $CO_2$ Sensor Wiring (Wiring Only) | | X | | |
| Colored and Numbered Wiring | X | | | |
| Complete Coat™ Microchannel Condenser Coil | | X | | |
| Condensate Overflow Switch | | X | | |
| Crankcase Heaters | X | | | |
| Dedicated Airflow | X | | | |

**Table 2. Voyager™ Light Commercial features - standard and optional (continued)**

| | Standard Features | Options[a] | | |
|---|---|---|---|---|
| | | Factory Installed | Factory or Field Installed | Field Installed |
| Dehumidification (Hot Gas Reheat) | | X | | |
| Digital Display Zone Sensor | | | | X |
| Discharge Air Temperature Sensing Kit | | | X | |
| Easy Access Low Voltage Terminal Board (LTB) | X | | | |
| Economizer - Standard, Downflow | | | X | |
| Economizer - Standard, Horizontal | | | | X |
| Electric Heaters | | | X | |
| Fault Detection and Diagnostics (FDD) | | X | | |
| Foil-Faced and Edge Captured Insulation | X | | | |
| Frostat™ | | | X | |
| High and Low Static Drive Kits | | | | X |
| High Efficiency Drum and Tube Heat Exchanger | X | | | |
| High Efficiency Gas Heat with Hot Surface Ignition | X | | | |
| High Efficiency Motors | | X | | |
| High Pressure Cutout | X | | | |
| High Short Circuit Current Rated (SCCR) Electrical Subsystem | | X | | |
| Hinged Access Doors | | X | | |
| Human Interface - 5 inch Color Touchscreen | | X | | |
| IAQ Sloped Condensate Drain Pan | X | | | |
| Indoor Fan Motor Shaft Grounding Ring | | | X | |
| Liquid Line Refrigerant Drier | X | | | |
| Low Ambient Cooling to 0°F | X | | | |
| Low Leak Economizer - Downflow | | | X | |
| Low Leak Economizer - Downflow and Horizontal | | | | X |
| LP Conversion Kit | | | | X |
| Manual Outside Air Dampers | | | | X |
| Microchannel Type Condenser Coils | X | | | |
| Microchannel Type Evaporator Coils (Standard Efficiency Only) | X | | | |
| Modulating Gas Heat Furnace with a 2.5:1 Turndown Ratio | | X | | |
| Motorized Outside Air Dampers | | | | X |
| Multi-Speed Indoor Fans | | X | | |
| Multiple Zone Variable Air Volume (MZVAV) | | X | | |
| Operating Charge of R-410A | X | | | |
| Outside Air Measuring/Monitoring Control (Traq Dampers) | | | | X |
| Oversized Motors | | | X | |
| Phase Monitor | X | | | |
| Powered Exhaust | | | | X |
| Powered or Unpowered Convenience Outlet | | X | | |
| Provisions for Through-the-Base Gas Connections | X | | | |
| Quick Access Panels | X | | | |
| Quick Adjust Idler Arm Pulley | X | | | |
| Reference or Comparative Enthalpy | | | X | |

**Table 2. Voyager™ Light Commercial features - standard and optional (continued)**

| | Standard Features | Options[a] | | |
|---|---|---|---|---|
| | | Factory Installed | Factory or Field Installed | Field Installed |
| Remote Potentiometer | | | | X |
| Roof Curb (Downflow Only) | | | | X |
| Single Point Power | X | | | |
| Single Side Service | X | | | |
| Single Zone Variable Air Volume (SZ VAV) | | X | | |
| Stainless Steel Drain Pan | | X | | |
| Stainless Steel Heat Exchanger with 10 Year Warranty | | X | | |
| Standardized Components | X | | | |
| Supply and/or Return Air Smoke Detector | | X | | |
| Thermal Expansion Valve | X | | | |
| Through the Base Electrical Access | | X | | |
| Through the Base Electrical with Circuit Breaker | | X | | |
| Through the Base Electrical with Disconnect Switch | | X | | |
| Through the Base Gas Piping | | X | | |
| Tool-less Hail Guards | | | X | |
| U-shaped Airflow Pattern | X | | | |
| Variable Frequency Drive (Multispeed Indoor Fan, VAV, and Single Zone VAV) | X | | | |
| Ventilation Override Accessory | | | | X |

(a) Refer to model number description for option availability.
(b) Barometric relief comes standard with economizers.

***Note:*** *Most Factory Installed Options (FIOPS) available for Downflow Air Discharge units only. Please verify with ordering system for availability.*

# Standard Features

## Anti-Short Cycle Timer

Provides a 3 minute minimum “ON” time and 3 minute “OFF” time for compressors to enhance compressor reliability by assuring proper oil return.

## Barometric Relief

Designed to be used on downflow units, barometric relief is an unpowered means of relieving excess building pressure.

## Colored and Numbered Wiring

Save time and money tracing wires and diagnosing the unit.

## Compressors

Voyager contains the best compressor technology available to achieve the highest possible performance. Dual compressors are outstanding for humidity control, light load cooling conditions and system back-up applications. Dual compressors are available on all models and allow for efficient cooling utilizing three stages of compressor operation (high efficiency 12½–20 Tons models only). 25 tons high efficiency units have 4 stages of cooling with a single compressor and tandem set (similar to variable speed).

## Controls—ReliaTel™

ReliaTel microprocessor controls provide unit control for heating, cooling and ventilating utilizing input from sensors that measure indoor and outdoor temperature and other zone sensors. ReliaTel also provides outputs for building automation systems and expanded diagnostics. For a complete list of ReliaTel offerings, refer to "Other Benefits," p. 17.

## 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. Horizontal units come complete with duct flanges so the contractor doesn't have to field fabricate them. These duct flanges are a time and cost saver.

## Crankcase Heaters

These band or insertion heaters provide improved compressor reliability by warming the oil to prevent migration during off-cycles or low ambient conditions. These are standard on all Voyager models.

## Discharge Line Thermostat

A bi-metal element discharge line thermostats installed as a standard feature on the discharge line of each system. This standard feature provides extra protection to the compressors against high discharge temperatures in case of loss of charge, extremely high ambient and other conditions which could drive the discharge temperature higher.

## Efficiencies

Standard or High Efficiency Cooling available.

## Easy Access Low Voltage Terminal Board


## Foil Faced Insulation

Voyager's Low Voltage Terminal Board is external to the electrical control cabinet. It is extremely easy to locate and attach the thermostat wire and test operation of all unit functions. This is another cost and time saving installation feature.

All panels in the evaporator section of the unit have cleanable foil-faced insulation. All edges are either captured or sealed to ensure no insulation fibers get into the airstream.

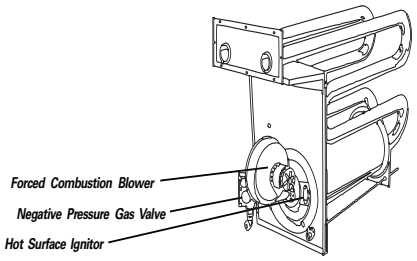
## Fork Pocket Access

Voyager™ has the ability to be forked from 3 sides.

## Heat Exchanger—Drum and Tube

The cabinet features a drum and tube heat exchanger (pictured right) that is manufactured using 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 negative pressure gas valve is used in the standard furnaces. This is one of our unique safety features. Modulating heaters use a pressure switch to ensure that the blower motor is operating before the gas valve is allowed to open.

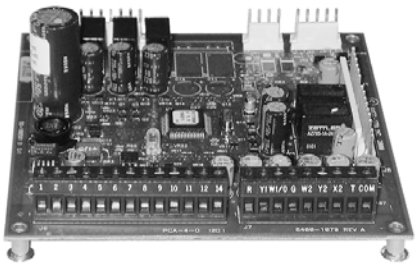
The forced combustion blower supplies pre-mixed fuel through a single stainless steel burner screen into a sealed drum where ignition takes place. It is more reliable to operate and maintain than a multiple burner system. Modulating furnaces contain a metal fiber material to ensure proper flame distribution at low fire. 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. Our gas/electric rooftops exceed all California seasonal efficiency requirements and perform even better than the California $NO_X$ emission requirements.

## Low Ambient Cooling

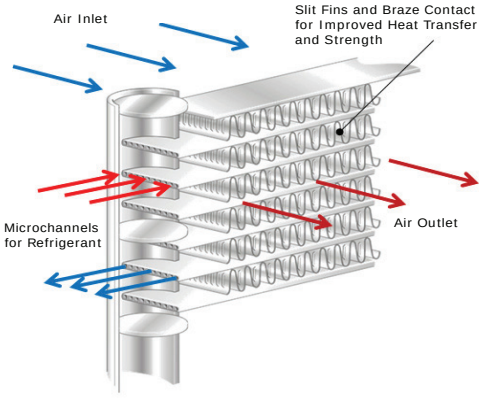
All Voyager microprocessor units have cooling capabilities down to 0°F as standard.

## Low Voltage Connections

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



## Microchannel Coils




Microchannel coils are all-aluminum coils with fully-brazed construction. This design reduces risk of leaks and provides increased coil rigidity — making them more rugged on the jobsite. Their flat streamlined tubes with small ports and metallurgical tube-to-fin bond allow for exceptional heat transfer.

Microchannel all-aluminum construction provides several additional benefits:

- Light weight (simplifies coil handling)
- Easy to recycle
- Minimize galvanic corrosion

## Motors

All indoor fan motors are belt drive as standard.

## Pressure Cutouts

Low and high pressure cutouts are standard on all Voyager models.

## Phase Monitor

Voyager features a three-phase line monitor module that protects against phase loss, phase reversal and phase unbalance. It is intended to protect compressors from reverse rotation. It has an operating input voltage range of 190–600 Vac, and LED indicators for ON and FAULT. There are no field adjustments and the module will automatically reset from a fault condition.

## Quick-Access Panels

Remove three or more screws for access to the standardized internal components and wiring.

## Quick-Adjust Slider Plate

With the Quick-Adjust Slider Plate (pictured right), the belt and sheaves can be quickly adjusted without moving the mounted fan motor. The result is a major savings in time and money.

## Single Point Power

A single electrical connection powers the unit.

## Single Side Service

Single side service is standard on all units.

## Sloped Drain Pans

Every Voyager unit has a non-corrosive, sloped drain pan made of pre-painted steel and standard on all units.

## Standardized Components

Components are placed in the same location on all Voyager units. Familiarize yourself with one Voyager and you are familiar with every Voyager. Due to standardized components throughout the Voyager line, contractors/owners can stock fewer parts.

### U-Shaped Airflow Pattern

The U-shaped airflow allows for improved static capabilities.

### Variable Frequency Drives - VFD (Multispeed Indoor Fan, VAV, and SZ VAV Only)

Variable Frequency Drives are factory installed and tested to provide supply fan motor speed modulation. VFDs on the supply fan, as compared to inlet guide vanes or discharge dampers, are quieter, more efficient, and are eligible for utility rebates. All VFDs are designed to allow bypass if required. Bypass control will simply provide full nominal airflow in the event of drive failure. Bypass mode is indicated in the unit wiring manual. Modulating gas heat models with SZVAV allow tighter space temperature control with less temperature swing.

# Variety of Options[1]

## Factory Installed Options

### Trane® Air-Fi® Wireless

Trane® Air-Fi® wireless communication is a reliable, flexible solution that frees you from the hassles associated with wired components for your building controls system. With Air-Fi® wireless, you get easy problem solving, efficient performance, and cost savings over the life of the equipment.

### $CO_2$ Sensor Wiring

This is the unit wiring for field installed $CO_2$ sensors. Factory-installed $CO_2$ sensor wiring saves time and ensures proper unit connections for the field installed $CO_2$ sensor kits.

### Complete Coat™ Condenser Coil

The cathodic epoxy type electrodisposition coating is formulated for high edge build to a number of different types of heat exchangers. The coating is selected to provide excellent resistance and durability to corrosive effects of alkalies, acids, alcohols, petroleum, seawater, salt air, and corrosive environments. This coating is available for microchannel coils only.

### Circuit Breaker (Required with Through-the-Base Electrical)

This option is a factory installed thermal magnetic, molded case, HACR Circuit Breaker with provisions for through the base electrical connections. Available on all models.

### Condensate Overflow Switch

A condensate overflow switch is available to shut the unit down in the event that the condensate drain line becomes clogged. This option protects the unit from water overflowing from the drain pan and entering the base of the units.

### Dehumidification (Hot Gas Reheat)

This option allows for increased outdoor air ventilation. It reduces humidity levels while increasing comfort level in the air space. Cooling can operate without a demand for dehumidification. The hot gas reheat coil is designed to deliver maximum reheat temperature.

[1] Refer to "Model Number Description," p. 24 for option availability.

## Disconnect Switch (Required with Through-the-Base Electrical)

Factory installed 3-pole, molded case, disconnect switch with provisions for through the base electrical connections are available. Available on all models.
Codes require a method of assured unit shutdown for servicing. Field-installed disconnects sometimes interfere with service access. Factory installation of unit disconnects reduces costs, assures proper mounting and provides the opportunity to upgrade to unit circuit breaker protection.

## Fault Detection and Diagnostics (FDD)

This offering meets the mandatory requirement of CA Title 24 of fully configurable diagnostics allowing fault history and reading fault codes at the unit.This option provides detection of the following faults: Air temperature sensor failure/fault and notification of acceptable economizer mode.The FDD system shall be certified by the Energy Commission as meeting the requirements.

## High Efficiency Filtration

Voyager units offer a variety of high efficiency filtration options. MERV 8 and MERV 13 filters provide additional filtration beyond the capabilities of typical 2-inch throwaway filters. Also, when MERV 8 or MERV 13 filters are ordered, units come equipped with a filter removal tool.

## High Efficiency Motors

High efficiency motors are available with efficiency ratings from 86.5 up to 91.0. It is not available for all models.

## High Short Circuit Current Rating (SCCR)

Voyager rooftop units now have an optional high short circuit current rated electrical subsystem for units with an MOP above 60A. This option is a perfect fit for applications that need protection against high potential fault currents. This option also includes individual over current protection for each compressor and the indoor fan, as well as a dedicated over current protection to the condenser fan motor(s). When the high SCCR is ordered, the control box will have components separated into two sections - high and low voltage components.

## Hinged Access Doors

These doors permit easy access to the filter, fan/heat, and compressor/control sections. They reduce the potential roof damage from screws or sharp access door corners.

## Human Interface


The 5 inch Color Touchscreen Human Interface provides an intuitive user interface to the rooftop unit that speeds up unit commissioning, shortens unit troubleshooting times, and enhances preventative maintenance measures. The human interface includes several features such as:

- Data trending capabilities by means of time series graphs
- Historical alarm messages
- Real-time sensor measurements
- On board system setpoints
- USB port that enables the downloading of component runtime information as well as trended historical sensor data
- Customizable reports

## Modulating Gas Heat with a 2.5:1 Turndown Ratio

Upon receiving a call for heat, modulating gas heat units with a 2.5:1 turndown ratio light their burner at full fire (100%). After the burner is lit, the unit controls will monitor the discharge air temperature and modulate the input rate down to match the load.

***Note:*** *Modulating gas heat units are equipped with a stainless steel heat exchanger as standard.*

## Multi-Speed Indoor Fan System

Multi-speed indoor fan system is designed for use in applications for meeting the minimum requirement of CA Title 24. This system incorporates a multi-speed fan control to change the speed of the fan to 66% of full airflow based off compressor stages.

## Multiple-Zone VAV Control

A multiple-zone VAV (MZVAV) system consists of a packaged rooftop unit that serves several individually controlled zones. Each zone is equipped with a VAV terminal unit that varies the quantity of air delivered to maintain the desired temperature in that zone. The rooftop unit controller varies the speed of the indoor fan to maintain the static pressure in the supply ductwork at a setpoint, ensuring that all zones receive the necessary quantity of air. In addition, cooling capacity is cycled to maintain the supply air temperature at the desired setpoint.

For decades, Trane has been an industry leader in rooftop VAV systems. Now, multiple-zone VAV control is available in Trane's light commercial rooftop platform (3-25 tons).

## Novar Unit Controls

Novar 3051 and 2024 are available for Voyager Cooling and Gas/Electric models.

## Powered or Unpowered Convenience Outlet

This option is a GFCI, 120V/15amp, 2-plug, convenience outlet, either powered or unpowered. This option can only be ordered when Through the Base Electrical with either the Disconnect Switch or Circuit Breaker option is ordered. This option is available on all models.

## Single Zone VAV - One Zone Variable Air Volume Mode

***Note:*** *Single Zone VAV is designed to be used with a zone sensor. If a unit is configured for Single Zone VAV operation but is connected to a thermostat, the control will revert to multi-speed (2-Speed) indoor fan control. (See "Multi-Speed Indoor Fan System" above.)*

Single zone VAV is designed for use in single zone applications like gymnasiums, auditoriums, manufacturing facilities, retail box stores, and any large open spaces, where there is a lot of diversity in the load profile. Single Zone VAV (SZ VAV) is an ideal replacement to "yesterday's" constant volume (CV) systems, by reducing operating costs while improving occupant comfort. SZ VAV systems combine Trane application, control and system integration knowledge to exactly match fan speed with cooling and heating loads, regardless of the operating condition. Trane algorithms meet/exceed ASHRAE 90.1- 2010, SZ VAV energy-saving recommendations, and those of CA Title 24. The result is an optimized balance between zone temperature control and system energy savings. Depending on your specific application, energy savings can be as much as 20%.

***Note:*** *Building system modeling in energy simulation software like TRACE is recommended to evaluate performance improvements for your application.*

SZ VAV is fully integrated into the ReliaTel Control system and is available today. It provides the simplest and fastest commissioning in the industry through proven factory-installed, wired, and tested system controllers. All control modules, logic and sensors are factory installed, and tested to assure the highest quality and most reliable system available. This means no special programming of algorithms, or hunting at the jobsite for sensors, boards, etc. that need to be installed in the field. Single zone VAV is a quick and simple solution for many applications and is available from your most trusted rooftop VAV system solution provider- Trane.

## Stainless Steel Drain Pan

For excellent corrosion and oxidation resistance, the optional stainless steel drain pan provides a cleanable surface that complement other IAQ solutions such as high efficiency filtration (MERV 8 or 13), demand control ventilation ($CO_2$), and hot gas reheat.

## Stainless Steel Heat Exchanger

The optional stainless steel heat exchanger is constructed of 439 stainless steel. It is resistant to corrosion and oxidation and easy to clean. The high strength to weight ratio allows for high ventilation rates with gas units and comes standard with a modulating gas heat option. With this option, a 10-year stainless steel heat exchanger warranty is standard.

## Supply, Return, and Plenum Air Smoke Detector

With this option (pictured right) installed, if smoke is detected, all unit operation will be shut down. Reset will be manual at the unit. Return Air Smoke Detectors require minimum allowable airflow when used with certain models.

Supply and/or Return Smoke Detectors may not be used with the Plenum Smoke Detector.

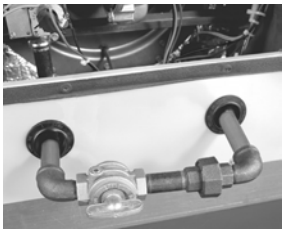
## Through-the-Base Electrical Utility Access

An electrical service entrance shall be provided allowing electrical access for both control and main power connections inside the curb and through the base of the unit. Option will allow for field installation of liquid-tight conduit and an external field installed disconnect switch.

Factory provided through the base openings simplify wiring and piping. Because these utility openings frequently minimize the number of roof penetrations, the integrity of roofing materials is enhanced.

### Through-the-Base Gas Piping (Gas/Electric Only)

This option (pictured right) shall have all piping necessary including, black steel, manual gas shut-off valve, elbows, and union. This assembly will require minor field labor to install.



## Factory or Field Installed Options[1]

### BACnet® Communications Interface

The BACnet® communications interface allows the unit to communicate directly with a generic open protocol BACnet® MS/TP Network Building Automation System Controls.

### Clogged Filter/Fan Failure Switch

A dedicated differential pressure switch is available to achieve active fan failure indication and/or clogged filter indication. These sensors allow a zone sensor service light or Integrated Comfort System to indicate a dirty filter or a fan that's not working. The field installation charges for these valuable feedback devices often eliminate them from consideration. Factory installation can make such features a good investment.

### Discharge Air Temperature Sensing Kit

Provides true discharge air temperature sensing in heating models. The kit is functional only with the ReliaTel Options Module.

### Economizer - Standard, Downflow

Economizers are equipped with either dry bulb, reference, or comparative enthalpy sensing. These economizers provide free cooling as the outdoor temperature and/or humidity decreases. Correctly installed, they offer a valuable energy savings. Factory-installed economizers save time and ensure proper installation.

***Note:*** *Factory-installed economizers require some field set-up.*

### Economizer - Low Leak, Downflow

This accessory meets low leak requirements for ASHRAE 90.1, IECC, and CA Title 24 standards (3 cfm/ft^2@1" wg exterior air, 4 cfm/ft^2@1" wg return air). This option allows 100% outdoor air supply from 0-100% modulating dampers and is standard with barometric relief. It can be paired with powered exhaust for additional building pressure relief. This option can be paired with or without Fault Detection and Diagnostics (FDD) to meet current mandatory CA Title 24 requirements. Available on downflow units only. The economizers come with three control options, dry bulb and reference or comparative enthalpy (optional).

### Electric Heaters

Electric heat modules are available within the basic unit. If ordering the Through the Base Electrical option with an Electrical Heater, the heater must be factory installed.

### Frostat™

A capillary bulb embedded in the face of the evaporator coil or a thermostat on the suction line monitors coil temperature to prevent evaporator icing and protect the compressor. Recommended for applications with low leaving air temperatures, low airflow and/or high latent load applications.

***Note:*** *Frostat is standard on all Single-Zone VAV, Multiple-Zone VAV, and high efficiency units.*

[1] Refer to "Model Number Description," p. 24 for option availability.

### Indoor Fan Motor Shaft Grounding Ring

Shaft grounding rings are used on all VFD driven motors to provide a conductive discharge path away from the motor bearings to ground. Bearing Protection Rings shall be maintenance free circumferential rings of conductive micro fibers that discharge voltages to ground.

### LonTalk® Communications Interface

The LonTalk communications interface allows the unit to communicate as a Tracer™LCI-V device or directly with generic LonTalk Network Building Automation System Controls.

### Oversized Motors

Factory or field installed oversized motors are available for high static applications.

### Reference or Comparative Enthalpy

Measures and communicates humidity while maximizing comfort control.

### ReliaTel Options Module (RTOM)

The RTOM monitors the supply fan proving, clogged filter, supply air temperature, exhaust fan setpoint, dehumidification setpoint, supply air tempering, Frostat™ and smoke detector.

***Note:*** *The RTOM is standard on high efficiency units.*

### Tool-less Hail Guards

Tool-less, hail protection quality coil guards (pictured right) shall be either factory or field-installed for condenser coil protection. This option protects the condenser coil from vandalism and/or hail damage.

### Trane Communication Interface (TCI)

Available factory or field installed. This module when applied with the ReliaTel™ easily interfaces with Trane's Integrated Comfort™ System.

## Field Installed Options[1]

### $CO_2$ Sensor - Demand Control Ventilation (DCV)

Demand-controlled ventilation (DCV) is a control strategy that responds to the actual demand (need) for ventilation by regulating the rate at which the HVAC system brings outdoor air into the building. A $CO_2$ sensor measures the concentration (parts per million, ppm) of $CO_2$ (Carbon Dioxide) in the air. As the $CO_2$ concentration changes, the outside air damper modulates to meet the current ventilation needs of the zone. The $CO_2$ sensor kit is available as a field installed accessory. Two field installed kits are offered; $CO_2$ sensor and wiring or $CO_2$ sensor only. The $CO_2$ sensor only kit should be ordered with factory installed $CO_2$ sensor wiring. Factory installed $CO_2$ sensor wiring saves set-up time and ensures proper unit connections for the $CO_2$ sensor.

### Dampers

0–25 percent manual or 0–50 percent motorized outside air dampers are available.

### Digital Display Zone Sensor

The Digital LCD (Liquid Crystal Display) zone sensor has the look and functionality of standard zone sensors.

[1] Refer to "Model Number Description," p. 24 for option availability.

### Economizer - Standard, Horizontal

Economizers are equipped with either dry bulb or reference or comparative enthalpy sensing. These economizers provide free cooling as the outdoor temperature and/or humidity decreases. Correctly installed, they offer a valuable energy savings.

### Economizer - Low Leak, Downflow and Horizontal

This accessory meets low leak requirements for ASHRAE 90.1, IECC, and CA Title 24 standards (3 cfm/ft^2@1" wg exterior air, 4 cfm/ft^2@1" wg return air). This option allows 100% outdoor air supply from 0-100% modulating dampers and is standard with barometric relief. It can be paired with powered exhaust for additional building pressure relief.

### Humidity Sensor/Humidistat

Used in conjunction with our Dehumidification (Hot Gas Reheat) units to provide outstanding humidity control and comfort. Humidity sensors can be wall or duct mounted and set for levels between 40% and 60%.

### LP Conversion Kit

Provided for field conversion of gas/electric units from natural gas to propane.

### Outside Air Measuring/Monitoring Control (Traq Dampers)

Quantity of fresh air entering the unit will be measured and monitored via Trane UC400 controller and series of pressure sensing rings mounted at the outside air intake.

### Powered Exhaust

This option is available on downflow units and provides exhaust of the return air, when using a downflow economizer, to maintain proper building pressurization. Great for relieving most building overpressurization problems.

### Remote Potentiometer

When properly installed in the economizer control circuitry, this accessory provides a remote variable resistance to enable the operator to adjust the minimum damper position.

### Roof Curbs

Available for downflow units. Only two roof curbs for the entire Voyager line simplifies curb selection.

### Static Drive Accessories

Available on many models, this high and low static drive accessories extend the capability of the standard motor. Avoid expensive motors and operating costs by installing this optimized sheave accessory.

### Ventilation Override Accessory

With the Ventilation Override Accessory installed, the unit can be set to transition to up to 3 different pre-programmed sequences for Smoke Purge, Pressurization and Exhaust. The transition occurs when a binary input on the RTOM is closed (shorted). This would typically be a hard wired relay output from a smoke detector or fire control panel. The ventilation override kit is available as a field installed accessory.

### Wireless Zone Sensor

LCD display that provides heat, cool, auto, or off. Includes two temperature setpoints and a lockable setting with °F or °C indicators.

### Zone Sensors/Thermostats

Available in programmable, automatic and manual styles.

***Note:*** *Zone sensors required for units configured for Single Zone VAV indoor fan system control to enable Single Zone VAV functionality.*

## Other Benefits

### Cabinet Integrity

For added water integrity, Voyager has a raised 1-1/8-inch lip around the supply and return of the downflow units to prevent water from blowing into the ductwork.

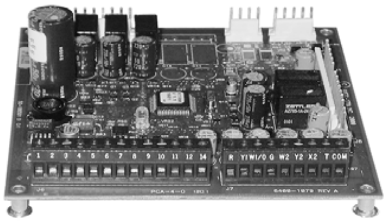
### Easy to Install, Service and Maintain

Because today's owners are very cost-conscious when it comes to service and maintenance, Voyager was designed with direct input from service contractors. This valuable information helped to design a product that would get the serviceman off the job quicker and save the owner money. Voyager does this by offering outstanding standard features enhanced by a variety of factory and field installed options, multiple control options, rigorously tested proven designs and superior product and technical support.

### Outstanding Airflow Distribution

Airflow is outstanding. The Voyager can replace an older machine with old ductwork and, in many cases, improve the comfort through better air distribution.

### ReliaTel™ Controls Benefits



ReliaTel controls provide unit control for heating, cooling and ventilating by 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 the compressor will run for a specific amount of time which allows oil to return for better lubrication, enhancing the reliability of the 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 wiring easier for the installer.

#### *ReliaTel Makes Testing Easy*

ReliaTel requires no special tools to run 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.

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.

The same ReliaTel Board fits all Packaged Gas/Electric, Cooling, and Heat Pump models. This provides standardization of parts for contractors. Less money is tied up in inventory with ReliaTel.

## Rigorous Testing

All of Voyager’s designs were rigorously rain tested at the factory to ensure water integrity. Voyager units incorporate either a one piece top or the Trane-Tite-Top (T3). Each part of the top (either two or three pieces) overlaps in such a way that water cannot leak into the unit. These overlapped edges are gasketed and sealed to ensure superior water integrity.

Actual shipping tests were performed to determine packaging requirements. Units were test shipped around the country to determine the best packaging. Factory shake and drop tests were used as part of the package design process to help assure that the unit arrives at the job site in top condition.

Rigging tests include lifting a unit into the air and letting it drop one foot, assuring that the lifting lugs and rails hold up under stress. For the microchannel coils, the supplier will perform the leak check at 450 psig. The completely assembled refrigerant system is leak tested at a minimum of 225 psig with a refrigerant and nitrogen mixture.

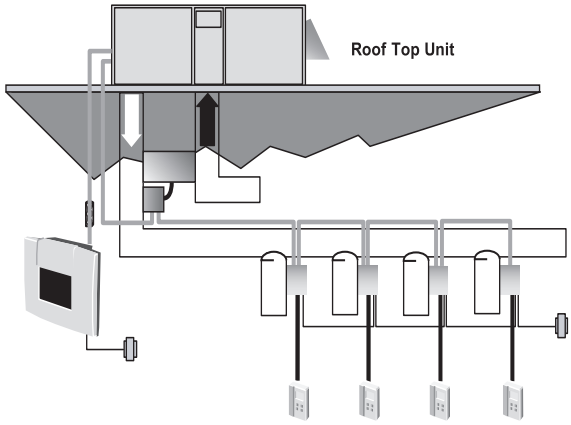
All parts are inspected at the point of final assembly. Sub-standard parts are identified and rejected immediately. Every unit receives a 100% unit run test before leaving the production line to make sure it lives up to rigorous Trane requirements.

## Unmatched Support

Trane Sales Representatives are a Support Group that can assist you with:

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

## VariTrac® – Changeover-Bypass System




A changeover-bypass system consists of a packaged rooftop unit that serves several individually controlled zones. Each zone is equipped with a damper that varies the quantity of air delivered to maintain the desired temperature in that zone. However, unlike a conventional multiple-zone VAV system, the fan inside the rooftop unit operates at a constant speed. Any unneeded air is diverted to the return air stream through a bypass damper.

The term “changeover” refers to how this system handles the cooling and heating requirements of the building. The central rooftop unit can provide either cooled or heated air, and it makes this decision by periodically “polling” the zones.

# Application Considerations

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

## Air-Fi® Wireless

Please refer to Air-Fi® Network Design Installation, Operation, and Maintenance manual BAS-SVX55*-EN for additional details on applications with factory installed wireless.

## Barometric Relief

This product line offers a barometric relief damper for use in conjunction with economizer option. This accessory consists of gravity dampers which open with increased pressure. As the building air pressure increases, the pressure in the unit return air section also increases, opening the dampers and relieving the conditioned space.

***Note:*** *The effectiveness of barometric relief damper during economizing operation is limited, depending on the pressure drop of the return-air path. For some applications, powered exhaust may be better suited for preventing over-pressurization when economizing.*

## Clearance Requirements

The recommended clearances identified with unit dimensions should be maintained to ensure adequate serviceability, maximum capacity and peak operating efficiency. Actual clearances which appear inadequate should be reviewed with local Trane sales personnel.

## Complete Coat™ Microchannel Condenser Coil

The cathodic epoxy type electrodisposition coating is formulated for high edge build to a number of different types of heat exchangers. The coating is selected to provide excellent resistance and durability to corrosive effects of alkalies, acids, alcohols, petroleum, seawater, salt air, and corrosive environments. This coating shall be available on microchannel condenser coils.

## Condensate Trap

The evaporator is a draw-through configuration. A trap must be field provided prior to start-up on the cooling cycle.

## Dual Compressors — 3 Stages of Cooling (12½ to 20 Tons)

Using the ReliaTel™ microprocessor controls, the Voyager™ high efficiency line can provide three stages of cooling, allowing for a more efficient and comfortable cooling operation.

***Important:*** *All high efficiency products will have intertwined evaporator coils as standard. No face split coils are allowed with 3 or 4 stages of cooling.*

***Note:*** *Standard efficiency models do not have 3 stages of cooling operation.*

## 4 Stages of Cooling (25 Tons)

25 tons high efficiency units have 4 stages of cooling with a single compressor and tandem set (similar to variable speed).

## Heating Operation

The heat exchanger is manufactured with aluminized steel. To prevent condensation within the heat exchanger, do not exceed 50 percent outside air or a minimum mixed air temperature of 40°F.

## Optional Stainless Steel Heat Exchanger

The optional stainless steel heat exchanger is manufactured with 439 stainless steel. To prevent corrosion and prolong heat exchanger reliability, the minimum mixed air temperature allowed across the heat exchanger is 20°F. The stainless steel heat exchanger option is an excellent option that compliments the dehumidification package and is used in conjunction with the modulating heat option. Whenever high outside air or outside applications exist, these options should be utilized.

## Low Ambient Cooling

The Voyager line features, with ReliaTel™ microprocessor controls, low ambient cooling down to 0°F. A frostat needs to be included in the selection when Low Ambient Cooling is required. Contact your local Trane Representative for more assistance with low ambient cooling applications.

## Unit Pitch

These units have sloped condensate drain pans. Units must be installed level. Any unit slope must be toward access side of the unit.

## Low Airflow

Unit applications designed for airflow below 320 cfm/ton are available on cooling only units and gas heat units equipped with modulating gas heat. Units must be high efficiency units with dehumidification (hot gas reheat) or TXV with Frostat and Crankcase heaters. Electric heat is restricted below 320 cfm/ton. Standard efficiency units are restricted below 250 cfm/ton. Multi-speed or single zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

## VariTrac®

VariTrac is for Voyager units with constant-speed indoor fan control. It is not recommended for use with Multiple-Speed Indoor Fan Control, Single-Zone VAV Control, or Multiple-Zone VAV Control.

# Selection Procedure

## Cooling Capacity

***Note:*** *Cooling Capacity Procedure is the same for cooling (T*) and gas/electric (Y*).*

### Step 1.

Calculate the building's total and sensible cooling loads at design conditions. Use the following calculation methods or any other standard accepted method. Factors used in unit selection:

Total Cooling Load: 180 MBh
Sensible Cooling Load: 126 MBh
Airflow: 6000 cfm
Electrical Characteristics: 460/60/3
Summer Design Conditions: Entering Evaporator Coil: 80 DB, 67 WB Outdoor Ambient: 95 DB
External Static Pressure: 0.39 in. wg
Rooftop—downflow configuration
Accessories

- Roof curb
- Economizer
- Electric Heat

### Step 2.

As a starting point, a rough determination must be made of the size of the unit. The final selection will be made after examining the performance at the given conditions. Divide the total cooling load by nominal Btu/h per ton (12 MBh per ton); then round up to the nearest unit size.

180 MBh / 12 MBh = 15.0 tons

### Step 3.

Table 16, p. 39 shows that a TSD180F4 has a **gross** cooling capacity of 186.1 MBh and 139.1 MBh sensible capacity at 6000 cfm and 95 DB outdoor ambient with 80 DB, 67 WB air entering the evaporator.

### To Find Capacity at Intermediate Conditions Not in the Table.

When the design conditions are between two numbers that are in the capacity table, interpolation is required to approximate the capacity.

***Note:*** *Extrapolation outside of the table conditions is not recommended.*

### Step 4.

In order to select the correct unit which meets the building's requirements, the fan motor heat must be deducted from the gross cooling capacity. The amount of heat that the fan motor generates is dependent on the effort by the motor—cfm and static pressure. To determine the total unit static pressure you add the external static pressure to the additional static related by the added features:

| | |
|---|---|
| External Static Duct System | 0.39 wg |
| Standard Filter 2 in. from Table 85, p. 115 | 0.06 wg |
| Economizer from Table 85, p. 115 (100% Return Air) | 0.04 wg |
| Electric Heater Size 36 kW from Table 85, p. 115 | 0.07 wg |
| (Reference "Heating Capacity," p. 23 for determination of heater size.) No additional static add for gas/heat exchanger. | |
| Total Static Pressure | 0.56 wg |

***Note:*** *The Evaporator Fan Performance Table 45, p. 78 has already accounted for the pressure drop for standard filters and wet coils (see note below Table 45). Therefore, the actual total static pressure is 0.56 - 0.06 (from Table 85, p. 115 = 0.50 wg).*

With 6000 cfm and 0.50 wg.
*Table 45, p. 78* shows 1.95 bhp for this unit. Note below the table gives a formula to calculate Fan Motor Heat,
3.15 x bhp = MBh.
3.15 x 1.95 = 6.14 MBh.

Now subtract the fan motor heat from the gross cooling capacity of the unit:
**Net** Total Cooling Capacity = 186.1 MBh - 6.14 = 179.96 MBh.

**Net** Sensible Cooling Capacity = 139.1 MBh - 6.14 = 132.96 MBh.

**Step 5.**

If the performance will not meet the required load of the building—total or sensible cooling load, try a selection at the next higher size unit.

# Heating Capacity

***Note:*** *Heating capacity procedures DIFFER for cooling (T*) and gas/electric (Y*) units.*

**Step 1.**

Calculate the building heating load.

**Step 2.**

Size the system heating capacity to match the calculated building heating load. The following are building heating requirements:

T* cooling units:
460 volt/3 phase Power Supply
Total heating load of 115.0 MBh
6000 cfm

The electric heat accessory capacities are listed in Table 87, p. 117. From the table, a 36 kW heater will deliver 122.94 MBh at 480 volts. In order to determine capacity at 460 volts, the heater voltage correction factor from Table 88, p. 118 must be used. Therefore, 122.94 MBh x .94 (voltage correction factor) = 115.6 MBh.

Y* gas/electric: Fuel natural gas total heating load of 195 MBh. Table Table 86, p. 117 shows 250 MBh and 350 MBh input models. The output capacities of these furnaces are 203 MBh and 284 MBh respectively. The low heat model with 203 MBh output best matches the building requirements.

# Air Delivery Selection

***Note:*** *Air Delivery procedures is the same for cooling (T*) and gas/electric (Y*) units.*

External static pressure drop through the air distribution system has been calculated to be 0.50 inches of water. From Table 85, p. 115 static pressure drop through the economizer is 0.04 and the 36 kW heater is 0.07 inches of water (0.39 + 0.04 + 0.07). Enter Table 45, p. 78 for a TSD180F4 at 6000 cfm and 0.50 static pressure. The standard motor at 533 rpm will give the desired airflow at a rated bhp of 1.92.

# Model Number Description

### Digit 1 — Unit Type

T = Packaged Cooling, Electric Heat
Y = Packaged Cooling, Gas Heat

### Digit 2 — Efficiency

S = Standard Efficiency
H = High Efficiency

### Digit 3 — Airflow Configuration

D = Downflow
H = Horizontal

### Digit 4, 5, 6 — Nominal Gross Cooling Capacity (MBh)

150 = 12½ Tons
180 = 15 Tons
210 = 17½ Tons, 60Hz DOE 2018
240 = 20 Tons
300 = 25 Tons, 60Hz DOE 2018

### Digit 7 — Major Design Sequence

G = ASHRAE 90.1-2013 (Fan/Compressor Staging)[13] or Microchannel Type Evaporator and Condenser Coils

### Digit 8 — Voltage Selection

3 = 208-230/60/3
4 = 460/60/3
W = 575/60/3
K = 380/60/3

### Digit 9 — Unit Controls

R = Reliatel

### Digit 10 — Heating Capacity

***Note:*** *(Applicable to Digit 1 T models only)*

0 = No Heat
G = 18 kW Electric Heat
K = 27 kW Electric Heat
N = 36 kW Electric Heat
P = 54 kW Electric Heat
R = 72 kW Electric Heat

***Note:*** *(Applicable to Digit 1 Y models only)*

H = Gas Heat - High
L = Gas Heat - Low
V = Gas Heat - SS Ht Ex - Modulating
X = Gas Heat - SS Ht Ex - Low
Z = Gas Heat - SS Ht Ex - High

### Digit 11 — Minor Design Sequence

### Digit 12, 13 — Service Sequence

00 = None
01 = 18mm Microchannel Condenser Coil

***Note:*** *'01' only available on select models.*

### Digit 14 — Fresh Air Selection

0 = No Fresh Air
D = Econ Dry Bulb w/ Barometric Relief[1]
F = Econ Reference Enthaply w/ Barometric Relief[1]
H = Econ Comparative Enthaply w/ Barometric Relief[1]
K = Low Leak Econ w/ Barometric Relief[1]
M = Low Leak Econ Reference Enthalpy w/ Barometric Relief[1]
P = Low Leak Econ Comparative Enthalpy w/ Barometric Relief[1]

### Digit 15 — Supply Fan/Drive Type/Motor

0 = Standard Motor
1 = Oversized Motor[6]
3 = High Efficiency Motor[6]
6 = Single Zone Variable Air Volume Standard Motor
7 = Multi-Speed Standard Motor
8 = Single Zone Variable Air Volume Oversized Motor
9 = Multi-Speed Oversized Motor
A = Single Zone Variable Air Volume Standard Motor w/ Shaft Grounding Ring
B = Multi-Speed Standard Motor w/ Shaft Grounding Ring
C = Single Zone Variable Air Volume Oversized Motor w/ Shaft Grounding Ring
D = Multi-Speed Oversized Motor w/ Shaft Grounding Ring
E = VAV Supply Air Temperature Control - Standard Motor
F = VAV Supply Air Temperature Control - Oversized Motor
G = VAV Supply Air Temperature Control - Standard Motor w/ Shaft Grounding Ring
H = VAV Supply Air Temperature Control - Oversized Motor w/ Shaft Grounding Ring

### Digit 16 — Hinged Service Access / Filters

0 = Standard Panels/Standard Filters[22]
A = Hinged Access/Standard Filters[22]
B = Standard Panels/MERV 8 Filters[6]
C = Hinged Access/MERV 8 Filters[6]
D = Standard Panels/MERV 13 Filters[6]
E = Hinged Access/MERV 13 Filters[6]

### Digit 17 — Condenser Coil Protection

0 = Standard Coil
1 = Standard Coil With Hail Guard
4 = CompleteCoat™Condenser Coil
5 = CompleteCoat™Condenser Coil with Hail Guard

### Digit 18 — Through The Base Provisions

***Note:*** *Applicable to Digit 1, T or Y models.*

0 = No Through The Base Provisions
A = Through The Base Electric[12]

***Note:*** *Applicable to Digit1, Y models only.*

B = Through The Base Gas
C = Through The Base Electric/Gas[12]
D = Through The Base Access

### Digit 19 — Disconnect Switch/Circuit Breaker[11]

0 = No Disconnect/circuit break
1 = Unit Mounted Non-Fused Disconnect Switch
2 = Unit Mounted Circuit Breaker

### Digit 20 — Convenience Outlet Option

0 = Without Convenience Outlet
A = Unpowered Convenience Outlet[5]
B = Powered Convenience Outlet[5]

### Digit 21 — Communications Options

0 = Without Communications Options
1 = Trane Communications Interface[6, 15]
2 = Lontalk Communications Interface[6]
6 = Building Automation Control Network Communications Interface
7 = Air-Fi® Wireless Communications[24]

### Digit 22 — Refrigeration System Option

0 = Standard refrigeration system
B = Dehumidification (Hot Gas Reheat)[4,13]

### Digit 23 — Refrigeration Controls

0 = Without Refrigeration Controls
1 = Frostat[9, 18]

### Digit 24 — Smoke Detector[2,10]

0 = Without Smoke Detector
A = Return Air Smoke Detector
B = Supply Air Smoke Detector
C = Return/Supply Air Smoke Detector
D = Plenum Smoke Detector[19]

### Digit 25 — System Monitoring Controls

0 = No Monitoring Controls
1 = Clogged Filter Switch[9]
2 = Fan Failure Switch[9]
3 = Discharge Air Sensing[9]
4 = Clogged Filter Switch and Fan Failure switch[9]

5 = Clogged Filter Switch and Discharge Air Sensing[9]
6 = Fan Failure Switch and Discharge Air Sensing[9]
7 = Clogged Filter Switch, Fan Failure Switch and Discharge Air Sensing[9]
A = Condensate Drain Pan Overflow Switch
B = Clogged Filter Switch and Condensate Drain Pan Overflow Switch[9]
C = Fan Failure Switch and Condensate Drain Pan Overflow Switch[9]
D = Discharge Air Sensing and Condensate Drain Pan Overflow Switch[9]
E = Clogged Filter Switch, Fan Failure Switch and Condensate Drain Pan Overflow Switch[9]
F = Clogged Filter Switch, Discharge Air Sensing Tube and Condensate Drain Pan Overflow Switch[9]
G = Fan Failure Switch, Discharge Air Sensing Tube and Condensate Drain Pan Overflow Switch[9]
H = Clogged Filter Switch, Fan Failure Switch, Discharge Air Sensing and Condensate Drain Pan Overflow Switch[9]

**Digit 26 - System Monitoring Controls**

0 = No Monitoring Controls
A = Demand Control Ventilation ($CO_2$)[17]
B = FDD (Fault Detection and Diagnostics)
C = FDD (Fault Detection Diagnostics) and Demand Control Ventilation ($CO_2$)[17]

**Digit 27 - Unit Hardware Enhancements**

0 = No Enhancements
1 = Stainless Steel Drain Pan

**Digit 28 - Short Circuit Current Rating**

0 = Standard SCCR
A = 65kA SCCR Option[20, 21]

**Digit 31 - Advanced Unit Controls**

0 = Standard Unit Controls
1 = Human Interface[23]

***Note:*** *Most Factory Installed Options available for Downflow Air Discharge units only. Please verify with ordering system for availability.*

# Model Number Notes

1. Some field set up required.
2. Requires ReliaTel Options Module.
3. Requires Economizer.
4. All 22nd digit model numbers for reheat coil (B) require additional factory installed options: Frostat, and 2-inch pleated filters.
5. Must be ordered with Through-the-Base Electrical option or Horizontal-Side Access and either Unit Mounted Disconnect or Circuit Breaker.
6. Available factory installed on downflow AND horizontal units. Verify with ordering system.
7. Cannot be fused.
8. Must be factory installed when using Through-the-Base Options.
9. ReliaTel Options Module is required when ordering the following accessories: 4 Stage Cooling, Clogged Filter Switch, Fan Fail Switch, Condensate Overflow Switch, Discharge Air Sensing Kit, Frostat, Ventilation Override, Smoke Detector, Dehumidification and Modulating Gas Heat Furnace.
10. Option cannot be ordered in conjunction with field installed economizer on downflow units. Must be factory installed. The return air smoke detector may not fit up or work properly on the Voyager units when used in conjunction with 3rd party accessories (such as bolt on heat wheels, economizers, and power exhaust). Do not order the return air smoke detectors when using this type of accessory.
11. Unit mounted disconnect and circuit breakers are mutually exclusive of each other.
12. Through-the-base electrical option or Horizontal-Side Access must be ordered with either unit mounted disconnect or circuit breaker. When adding heat, you must order Trane Electric Heat.
13. Available on high efficiency units only.
14. All Factory Installed Options are Built-to-Order. Check order services for estimated production cycle.
15. TCI is for use with non-VariTrac systems and VariTrac systems.
16. For use with multi-speed and SZVAV units only.
17. Demand Control Ventilation Option includes wiring only. The $CO_2$ sensor is a field-installed only option.
18. Frostat is standard on VAV and high efficiency units.
19. Supply and/or return smoke detector may not be used with the plenum smoke detector.
20. Only available where MOP is above 60A.
21. 575 Vac option is 25kA.
22. Standard filters are not available with Low Leak Economizers.
23. Human Interface is standard with FDD (Fault Detection Diagnostics).
24. Must be used with BACnet® open protocol.

# General Data

**Table 3. General data—cooling 12½–15 tons standard efficiency**

| | 12½ Tons Downflow and Horizontal Units | | 15 Tons Downflow and Horizontal Units | |
|---|---|---|---|---|
| | **TS*150G3,4,W,K** | **YS*150G3,4,W,K** | **TS*180G3,4,W,K** | **YS*180G3,4,W,K** |
| **Cooling Performance[a]** | | | | |
| Gross Cooling Capacity | 150,000 | 150,000 | 186,000 | 186,000 |
| EER (Downflow/Horizontal)[b] | 11 | 11 | 11 | 11 |
| Nominal Airflow CFM / AHRI Rated CFM | 5,000 / 4,000 | 5,000 / 4,000 | 6,000 / 5,400 | 6,000 / 5,400 |
| AHRI Net Cooling Capacity | 140,000 | 140,000 | 176,000 | 176,000 |
| Integrated Energy Efficiency Ratio (IEER) (One Speed Fan / Multi or Variable Speed Fan)[c] | 12.4/13.5 | 12.2/13.5 | 12.4/13.2 | 12.2/13.2 |
| Percent Capacity @ part load (Stage 1/Stage 2) | 66/100 | 66/100 | 67/100 | 67/100 |
| System Power (kW) | 12.73 | 12.73 | 16.00 | 16.00 |
| **Compressor** | | | | |
| Number/Type | 2 / Scrolls | 2 / Scrolls | 2 / Scrolls | 2 / Scrolls |
| **Sound** | | | | |
| Outdoor Sound Rating (BELS)[d] | 9.2 | 9.2 | 9.2 | 9.2 |
| **Outdoor Coil** | | | | |
| Type | Microchannel | Microchannel | Microchannel | Microchannel |
| Coil Width (in.) | 0.71 | 0.71 | 0.71 | 0.71 |
| Face Area (sq. ft.) | 25.9 | 25.9 | 35.2 | 35.2 |
| Rows/FPI (DF/HZ) | 1/23 | 1/23 | 1/23 | 1/23 |
| **Indoor Coil** | | | | |
| Type | Microchannel | Microchannel | Microchannel | Microchannel |
| Coil Width (in.) | 1.00 | 1.00 | 0.81 | 0.81 |
| Face Area (sq. ft.) | 17.30 | 17.30 | 23.00 | 23.00 |
| Rows/FPI | 2/16 | 2/16 | 2/16 | 2/16 |
| Refrigerant Control | TXV | TXV | TXV | TXV |
| Drain Connection Number/Size (in.) | 1/1.00 NPT | 1/1.00 NPT | 1/1.00 NPT | 1/1.00 NPT |
| **Outdoor Fan** | | | | |
| Type | Propeller | Propeller | Propeller | Propeller |
| Number Used/Diameter (in.) | 2 / 26 | 2 / 26 | 2 / 26 | 2 / 26 |
| Drive Type/No. Speeds | Direct / 1 | Direct / 1 | Direct / 1 | Direct / 1 |
| cfm | 11,000 | 11,000 | 11,000 | 11,000 |
| Number Motors/hp | 2 / 0.50 | 2 / 0.50 | 2 / 0.50 | 2 / 0.50 |
| Motor rpm | 1,100 | 1,100 | 1,100 | 1,100 |
| **Indoor Fan** | | | | |
| Type | FC Centrifugal | FC Centrifugal | FC Centrifugal | FC Centrifugal |
| Number Used/Diameter (in.) | 1 / 15x15 | 1 / 15x15 | 1 / 18x18 | 1 / 18x18 |
| Drive Type/No. Speeds | Belt / 1 | Belt / 1 | Belt / 1 | Belt / 1 |
| Number Motors | 1 | 1 | 1 | 1 |
| Motor hp (Standard/Oversized)[e] | 3.0 / 5.0 | 3.0 / 5.0 | 3.0 / 5.0 or 7.5[f] | 3.0 / 5.0 or 7.5[f] |
| Motor rpm (Standard/Oversized) | 1,740 / 3,450 | 1,740 / 3,450 | 1,740 / 3,450 | 1,740 / 3,450 |
| Motor Frame Size (Standard/Oversized) | 56HZ / 56HZ | 56HZ / 56HZ | 184TZ / 56HZ/184TZ | 56HZ / 56HZ/184TZ |

**Table 3. General data—cooling 12½–15 tons standard efficiency (continued)**

| | 12½ Tons Downflow and Horizontal Units | | 15 Tons Downflow and Horizontal Units | |
|---|---|---|---|---|
| | TS*150G3,4,W,K | YS*150G3,4,W,K | TS*180G3,4,W,K | YS*180G3,4,W,K |
| **Filters** | | | | |
| Type Furnished[g] | Throwaway | Throwaway | Throwaway | Throwaway |
| Number Size Recommended | | | | |
| Downflow | (2)20x20x2<br>(4)20x25x2 | (2)20x20x2<br>(4)20x25x2 | (4)20x20x2<br>(4)20x25x2 | (4)20x20x2<br>(4)20x25x2 |
| Horizontal | (2)20x20x2<br>(4)20x25x2 | (2)20x20x2<br>(4)20x25x2 | (8)20x25x2 | (8)20x25x2 |
| **Refrigerant Charge (Pounds of R-410A)[h]** | | | | |
| Cir#1 / Cir#2 (DF) | 8.1/5.1 | 8.1/5.1 | 9.0/5.0 | 9.0/5.0 |
| Cir#1 / Cir#2 (HZ) | 8.1/5.2 | 8.1/5.2 | 9.2/5.1 | 9.2/5.1 |

(a) 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. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal cfm. Certified in accordance with the Unitary Large Equipment Certification Program, which is based on AHRI Standard 340/360.
(b) EER is rated at AHRI conditions and in accordance with AHRI Standard 210/240 or 340/360.
(c) Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI standard 210/240 or 340/360.
(d) Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270 or 370.
(e) For 380V/60Hz units, the oversized motor (Indoor Fan) is used as the standard motor. Refer to oversized motor data.
(f) Offered only as a field installed accessory.
(g) An optional 2-inch pleated filter is also available.
(h) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
* Indicates both downflow and horizontal units.

**Table 4. General data—heating—12½–15 tons standard efficiency**

| | 12½ Tons Downflow and Horizontal Units | | | 15 Tons Downflow and Horizontal Units | | |
|---|---|---|---|---|---|---|
| | Heating Performance[a] (Gas/Electric Only) | | | | | |
| **Heating Models** | **Low** | **High** | **Modulating Turn Down = 2.5:1** | **Low** | **High** | **Modulating Turn Down = 2.5:1** |
| **Heating Input (Btu/h)** | 150,000 | 250,000 | 350,000 | 250,000 | 350,000 | 350,000 |
| 1st Stage (Btu) | 100,000 | 175,000 | 140,000 | 175,000 | 250,000 | 140,000 |
| **Heating Output (Btu/h)** | 120,000 | 200,000 | 280,000 | 200,000 | 280,000 | 280,000 |
| 1st Stage (Btu) | 80,000 | 140,000 | 112,000 | 140,000 | 200,000 | 112,000 |
| **Steady State Efficiency%** | 80 | 80 | 80 | 80 | 80 | 80 |
| **No. Burners** | 1 | 1 | 1 | 1 | 1 | 1 |
| **No. Stages** | 2 | 2 | N/A | 2 | 2 | N/A |
| **Gas Supply Line Pressure (in. wc)** | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 |
| Natural or LP (minimum/maximum) | Natural or LP | Natural or LP | Natural Only | Natural or LP | Natural or LP | Natural Only |
| **Gas Connection Pipe Size (in.)** | 1/2 | 1/2 | 3/4 | 1/2 | 3/4 | 3/4 |

(a) 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 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.

**Table 5. General data—17½–20 tons standard efficiency**

| | 17½ Tons Downflow and Horizontal Units | | 20 Tons Downflow and Horizontal Units | |
|---|---|---|---|---|
| | TS*210G3,4,W,K | YS*210G3,4,W,K | TS*240G3,4,W,K | YS*240G3,4,W,K |
| **Cooling Performance[a]** | | | | |
| Gross Cooling Capacity | 210,000 | 210,000 | 259,000 | 259,000 |
| EER (Downflow/Horizontal)[b] | 11 | 11 | 10 | 10 |
| Nominal Airflow CFM / AHRI Rated CFM | 7,000 / 6,125 | 7,000 / 6,125 | 8,000 / 6,400 | 8,000 / 6,400 |
| AHRI Net Cooling Capacity | 196,000 | 196,000 | 240,000 | 240,000 |
| Integrated Energy Efficiency Ratio (IEER) (One Speed Fan / Multi or Variable Speed Fan)[c] | 12.4/13.2 | 12.2/13.2 | 11.6/12.4 | 11.4/12.4 |
| Percent Capacity @ part load (Stage 1/Stage 2) | 67/100 | 67/100 | 67/100 | 67/100 |
| System Power (kW) | 17.82 | 17.82 | 24.00 | 24.00 |
| **Compressor** | | | | |
| Number/Type | 2 / Scrolls | 2 / Scrolls | 2 / Scrolls | 2 / Scrolls |
| **Sound** | | | | |
| Outdoor Sound Rating (BELS)[d] | 9.4 | 9.4 | 9.4 | 9.4 |
| **Outdoor Coil** | | | | |
| Type | Microchannel | Microchannel | Microchannel | Microchannel |
| Coil Width (in.) | 1.00 | 1.00 | 1.0 | 1.0 |
| Face Area (sq. ft.) | 35.2 | 35.2 | 35.2 | 35.2 |
| Rows/FPI (DF/HZ) | 1/20 | 1/20 | 1/23 / 1/20 | 1/23 / 1/20 |
| **Indoor Coil** | | | | |
| Type | Microchannel | Microchannel | Microchannel | Microchannel |
| Tube Size (in.) ID | 1.00 | 1.00 | 1.00 | 1.00 |
| Face Area (sq. ft.) | 23.00 | 23.00 | 23.00 | 23.00 |
| Rows/FPI | 2 / 16 | 2 / 16 | 2 / 16 | 2 / 16 |
| Refrigerant Control | TXV | TXV | TXV | TXV |
| Drain Connection Number/Size (in.) | 1/1.00 NPT | 1/1.00 NPT | 1/1.00 NPT | 1/1.00 NPT |
| **Outdoor Fan** | | | | |
| Type | Propeller | Propeller | Propeller | Propeller |
| Number Used/Diameter (in.) | 2 / 26 | 2 / 26 | 2 / 26 | 2 / 26 |
| Drive Type/No. Speeds | Direct / 1 | Direct / 1 | Direct / 1 | Direct / 1 |
| cfm | 14,500 | 14,500 | 15,500 | 15,500 |
| Number Motors/hp | 2 / 1.0 | 2 / 1.0 | 2 / 1.0 | 2 / 1.0 |
| Motor rpm | 1125 | 1125 | 1125 | 1125 |
| **Indoor Fan** | | | | |
| Type | FC Centrifugal | FC Centrifugal | FC Centrifugal | FC Centrifugal |
| Number Used/Diameter (in.) | 1 / 18x18 | 1 / 18x18 | 1 / 18x18 | 1 / 18x18 |
| Drive Type/No. Speeds | Belt / 1 | Belt / 1 | Belt / 1 | Belt / 1 |
| Number Motors | 1 | 1 | 1 | 1 |
| Motor hp (Standard/Oversized)[e] | 5.0 / 7.5 | 5.0 / 7.5 | 5.0 / 7.5 | 5.0 / 7.5 |
| Motor rpm (Standard/Oversized) | 3,450 / 3,470 | 3,450 / 3,470 | 3,450 / 3,470 | 3,450 / 3,470 |
| Motor Frame Size (Standard/Oversized) | 56HZ / 184T | 56HZ / 184T | 56HZ / 184T | 56HZ / 184T |

**Table 5. General data—17½–20 tons standard efficiency (continued)**

| | 17½ Tons Downflow and Horizontal Units | | 20 Tons Downflow and Horizontal Units | |
|---|---|---|---|---|
| | TS*210G3,4,W,K | YS*210G3,4,W,K | TS*240G3,4,W,K | YS*240G3,4,W,K |
| **Filters** | | | | |
| Type Furnished[f] | Throwaway | Throwaway | Throwaway | Throwaway |
| Number Size Recommended | | | | |
| Downflow | (4)20x20x2<br>(4)20x25x2 | (4)20x20x2<br>(4)20x25x2 | (4)20x20x2<br>(4)20x25x2 | (4)20x20x2<br>(4)20x25x2 |
| Horizontal | (8)20x25x2 | (8)20x25x2 | (8)20x25x2 | (8)20x25x2 |
| **Refrigerant Charge (Pounds of R-410A)** | | | | |
| Cir#1/Cir#2 (DF) | 12.6/6.8 | 12.6/6.8 | 12.4/7.2 | 12.4/7.2 |
| Cir#1/Cir#2 (HZ) | 12.0/6.8 | 12.0/6.8 | 11.7/6.8 | 11.7/6.8 |

(a) 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. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal cfm. Certified in accordance with the Unitary Large Equipment Certification Program, which is based on AHRI Standard 340/360.
(b) EER is rated at AHRI conditions and in accordance with AHRI Standard 210/240 or 340/360.
(c) Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI standard 210/240 or 340/360.
(d) Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270 or 370.
(e) For 380V/60Hz units, the oversized motor (Indoor Fan) is used as the standard motor. Refer to oversized motor data.
(f) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
* Indicates both downflow and horizontal units.

**Table 6. General data—heating—17½–20 tons standard efficiency**

| | 17½ Tons Downflow and Horizontal Units | | | 20 Tons Downflow and Horizontal Units | | |
|---|---|---|---|---|---|---|
| | Heating Performance[a] (Gas/Electric Only) | | | | | |
| **Heating Models** | **Low** | **High** | **Modulating Turn Down = 2.5:1** | **Low** | **High** | **Modulating Turn Down = 2.5:1** |
| **Heating Input (Btu/h)** | 250,000 | 350,000 | 350,000 | 250,000 | 400,000 | 350,000 |
| 1st Stage (Btu) | 175,000 | 250,000 | 140,000 | 175,000 | 300,000 | 140,000 |
| **Heating Output (Btu/h)** | 200,000 | 280,000 | 280,000 | 200,000 | 320,000 | 280,000 |
| 1st Stage (Btu) | 140,000 | 200,000 | 112,000 | 140,000 | 240,000 | 112,000 |
| **Steady State Efficiency%** | 80 | 80 | 80 | 80 | 80 | 80 |
| **No. Burners** | 1 | 1 | 1 | 1 | 1 | 1 |
| **No. Stages** | 2 | 2 | N/A | 2 | 2 | N/A |
| **Gas Supply Line Pressure (in. wc)** | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 | 2.5/14.0 |
| Natural or LP (minimum/maximum) | Natural or LP | Natural or LP | Natural Only | Natural or LP | Natural or LP | Natural Only |
| **Gas Connection Pipe Size (in.)** | 1/2 | 3/4 | 3/4 | 1/2 | 3/4 | 3/4 |

(a) 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 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.

**Table 7. General data—25 tons standard efficiency**

| | 25 Tons Downflow and Horizontal Units | |
|---|---|---|
| | **TS*300G3,4,W,K** | **YS*300G3,4,W,K** |
| **Cooling Performance[a]** | | |
| Gross Cooling Capacity | 285,300 | 285,300 |
| EER (Downflow/Horizontal)[b] | 10 | 10 |
| Nominal Airflow CFM / AHRI Rated CFM | 10,000 / 8,000 | 10,000 / 8,000 |
| AHRI Net Cooling Capacity | 266,000 | 266,000 |
| Integrated Energy Efficiency Ratio (IEER) (One Speed Fan / Multi or Variable Speed Fan)[c] | 11.6/12.4 | 11.4/12.4 |
| Percent Capacity @ part load (Stage 1/Stage 2) | 66/100 | 66/100 |
| System Power (kW) | 27 | 27 |
| **Compressor** | | |
| Number/Type | 2 / Scrolls | 2 / Scrolls |
| **Sound** | | |
| Outdoor Sound Rating (BELS)[d] | 9.4 | 9.4 |
| **Outdoor Coil** | | |
| Type | Microchannel | Microchannel |
| Coil Width (in.) | 1.0 | 1.0 |
| Face Area (sq. ft.) | 35.2 | 35.2 |
| Rows/FPI (DF/HZ) | 1/23 / 1/20 | 1/23 / 1/20 |
| **Indoor Coil** | | |
| Type | Microchannel | Microchannel |
| Tube Size (in.) ID | 1.00 | 1.00 |
| Face Area (sq. ft.) | 23.00 | 23.00 |
| Rows/FPI | 2 / 16 | 2 / 16 |
| Refrigerant Control | TXV | TXV |
| Drain Connection Number/Size (in.) | 1/1.00 NPT | 1/1.00 NPT |
| **Outdoor Fan** | | |
| Type | Propeller | Propeller |
| Number Used/Diameter (in.) | 2 / 28 | 2 / 28 |
| Drive Type/No. Speeds | Direct / 1 | Direct / 1 |
| cfm | 16,100 | 16,100 |
| Number Motors/hp | 2 / 1.0 | 2 / 1.0 |
| Motor rpm | 1125 | 1125 |
| **Indoor Fan** | | |
| Type | FC Centrifugal | FC Centrifugal |
| Number Used/Diameter (in.) | 1 / 18x18 | 1 / 18x18 |
| Drive Type/No. Speeds | Belt / 1 | Belt / 1 |
| Number Motors | 1 | 1 |
| Motor hp (Standard/Oversized) | 7.5 / N/A | 7.5 / N/A |
| Motor rpm (Standard/Oversized) | 3,470 / N/A | 3,470 / N/A |
| Motor Frame Size (Standard/Oversized) | 184T / N/A | 184T / N/A |

**Table 7. General data—25 tons standard efficiency (continued)**

| | 25 Tons Downflow and Horizontal Units | |
|---|---|---|
| | **TS*300G3,4,W,K** | **YS*300G3,4,W,K** |
| **Filters** | | |
| Type Furnished[e] | Throwaway | Throwaway |
| Number Size Recommended | | |
| Downflow | (4)20x20x2 (4)20x25x2 | (4)20x20x2 (4)20x25x2 |
| Horizontal | (8)20x25x2 | (8)20x25x2 |
| **Refrigerant Charge (Pounds of R-410A)[f]** | | |
| Cir#1/Cir#2 (DF) | 12.5/6.7 | 12.5/6.7 |
| Cir#1/Cir#2 (HZ) | 11.7/6.7 | 11.7/6.7 |

(a) 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. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal cfm. Certified in accordance with the Unitary Large Equipment Certification Program, which is based on AHRI Standard 340/360.
(b) EER is rated at AHRI conditions and in accordance with AHRI Standard 210/240 or 340/360.
(c) Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI standard 210/240 or 340/360.
(d) Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270 or 370.
(e) An optional 2-inch pleated filter is also available.
(f) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
* Indicates both downflow and horizontal units.

**Table 8. General data—heating—25 tons**

| | 25 Tons Downflow and Horizontal Units | | |
|---|---|---|---|
| | **Heating Performance[a] (Gas/Electric Only)** | | |
| **Heating Models** | **Low** | **High** | **Modulating Turn Down = 2.5:1** |
| **Heating Input (Btu/h)** | 250,000 | 400,000 | 350,000 |
| 1st Stage (Btu) | 175,000 | 300,000 | 140,000 |
| **Heating Output (Btu/h)** | 200,000 | 320,000 | 280,000 |
| 1st Stage (Btu) | 140,000 | 240,000 | 112,000 |
| **Steady State Efficiency%** | 80 | 80 | 80 |
| **No. Burners** | 1 | 1 | 1 |
| **No. Stages** | 2 | 2 | N/A |
| **Gas Supply Line Pressure (in. wc)** | 2.5 / 14.0 | 2.5 / 14.0 | 2.5 / 14.0 |
| Natural or LP (minimum/maximum) | Natural or LP | Natural or LP | Natural Only |
| **Gas Connection Pipe Size (in.)** | ½ | ¾ | ¾ |

(a) 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 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.

**Table 9. General data—12½–15 tons high efficiency**

| | 12½ Tons Downflow and Horizontal Units | | 15 Tons Downflow and Horizontal Units | |
|---|---|---|---|---|
| | TH*150G3,4,W | YH*150G3,4,W | TH*180G3,4,W | YH*180G3,4,W |
| **Cooling Performance[a]** | | | | |
| Gross Cooling Capacity | 152,400 | 152,400 | 180,500 | 180,500 |
| EER[b] | 12.1 | 12.1 | 12.1 | 12.1 |
| Nominal CFM / AHRI Rated CFM | 5,000 / 4,000 | 5,000 / 4,000 | 6,000 / 5,250 | 6,000 / 5,250 |
| AHRI Net Cooling Capacity | 144,000 | 144,000 | 174,000 | 174,000 |
| Integrated Energy Efficiency Ratio (IEER) (One Speed Fan / Multi or Variable Speed Fan)[c] | 13.5/15.0 | 13.5/15.0 | 14.0/15.0 | 14.0/15.0 |
| Percent Capacity @ part load (Stage 1/Stage 2/Stage 3)[d] | 30/70/100 | 30/70/100 | 32/68/100 | 32/68/100 |
| System Power (kW) | 11.90 | 11.90 | 14.38 | 14.38 |
| **Compressor** | | | | |
| Number/Type | 2 / Scrolls | 2 / Scrolls | 2 / Scrolls | 2 / Scrolls |
| **Sound** | | | | |
| Outdoor Sound Rating (BELS)[e] | 9.2 | 9.2 | 9.2 | 9.2 |
| **Outdoor Coil** | | | | |
| Type | Microchannel | Microchannel | Microchannel | Microchannel |
| Coil Width (in.) | 1.0 | 1.0 | 1.0 | 1.0 |
| Face Area (sq. ft.) | 35.2 | 35.2 | 42.6 | 42.6 |
| Rows/FPI | 1 / 20 | 1 / 20 | 1 / 20 | 1 / 20 |
| **Indoor Coil** | | | | |
| Type | Hi-Performance | Hi-Performance | Hi-Performance | Hi-Performance |
| Tube Size (in.) ID | 0.3125 | 0.3125 | 0.3125 | 0.3125 |
| Face Area (sq. ft.) | 26.00 | 26.00 | 31.42 | 31.42 |
| Rows/FPI | 4 / 15 | 4 / 15 | 4 / 15 | 4 / 15 |
| Refrigerant Control | TXV | TXV | TXV | TXV |
| Drain Connection Number/Size (in.) | 1/1.00 NPT | 1/1.00 NPT | 1/1.00 NPT | 1/1.00 NPT |
| **Outdoor Fan** | | | | |
| Type | Propeller | Propeller | Propeller | Propeller |
| Number Used/Diameter (in.) | 2 / 26 | 2 / 26 | 2 / 26 | 2 / 26 |
| Drive Type/No. Speeds | Direct / 1 | Direct / 1 | Direct / 1 | Direct / 1 |
| cfm | 11,400 | 11,400 | 11,700 | 11,700 |
| Number Motors/hp | 2 / 0.50 | 2 / 0.50 | 2 / 0.50 | 2 / 0.50 |
| Motor rpm | 1,100 | 1,100 | 1,100 | 1,100 |
| **Indoor Fan** | | | | |
| Type | FC Centrifugal | FC Centrifugal | FC Centrifugal | FC Centrifugal |
| Number Used/Diameter (in.) | 1 / 18x18 | 1 / 18x18 | 1 / 18x18 | 1 / 18x18 |
| Drive Type/No. Speeds | Belt / 1 | Belt / 1 | Belt / 1 | Belt / 1 |
| Number Motors | 1 | 1 | 1 | 1 |
| Motor hp (Standard/Oversized) | 3.0 / 5.0 | 3.0 / 5.0 | 3.0 / 5.0 | 3.0 / 5.0 |
| Motor rpm (Standard/Oversized) | 1,740 / 3,450 | 1,740 / 3,450 | 1,740 / 3,450 | 1,740 / 3,450 |
| Motor Frame Size (Standard/Oversized) | 145T / 145T | 145T / 145T | 145T / 145T | 145T / 145T |

**Table 9. General data—12½–15 tons high efficiency (continued)**

| | 12½ Tons Downflow and Horizontal Units | | 15 Tons Downflow and Horizontal Units | |
|---|---|---|---|---|
| | TH*150G3,4,W | YH*150G3,4,W | TH*180G3,4,W | YH*180G3,4,W |
| **Filters** | | | | |
| Type Furnished(f) | Throwaway | Throwaway | Throwaway | Throwaway |
| Number Size Recommended | | | | |
| Downflow | (4)20x20x2 (4)20x25x2 | (4)20x20x2 (4)20x25x2 | (8)20x20x2 (4)20x16x2 | (8)20x20x2 (4)20x16x2 |
| Horizontal | (8)20x25x2 | (8)20x25x2 | (12)20x20x2 | (12)20x20x2 |
| **Refrigerant Charge (Pounds of R-410A) (g)** | | | | |
| Downflow and Horizontal (Cir#1/Cir#2) | 12.5/7.1 | 12.5/7.1 | 13.0/8.5 | 13.0/8.5 |
| Optional Hot Gas Reheat Coil (Cir#1/Cir#2) | 9.2 / 6.9 | 9.2 / 6.9 | 10.9 / 8.9 | 10.9 / 8.9 |

(a) 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. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal cfm. Certified in accordance with the Unitary Large Equipment Certification Program, which is based on AHRI Standard 340/360.
(b) EER is rated at AHRI conditions and in accordance with AHRI Standard 210/240 or 340/360.
(c) Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI standard 210/240 or 340/360.
(d) 3 stages not available with Reheat models.
(e) Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270 or 370.
(f) An optional 2 inch pleated filter is also available.
(g) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
* Indicates both downflow and horizontal units.

**Table 10. General data—heating—12½-15 tons high efficiency**

| | 12½ Tons Downflow and Horizontal Units | | | 15 Tons Downflow and Horizontal Units | | |
|---|---|---|---|---|---|---|
| | Heating Performance(a) (Gas/Electric Only) | | | | | |
| **Heating Models** | **Low** | **High** | **Modulating Turn Down = 2.5:1** | **Low** | **High** | **Modulating Turn Down = 2.5:1** |
| **Heating Input (Btu/h)** | 150,000 | 250,000 | 350,000 | 250,000 | 350,000 | 350,000 |
| 1st Stage (Btu) | 100,000 | 175,000 | 140,000 | 175,000 | 250,000 | 140,000 |
| **Heating Output (Btu/h)** | 120,000 | 200,000 | 280,000 | 200,000 | 280,000 | 280,000 |
| 1st Stage (Btu) | 80,000 | 140,000 | 112,000 | 140,000 | 200,000 | 112,000 |
| **Steady State Efficiency%** | 80 | 80 | 80 | 80 | 80 | 80 |
| **No. Burners** | 1 | 1 | 1 | 1 | 1 | 1 |
| **No. Stages** | 2 | 2 | N/A | 2 | 2 | N/A |
| **Gas Supply Line Pressure (in. wc)** | 2.5 / 14.0 | 2.5 / 14.0 | 2.5 / 14.0 | 2.5 / 14.0 | 2.5 / 14.0 | 2.5 / 14.0 |
| Natural or LP (minimum/maximum) | | | Natural Only | | | Natural Only |
| **Gas Connection Pipe Size (in.)** | ½ | ½ | ¾ | ½ | ¾ | ¾ |

(a) 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 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.

**Table 11. General data—17½–20 tons high efficiency**

| | 17½ Tons Downflow and Horizontal Units | | 20 Tons Downflow and Horizontal Units | |
|---|---|---|---|---|
| | **TH*210G3,4,W** | **YH*210G3,4,W** | **TH*240G3,4,W** | **YH*240G3,4,W** |
| **Cooling Performance[a]** | | | | |
| Gross Cooling Capacity | 214,800 | 214,800 | 248,500 | 248,500 |
| EER[b] | 11.8 | 11.8 | 11.0 | 11.0 |
| Nominal CFM / AHRI Rated CFM | 7,000 / 5,600 | 7,000 / 5,600 | 8,000 / 6,400 | 8,000 / 6,400 |
| AHRI Net Cooling Capacity | 204,000 | 204,000 | 234,000 | 234,000 |
| Integrated Energy Efficiency Ratio (IEER) (One Speed Fan / Multi or Variable Speed Fan)[c] | 13.0/14.0 | 13.0/14.0 | 12.4/14.0 | 12.4/14.0 |
| Percent Capacity @ part load (Stage 1/Stage 2/Stage 3)[d] | 31/69/100 | 31/69/100 | 30/70/100 | 30/70/100 |
| System Power (kW) | 17.29 | 17.29 | 21.27 | 21.27 |
| **Compressor** | | | | |
| Number/Type | 2 / Scrolls | 2 / Scrolls | 2 / Scrolls | 2 / Scrolls |
| **Sound** | | | | |
| Outdoor Sound Rating (BELS)[e] | 9.2 | 9.2 | 9.4 | 9.4 |
| **Outdoor Coil** | | | | |
| Type | Microchannel | Microchannel | Microchannel | Microchannel |
| Coil Width (in.) | 1.0 | 1.0 | 1.0 | 1.0 |
| Face Area (sq. ft.) | 42.6 | 42.6 | 42.6 | 42.6 |
| Rows/FPI | 1 / 20 | 1 / 20 | 1 / 20 | 1 / 20 |
| **Indoor Coil** | | | | |
| Type | Hi-Performance | Hi-Performance | Hi-Performance | Hi-Performance |
| Tube Size (in.) ID | 0.3125 | 0.3125 | 0.3125 | 0.3125 |
| Face Area (sq. ft.) | 31.42 | 31.42 | 31.42 | 31.42 |
| Rows/FPI | 4 / 15 | 4 / 15 | 4 / 15 | 4 / 15 |
| Refrigerant Control | TXV | TXV | TXV | TXV |
| Drain Connection Number/Size (in.) | 1/1.00 NPT | 1/1.00 NPT | 1/1.00 NPT | 1/1.00 NPT |
| **Outdoor Fan** | | | | |
| Type | Propeller | Propeller | Propeller | Propeller |
| Number Used/Diameter (in.) | 2 / 26 | 2 / 26 | 2 / 28 | 2 / 28 |
| Drive Type/No. Speeds | Direct / 1 | Direct / 1 | Direct / 1 | Direct / 1 |
| cfm | 15,800 | 15,800 | 16,500 | 16,500 |
| Number Motors/hp | 2 / 1.0 | 2 / 1.0 | 2 / 1.0 | 2 / 1.0 |
| Motor rpm | 1,125 | 1,125 | 1,125 | 1,125 |
| **Indoor Fan** | | | | |
| Type | FC Centrifugal | FC Centrifugal | FC Centrifugal | FC Centrifugal |
| Number Used/Diameter (in.) | 1 / 18x18 | 1 / 18x18 | 1 / 18x18 | 1 / 18x18 |
| Drive Type/No. Speeds | Belt / 1 | Belt / 1 | Belt / 1 | Belt / 1 |
| Number Motors | 1 | 1 | 1 | 1 |
| Motor hp (Standard/Oversized) | 5.0 / 7.5 | 5.0 / 7.5 | 5.0 / 7.5 | 5.0 / 7.5 |
| Motor rpm (Standard/Oversized) | 3,450 / 3,470 | 3,450 / 3,470 | 3,450 / 3,470 | 3,450 / 3,470 |
| Motor Frame Size (Standard/Oversized) | 145T / 184T | 145T / 184T | 145T / 184T | 145T / 184T |

**Table 11. General data—17½–20 tons high efficiency (continued)**

| | 17½ Tons Downflow and Horizontal Units | | 20 Tons Downflow and Horizontal Units | |
|---|---|---|---|---|
| | TH*210G3,4,W | YH*210G3,4,W | TH*240G3,4,W | YH*240G3,4,W |
| **Filters** | | | | |
| Type Furnished(f) | Throwaway | Throwaway | Throwaway | Throwaway |
| Number Size Recommended | | | | |
| Downflow | (8)20x20x2<br>(4)20x16x2 | (8)20x20x2<br>(4)20x16x2 | (8)20x20x2<br>(4)20x16x2 | (8)20x20x2<br>(4)20x16x2 |
| Horizontal | (12)20x20x2 | (12)20x20x2 | (12)20x20x2 | (12)20x20x2 |
| **Refrigerant Charge (Pounds of R-410A)(g)** | | | | |
| Downflow and Horizontal (Cir#1/Cir#2) | 14.0 / 7.3 | 14.0 / 7.3 | 15.5 / 7.5 | 15.5 / 7.5 |
| Optional Hot Gas Reheat Coil (Cir#1/Cir#2) | 12.2/8.9 | 12.2/8.9 | 11.9 / 9.6 | 11.9 / 9.6 |

(a) 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. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal cfm. Certified in accordance with the Unitary Large Equipment Certification Program, which is based on AHRI Standard 340/360.
(b) EER is rated at AHRI conditions and in accordance with AHRI Standard 210/240 or 340/360.
(c) Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI standard 210/240 or 340/360.
(d) 3 stages not available with Reheat models.
(e) Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270 or 370.
(f) An optional 2 inch pleated filter is also available.
(g) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
* Indicates both downflow and horizontal units.

**Table 12. General data—heating—17½–20 tons high efficiency**

| | 17½ Tons Downflow and Horizontal Units | | | 20 Tons Downflow and Horizontal Units | | |
|---|---|---|---|---|---|---|
| | Heating Performance(a) (Gas/Electric Only) | | | | | |
| **Heating Models** | **Low** | **High** | **Modulating Turn Down = 2.5:1** | **Low** | **High** | **Modulating Turn Down = 2.5:1** |
| **Heating Input (Btu/h)** | 250,000 | 350,000 | 350,000 | 250,000 | 400,000 | 350,000 |
| 1st Stage (Btu) | 175,000 | 250,000 | 140,000 | 175,000 | 300,000 | 140,000 |
| **Heating Output (Btu/h)** | 200,000 | 280,000 | 280,000 | 200,000 | 320,000 | 280,000 |
| 1st Stage (Btu) | 140,000 | 200,000 | 112,000 | 140,000 | 240,000 | 112,000 |
| **Steady State Efficiency %** | 80 | 80 | 80 | 80 | 80 | 80 |
| **No. Burners** | 1 | 1 | 1 | 1 | 1 | 1 |
| **No. Stages** | 2 | 2 | N/A | 2 | 2 | N/A |
| **Gas Supply Line Pressure (in. wc)** | 2.5 / 14.0 | 2.5 / 14.0 | 2.5/14.0 | 2.5 / 14.0 | 2.5 / 14.0 | 2.5/14.0 |
| Natural or LP (minimum/maximum) | | | Natural Only | | | Natural Only |
| **Gas Connection Pipe Size (in.)** | ½ | ¾ | ¾ | ½ | ¾ | ¾ |

(a) 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 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.

**Table 13. General data—25 tons high efficiency**

| | 25 Tons Downflow and Horizontal Units | |
|---|---|---|
| | **TH*300G3,4,W** | **YH*300G3,4,W** |
| **Cooling Performance[a]** | | |
| Gross Cooling Capacity | 292,300 | 292,300 |
| EER[b] | 10.6 | 10.6 |
| Nominal CFM / AHRI Rated CFM | 10,000 / 8,000 | 10,000 / 8,000 |
| AHRI Net Cooling Capacity | 274,000 | 274,000 |
| Integrated Energy Efficiency Ratio (IEER) (One Speed Fan / Multi or Variable Speed Fan)[c] | 12.4/15.0 | 12.4/15.0 |
| Percent Capacity @ part load (Stage 1/Stage 2/Stage 3/Stage 4)[d] | 25/50/75/100 | 25/50/75/100 |
| System Power (kW) | 25.85 | 25.85 |
| **Compressor** | | |
| Number[e]/Type | 3 / Scrolls | 3 / Scrolls |
| **Sound** | | |
| Outdoor Sound Rating (BELS)[f] | 9.4 | 9.4 |
| **Outdoor Coil** | | |
| Type | Microchannel | Microchannel |
| Coil Width (in.) | 1.0 | 1.0 |
| Face Area (sq. ft.) | 42.58 | 42.58 |
| Rows/FPI | 1 / 20 | 1 / 20 |
| **Indoor Coil** | | |
| Type | Hi-Performance | Hi-Performance |
| Tube Size (in.) ID | 0.3125 | 0.3125 |
| Face Area (sq. ft.) | 31.42 | 31.42 |
| Rows/FPI | 4 / 15 | 4 / 15 |
| Refrigerant Control | TXV | TXV |
| Drain Connection Number/Size (in.) | 1/1.00 NPT | 1/1.00 NPT |
| **Outdoor Fan** | | |
| Type | Propeller | Propeller |
| Number Used/Diameter (in.) | 2 / 28 | 2 / 28 |
| Drive Type/No. Speeds | Direct / 1 | Direct / 1 |
| cfm | 16,500 | 16,500 |
| Number Motors/hp | 2 / 1.0 | 2 / 1.0 |
| Motor rpm | 1,125 | 1,125 |
| **Indoor Fan** | | |
| Type | FC Centrifugal | FC Centrifugal |
| Number Used/Diameter (in.) | 1 / 18x18 | 1 / 18x18 |
| Drive Type/No. Speeds | Belt / 1 | Belt / 1 |
| Number Motors | 1 | 1 |
| Motor hp (Standard) | 7.5 | 7.5 |
| Motor rpm (Standard) | 3,470 | 3,470 |
| Motor Frame Size (Standard) | 184T | 184T |

**Table 13. General data—25 tons high efficiency (continued)**

| | 25 Tons Downflow and Horizontal Units | |
|---|---|---|
| | **TH*300G3,4,W** | **YH*300G3,4,W** |
| **Filters** | | |
| Type Furnished[g] | Throwaway | Throwaway |
| Number Size Recommended | | |
| Downflow | (8)20x20x2 (4)20x16x2 | (8)20x20x2 (4)20x16x2 |
| Horizontal | (12)20x20x2 | (12)20x20x2 |
| **Refrigerant Charge (Pounds of R-410A)[h]** | | |
| Downflow and Horizontal (Cir#1/Cir#2) | 11.8 / 10.6 | 11.8 / 10.6 |
| Optional Hot Gas Reheat Coil (Cir#1/Cir#2) | 12.7 / 11.4 | 12.7 / 11.4 |

(a) 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. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal cfm. Certified in accordance with the Unitary Large Equipment Certification Program, which is based on AHRI Standard 340/360.
(b) EER is rated at AHRI conditions and in accordance with AHRI Standard 210/240 or 340/360.
(c) Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI standard 210/240 or 340/360.
(d) 3 and 4 stages not available with Reheat models.
(e) 2 compressors for Reheat Model
(f) Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270 or 370.
(g) An optional 2-inch pleated filter is also available.
(h) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
* Indicates both downflow and horizontal units.

**Table 14. General data—heating—25 tons high efficiency**

| | 25 Tons Downflow and Horizontal Units | | |
|---|---|---|---|
| | **Heating Performance[a] (Gas/Electric Only)** | | |
| **Heating Models** | **Low** | **High** | **Modulating Turn Down = 2.5:1** |
| **Heating Input (Btu/h)** | 250,000 | 400,000 | 350,000 |
| 1st Stage (Btu) | 175,000 | 300,000 | 140,000 |
| **Heating Output (Btu/h)** | 200,000 | 320,000 | 280,000 |
| 1st Stage (Btu) | 140,000 | 240,000 | 112,000 |
| **Steady State Efficiency%** | 80 | 80 | 80 |
| **No. Burners** | 1 | 1 | 1 |
| **No. Stages** | 2 | 2 | N/A |
| **Gas Supply Line Pressure (in. wc)** | 2.5 / 14.0 | 2.5 / 14.0 | 2.5/14.0 |
| Natural or LP (minimum/maximum) | | | Natural Only |
| **Gas Connection Pipe Size (in.)** | ½ | ¾ | ¾ |

(a) 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 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.

# Performance Data

**Table 15. Gross cooling capacities 12½ tons three phase standard efficiency T/YS*150G3,4,W,K**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 4000 | 75 | 135 | 113 | 152 | 87 | 166 | 59 | 128 | 110 | 144 | 84 | 157 | 56 | 121.3 | 107.0 | 136.2 | 81.0 | 148.3 | 52.7 |
| | 80 | 135 | 134 | 152 | 109 | 166 | 81 | 128 | 128 | 144 | 106 | 158 | 78 | 121.5 | 121.4 | 136.2 | 103.0 | 148.6 | 75.1 |
| | 85 | 140 | 140 | 151 | 131 | 166 | 104 | 134 | 134 | 144 | 128 | 158 | 101 | 128.7 | 128.7 | 136.1 | 124.8 | 148.9 | 97.4 |
| | 90 | 148 | 148 | 151 | 151 | 166 | 126 | 142 | 142 | 144 | 144 | 158 | 123 | 136.0 | 136.0 | 136.2 | 136.1 | 148.8 | 119.4 |
| 4500 | 75 | 137 | 121 | 154 | 92 | 168 | 60 | 131 | 118 | 146 | 89 | 160 | 57 | 123.3 | 114.8 | 138.2 | 85.4 | 150.0 | 53.7 |
| | 80 | 138 | 137 | 154 | 117 | 169 | 85 | 131 | 131 | 146 | 113 | 160 | 82 | 125.1 | 125.1 | 138.1 | 110.2 | 150.4 | 78.9 |
| | 85 | 145 | 145 | 154 | 141 | 169 | 110 | 139 | 139 | 146 | 138 | 160 | 107 | 133.0 | 133.0 | 137.8 | 134.5 | 150.7 | 104.0 |
| | 90 | 153 | 153 | 154 | 154 | 169 | 135 | 147 | 147 | 147 | 147 | 160 | 132 | 140.3 | 140.3 | 140.5 | 140.5 | 150.5 | 128.7 |
| 5000 | 75 | 139 | 129 | 156 | 96 | 170 | 61 | 132 | 126 | 148 | 93 | 161 | 58 | 124.7 | 122.3 | 139.7 | 89.7 | 151.4 | 54.7 |
| | 80 | 141 | 141 | 156 | 124 | 171 | 89 | 135 | 135 | 148 | 121 | 162 | 86 | 128.6 | 128.6 | 139.6 | 117.2 | 151.9 | 82.7 |
| | 85 | 149 | 149 | 156 | 151 | 171 | 117 | 143 | 143 | 148 | 147 | 162 | 114 | 136.5 | 136.5 | 139.2 | 138.9 | 152.1 | 110.5 |
| | 90 | 157 | 157 | 157 | 157 | 171 | 144 | 151 | 151 | 151 | 151 | 162 | 141 | 143.7 | 143.7 | 143.9 | 143.9 | 151.9 | 137.9 |
| 5500 | 75 | 141 | 137 | 158 | 101 | 172 | 62 | 133 | 133 | 150 | 97 | 162 | 59 | 125.8 | 125.6 | 140.9 | 94.1 | 152.4 | 55.7 |
| | 80 | 144 | 144 | 158 | 131 | 172 | 93 | 138 | 138 | 149 | 128 | 163 | 90 | 131.5 | 131.5 | 140.8 | 124.2 | 153.1 | 86.5 |
| | 85 | 153 | 153 | 157 | 157 | 173 | 124 | 146 | 146 | 149 | 149 | 163 | 121 | 139.4 | 139.4 | 140.3 | 140.1 | 153.6 | 117.0 |
| | 90 | 161 | 161 | 161 | 161 | 172 | 154 | 154 | 154 | 154 | 154 | 163 | 151 | 146.4 | 146.4 | 146.5 | 146.5 | 152.8 | 147.1 |
| 6000 | 75 | 142 | 142 | 159 | 105 | 173 | 63 | 135 | 134 | 151 | 102 | 163 | 60 | 126.8 | 126.5 | 141.9 | 98.4 | 153.3 | 56.6 |
| | 80 | 147 | 147 | 159 | 138 | 174 | 97 | 141 | 141 | 150 | 135 | 164 | 94 | 134.0 | 134.0 | 141.6 | 131.2 | 154.2 | 90.3 |
| | 85 | 156 | 156 | 158 | 158 | 174 | 130 | 149 | 149 | 150 | 150 | 164 | 127 | 141.9 | 141.9 | 142.0 | 142.0 | 153.9 | 123.8 |
| | 90 | 164 | 164 | 164 | 164 | 173 | 163 | 157 | 157 | 157 | 157 | 164 | 160 | 148.9 | 148.9 | 149.0 | 149.0 | 153.3 | 152.9 |
| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | 120 | | | | | | 125 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 4000 | 75 | 114.1 | 103.8 | 127.9 | 77.7 | 138.5 | 49.3 | 110.4 | 102.1 | 123.6 | 76.0 | 133.4 | 47.5 | 106.5 | 100.4 | 119.0 | 74.1 | 127.9 | 45.6 |
| | 80 | 115.3 | 115.3 | 127.9 | 99.7 | 138.9 | 71.7 | 112.3 | 112.3 | 123.6 | 98.0 | 133.7 | 69.9 | 109.1 | 109.1 | 119.1 | 96.2 | 128.3 | 68.1 |
| | 85 | 122.6 | 122.6 | 127.8 | 121.5 | 139.2 | 94.0 | 119.3 | 119.3 | 123.3 | 119.7 | 134.1 | 92.3 | 115.7 | 115.7 | 118.7 | 117.8 | 128.8 | 90.4 |
| | 90 | 129.4 | 129.4 | 129.5 | 129.5 | 139.2 | 116.0 | 125.8 | 125.8 | 125.9 | 125.9 | 134.1 | 114.3 | 121.9 | 121.9 | 122.0 | 122.0 | 128.7 | 112.4 |
| 4500 | 75 | 115.8 | 111.5 | 129.6 | 82.0 | 140.0 | 50.3 | 111.8 | 109.7 | 125.1 | 80.3 | 134.6 | 48.4 | 107.8 | 107.6 | 120.4 | 78.5 | 128.9 | 46.5 |
| | 80 | 119.0 | 119.0 | 129.5 | 106.8 | 140.4 | 75.5 | 115.8 | 115.8 | 125.0 | 105.0 | 135.1 | 73.7 | 112.3 | 112.3 | 120.3 | 103.2 | 129.5 | 71.8 |
| | 85 | 126.4 | 126.4 | 129.2 | 129.0 | 140.7 | 100.6 | 122.8 | 122.8 | 124.7 | 124.5 | 135.3 | 98.7 | 119.0 | 119.0 | 120.0 | 119.8 | 129.7 | 96.8 |
| | 90 | 133.1 | 133.1 | 133.2 | 133.2 | 140.5 | 125.2 | 129.1 | 129.1 | 129.3 | 129.3 | 135.2 | 123.4 | 124.9 | 124.9 | 125.0 | 125.0 | 129.5 | 121.5 |
| 5000 | 75 | 116.9 | 116.7 | 130.9 | 86.4 | 141.0 | 51.2 | 113.0 | 112.8 | 126.3 | 84.6 | 135.5 | 49.4 | 108.9 | 108.7 | 121.4 | 82.8 | 129.7 | 47.5 |
| | 80 | 122.1 | 122.1 | 130.8 | 113.8 | 141.7 | 79.3 | 118.7 | 118.7 | 126.1 | 112.0 | 136.3 | 77.5 | 114.9 | 114.9 | 121.3 | 110.2 | 130.6 | 75.6 |
| | 85 | 129.5 | 129.5 | 130.4 | 130.2 | 141.8 | 107.0 | 125.7 | 125.7 | 125.9 | 125.8 | 136.3 | 105.2 | 121.6 | 121.6 | 121.7 | 121.7 | 130.5 | 103.3 |
| | 90 | 135.9 | 135.9 | 136.0 | 136.0 | 141.5 | 134.4 | 131.6 | 131.6 | 131.7 | 131.7 | 135.9 | 132.4 | 127.0 | 127.0 | 127.1 | 127.1 | 130.0 | 129.5 |
| 5500 | 75 | 118.0 | 117.8 | 131.9 | 90.7 | 141.8 | 52.1 | 114.0 | 113.8 | 127.2 | 88.9 | 136.2 | 50.3 | 109.9 | 109.8 | 122.2 | 87.1 | 130.3 | 48.4 |
| | 80 | 124.7 | 124.7 | 131.7 | 120.8 | 142.7 | 83.0 | 121.0 | 121.0 | 127.0 | 119.0 | 137.3 | 81.2 | 117.1 | 117.1 | 121.9 | 117.1 | 131.5 | 79.4 |
| | 85 | 132.0 | 132.0 | 132.1 | 132.1 | 142.6 | 113.5 | 127.9 | 127.9 | 128.0 | 128.0 | 137.0 | 111.6 | 123.6 | 123.6 | 123.7 | 123.7 | 131.1 | 109.7 |
| | 90 | 138.2 | 138.2 | 138.3 | 138.3 | 142.0 | 141.6 | 133.7 | 133.7 | 133.8 | 133.8 | 136.3 | 135.9 | 128.8 | 128.8 | 128.9 | 128.9 | 130.3 | 130.0 |
| 6000 | 75 | 118.9 | 118.8 | 132.7 | 94.9 | 142.5 | 53.1 | 115.3 | 115.3 | 127.8 | 93.1 | 136.8 | 51.2 | 111.6 | 111.6 | 122.8 | 91.3 | 130.8 | 49.3 |
| | 80 | 126.8 | 126.8 | 132.4 | 127.7 | 143.7 | 86.9 | 123.0 | 123.0 | 127.4 | 125.8 | 138.0 | 85.1 | 118.9 | 118.9 | 122.2 | 121.9 | 132.0 | 83.1 |
| | 85 | 134.0 | 134.0 | 134.1 | 134.1 | 143.2 | 119.9 | 129.7 | 129.7 | 129.8 | 129.8 | 137.5 | 118.1 | 125.2 | 125.2 | 125.3 | 125.3 | 131.5 | 116.2 |
| | 90 | 140.3 | 140.3 | 140.3 | 140.3 | 142.4 | 142.0 | 135.5 | 135.5 | 135.6 | 135.6 | 136.7 | 136.4 | 130.4 | 130.4 | 130.4 | 130.4 | 130.8 | 130.5 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain **NET** cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. * Stands for both downflow and horizontal unit.

**Table 16. Gross cooling capacities 15 tons three phase standard efficiency T/YS*180G3,4,W,K**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature 85 / Entering Wet Bulb 61 | | 67 | | 73 | | 95 / 61 | | 67 | | 73 | | 105 / 61 | | 67 | | 73 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 4800 | 75 | 163.2 | 138.4 | 185.0 | 107.5 | 206.8 | 74.7 | 155.6 | 134.9 | 176.1 | 103.9 | 195.7 | 70.7 | 147.4 | 131.1 | 166.3 | 99.8 | 183.0 | 66.1 |
| | 80 | 162.9 | 162.6 | 185.1 | 134.2 | 206.9 | 101.8 | 155.4 | 155.2 | 176.2 | 130.5 | 195.8 | 97.7 | 147.3 | 147.0 | 166.3 | 126.5 | 183.1 | 93.1 |
| | 85 | 164.5 | 164.4 | 185.0 | 160.7 | 206.9 | 128.7 | 157.8 | 157.7 | 176.0 | 157.1 | 195.9 | 124.6 | 151.2 | 151.2 | 166.2 | 152.9 | 183.2 | 120.0 |
| | 90 | 173.3 | 173.3 | 184.6 | 184.2 | 207.0 | 155.3 | 167.1 | 167.1 | 175.7 | 175.4 | 195.9 | 151.3 | 160.1 | 160.1 | 166.1 | 165.8 | 183.2 | 146.7 |
| 5400 | 75 | 167.9 | 148.7 | 190.1 | 113.9 | 211.1 | 76.6 | 159.8 | 145.1 | 180.5 | 110.0 | 198.9 | 72.2 | 150.9 | 141.1 | 170.0 | 105.8 | 185.0 | 67.4 |
| | 80 | 167.5 | 167.2 | 190.1 | 143.8 | 211.2 | 107.0 | 159.6 | 159.3 | 180.5 | 140.0 | 199.0 | 102.7 | 151.0 | 150.7 | 170.0 | 135.8 | 185.2 | 97.8 |
| | 85 | 170.5 | 170.5 | 189.9 | 173.5 | 211.3 | 137.2 | 164.2 | 164.2 | 180.3 | 169.6 | 199.1 | 132.9 | 157.1 | 157.1 | 169.8 | 165.4 | 185.3 | 128.0 |
| | 90 | 180.7 | 180.7 | 189.4 | 189.1 | 211.3 | 167.2 | 174.0 | 174.0 | 180.0 | 179.7 | 199.2 | 162.9 | 166.3 | 166.3 | 169.8 | 169.5 | 185.4 | 158.0 |
| 6000 | 75 | 171.7 | 158.9 | 194.2 | 120.0 | 214.3 | 78.2 | 163.1 | 155.1 | 184.1 | 115.9 | 201.1 | 73.6 | 153.9 | 151.0 | 173.0 | 111.6 | 186.5 | 68.6 |
| | 80 | 171.3 | 171.0 | 194.2 | 153.2 | 214.4 | 112.0 | 162.8 | 162.6 | 184.1 | 149.2 | 201.3 | 107.4 | 154.0 | 153.9 | 173.0 | 144.9 | 186.6 | 102.3 |
| | 85 | 176.6 | 176.6 | 193.8 | 186.2 | 214.4 | 145.5 | 169.8 | 169.8 | 183.6 | 181.7 | 201.4 | 141.0 | 162.2 | 162.2 | 172.5 | 172.1 | 186.7 | 135.9 |
| | 90 | 187.2 | 187.2 | 193.3 | 192.9 | 214.5 | 178.8 | 179.9 | 179.9 | 183.4 | 183.2 | 201.4 | 174.3 | 171.6 | 171.6 | 172.9 | 172.8 | 186.6 | 169.2 |
| 6600 | 75 | 174.9 | 168.9 | 197.5 | 125.9 | 216.5 | 79.6 | 165.9 | 164.6 | 187.0 | 121.7 | 202.5 | 74.8 | 156.2 | 155.8 | 175.3 | 117.2 | 188.2 | 70.0 |
| | 80 | 174.4 | 174.2 | 197.5 | 162.5 | 216.7 | 116.8 | 165.8 | 165.7 | 186.9 | 158.3 | 202.6 | 112.0 | 156.7 | 156.6 | 175.2 | 153.8 | 188.3 | 107.1 |
| | 85 | 181.9 | 181.9 | 196.9 | 196.4 | 216.8 | 153.7 | 174.7 | 174.7 | 186.3 | 185.8 | 202.7 | 148.9 | 166.5 | 166.5 | 174.7 | 174.3 | 188.4 | 144.0 |
| | 90 | 192.8 | 192.8 | 196.4 | 196.1 | 216.8 | 190.3 | 184.9 | 184.9 | 186.5 | 186.3 | 202.9 | 185.5 | 176.0 | 176.0 | 176.1 | 176.1 | 188.3 | 180.6 |
| 7200 | 75 | 177.6 | 177.1 | 200.3 | 131.7 | 218.1 | 80.9 | 168.3 | 167.8 | 189.3 | 127.4 | 204.3 | 76.2 | 158.2 | 157.8 | 177.1 | 122.8 | 189.5 | 71.3 |
| | 80 | 177.2 | 177.0 | 200.3 | 171.5 | 218.3 | 121.4 | 168.5 | 168.3 | 189.2 | 167.3 | 204.4 | 116.8 | 160.2 | 160.2 | 177.0 | 162.6 | 189.7 | 111.8 |
| | 85 | 186.6 | 186.6 | 199.4 | 198.9 | 218.4 | 161.7 | 178.9 | 178.9 | 188.4 | 187.9 | 204.5 | 157.0 | 170.3 | 170.3 | 176.4 | 175.9 | 189.8 | 152.1 |
| | 90 | 197.7 | 197.7 | 199.4 | 199.2 | 218.4 | 201.7 | 189.3 | 189.3 | 189.4 | 189.2 | 204.2 | 196.9 | 179.6 | 179.6 | 179.6 | 179.6 | 189.5 | 188.8 |

| Air Flow cfm | Ent DB (°F) | Ambient Temperature 115 / Entering Wet Bulb 61 | | 67 | | 73 | | 120 / 61 | | 67 | | 73 | | 125 / 61 | | 67 | | 73 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 4800 | 75 | 138.6 | 127.2 | 155.7 | 95.6 | 168.4 | 61.0 | 134.2 | 125.2 | 150.1 | 93.3 | 160.9 | 58.4 | - | - | 144.2 | 91.0 | 153.4 | 55.8 |
| | 80 | 138.8 | 138.5 | 155.7 | 122.2 | 168.6 | 88.0 | 134.5 | 134.3 | 150.1 | 120.0 | 161.0 | 85.4 | - | - | 144.3 | 117.7 | 153.5 | 82.8 |
| | 85 | 144.0 | 144.0 | 155.6 | 148.6 | 168.7 | 114.9 | 140.2 | 140.2 | 150.0 | 146.4 | 161.1 | 112.3 | 136.3 | 136.3 | 144.2 | 143.7 | 153.6 | 109.7 |
| | 90 | 152.4 | 152.4 | 155.7 | 155.5 | 168.8 | 141.6 | 148.2 | 148.2 | 150.3 | 150.0 | 161.1 | 138.9 | 143.8 | 143.8 | 144.8 | 144.7 | 153.7 | 136.4 |
| 5400 | 75 | 141.6 | 137.0 | 158.7 | 101.3 | 170.1 | 62.3 | 136.9 | 134.9 | 152.6 | 99.0 | 162.5 | 59.7 | 132.1 | 131.8 | 146.3 | 96.6 | 154.4 | 57.0 |
| | 80 | 142.0 | 141.9 | 158.7 | 131.3 | 170.2 | 92.7 | 137.6 | 137.4 | 152.7 | 128.9 | 162.6 | 90.1 | 133.1 | 132.9 | 146.4 | 126.5 | 154.6 | 87.4 |
| | 85 | 149.3 | 149.3 | 158.4 | 158.0 | 170.3 | 122.8 | 145.2 | 145.2 | 152.5 | 152.1 | 162.7 | 120.3 | 140.8 | 140.8 | 146.3 | 145.9 | 154.7 | 117.6 |
| | 90 | 157.8 | 157.8 | 159.0 | 158.8 | 170.4 | 152.8 | 153.1 | 153.1 | 153.3 | 153.1 | 162.8 | 150.3 | 147.9 | 147.9 | 148.0 | 148.0 | 154.8 | 147.6 |
| 6000 | 75 | 144.0 | 143.6 | 160.9 | 106.9 | 171.6 | 63.5 | 139.0 | 138.6 | 154.5 | 104.5 | 163.5 | 60.9 | 134.0 | 133.6 | 147.8 | 102.0 | 155.0 | 58.1 |
| | 80 | 144.8 | 144.8 | 160.9 | 140.2 | 171.7 | 97.3 | 140.7 | 140.7 | 154.5 | 137.7 | 163.7 | 94.6 | 136.5 | 136.5 | 147.8 | 135.2 | 155.2 | 91.8 |
| | 85 | 153.8 | 153.8 | 160.6 | 160.3 | 171.8 | 130.9 | 149.2 | 149.2 | 154.4 | 154.0 | 163.8 | 128.2 | 144.4 | 144.4 | 147.9 | 147.5 | 155.4 | 125.4 |
| | 90 | 162.2 | 162.2 | 162.3 | 162.3 | 171.8 | 164.2 | 156.8 | 156.8 | 156.9 | 156.9 | 163.8 | 161.5 | 150.8 | 150.8 | 150.8 | 150.8 | 155.6 | 154.8 |
| 6600 | 75 | 146.0 | 145.6 | 162.6 | 112.4 | 172.5 | 64.8 | 140.8 | 140.4 | 155.9 | 109.9 | 164.1 | 62.0 | 135.4 | 135.1 | 148.9 | 107.3 | 155.2 | 59.1 |
| | 80 | 148.4 | 148.4 | 162.6 | 149.0 | 172.7 | 101.9 | 144.1 | 144.1 | 155.9 | 146.5 | 164.3 | 99.2 | 139.6 | 139.6 | 148.9 | 143.9 | 155.5 | 96.3 |
| | 85 | 157.5 | 157.5 | 162.3 | 161.9 | 172.9 | 138.8 | 152.6 | 152.6 | 155.6 | 155.2 | 164.5 | 136.1 | 147.2 | 147.2 | 148.8 | 148.5 | 155.8 | 133.2 |
| | 90 | 165.5 | 165.5 | 165.6 | 165.6 | 172.9 | 172.2 | 159.3 | 159.3 | 159.4 | 159.4 | 164.7 | 164.0 | 152.2 | 152.2 | 152.2 | 152.2 | 156.1 | 155.5 |
| 7200 | 75 | 147.6 | 147.2 | 163.9 | 117.8 | 173.2 | 66.0 | 142.2 | 141.8 | 156.9 | 115.2 | 164.5 | 63.2 | 136.6 | 136.2 | 149.6 | 112.5 | 155.3 | 60.2 |
| | 80 | 151.6 | 151.6 | 163.8 | 157.7 | 173.4 | 106.5 | 147.0 | 147.0 | 156.9 | 155.1 | 164.7 | 103.6 | 142.1 | 142.1 | 149.6 | 149.0 | 155.5 | 100.7 |
| | 85 | 160.6 | 160.6 | 163.3 | 163.0 | 173.6 | 146.7 | 155.2 | 155.2 | 156.6 | 156.4 | 165.0 | 143.9 | 149.4 | 149.4 | 149.7 | 149.4 | 156.0 | 141.1 |
| | 90 | 167.9 | 167.9 | 167.9 | 167.9 | 173.7 | 173.0 | 160.7 | 160.7 | 160.8 | 160.8 | 165.2 | 164.6 | 153.9 | 153.9 | 154.0 | 154.0 | 156.4 | 155.7 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain **NET** cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Stands for both downflow and horizontal unit.

**Table 17. Gross cooling capacities 17½ tons three phase standard efficiency T/YS*210G3,4,W,K**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 5600 | 75 | 186.0 | 161.1 | 210.2 | 124.5 | 233.8 | 85.5 | 176.4 | 156.7 | 199.5 | 120.1 | 221.1 | 80.9 | 166.4 | 152.2 | 188.0 | 115.4 | 207.2 | 76.0 |
| | 80 | 185.1 | 184.9 | 209.9 | 155.7 | 233.8 | 117.2 | 175.8 | 175.6 | 199.3 | 151.4 | 221.1 | 112.6 | 166.2 | 166.1 | 187.8 | 146.7 | 207.3 | 107.7 |
| | 85 | 191.8 | 191.8 | 209.4 | 186.6 | 233.7 | 148.7 | 184.3 | 184.3 | 198.6 | 182.2 | 221.0 | 144.1 | 176.1 | 176.1 | 187.1 | 177.5 | 207.2 | 139.2 |
| | 90 | 203.1 | 203.1 | 208.5 | 208.2 | 233.5 | 180.1 | 195.2 | 195.2 | 198.0 | 197.7 | 220.9 | 175.5 | 186.5 | 186.5 | 187.0 | 186.9 | 207.0 | 170.5 |
| 6300 | 75 | 189.9 | 172.8 | 214.5 | 131.5 | 237.5 | 87.3 | 179.9 | 168.3 | 203.2 | 126.9 | 224.3 | 82.7 | 169.5 | 163.7 | 191.1 | 122.1 | 209.7 | 77.6 |
| | 80 | 189.1 | 188.9 | 214.2 | 166.6 | 237.5 | 123.0 | 179.8 | 179.7 | 203.0 | 162.1 | 224.3 | 118.4 | 171.3 | 171.3 | 190.9 | 157.3 | 209.8 | 113.3 |
| | 85 | 199.0 | 199.0 | 213.3 | 201.1 | 237.4 | 158.5 | 191.0 | 191.0 | 202.1 | 196.4 | 224.2 | 153.8 | 182.3 | 182.3 | 190.0 | 189.1 | 209.8 | 148.9 |
| | 90 | 210.7 | 210.7 | 212.4 | 212.2 | 237.1 | 193.7 | 202.2 | 202.2 | 202.4 | 202.4 | 223.9 | 189.0 | 192.8 | 192.8 | 193.0 | 193.0 | 209.5 | 183.9 |
| 7000 | 75 | 193.1 | 184.2 | 218.0 | 138.3 | 240.3 | 89.1 | 182.8 | 179.0 | 206.3 | 133.6 | 226.6 | 84.4 | 171.9 | 171.4 | 193.7 | 128.7 | 211.5 | 79.2 |
| | 80 | 193.0 | 193.0 | 217.6 | 177.2 | 240.4 | 128.8 | 185.0 | 185.0 | 205.9 | 172.6 | 226.7 | 124.0 | 176.3 | 176.3 | 193.3 | 167.7 | 211.7 | 118.9 |
| | 85 | 205.2 | 205.2 | 216.5 | 213.8 | 240.3 | 168.2 | 196.7 | 196.7 | 204.5 | 204.1 | 226.7 | 163.5 | 187.4 | 187.4 | 191.9 | 191.6 | 211.8 | 158.4 |
| | 90 | 217.3 | 217.3 | 217.5 | 217.5 | 239.8 | 207.1 | 208.2 | 208.2 | 208.4 | 208.4 | 226.2 | 202.4 | 198.2 | 198.2 | 198.3 | 198.3 | 211.4 | 197.3 |
| 7700 | 75 | 195.7 | 193.8 | 220.8 | 144.9 | 242.6 | 90.8 | 184.9 | 184.5 | 208.7 | 140.2 | 228.4 | 86.0 | 173.6 | 173.2 | 195.7 | 135.3 | 212.8 | 80.7 |
| | 80 | 198.1 | 198.1 | 220.4 | 187.8 | 242.7 | 134.4 | 189.7 | 189.7 | 208.3 | 183.1 | 228.6 | 129.6 | 180.5 | 180.5 | 195.3 | 178.1 | 213.2 | 124.4 |
| | 85 | 210.5 | 210.5 | 218.6 | 218.1 | 242.7 | 177.8 | 201.6 | 201.6 | 206.5 | 206.2 | 228.6 | 173.0 | 191.7 | 191.7 | 193.7 | 193.4 | 213.2 | 167.8 |
| | 90 | 222.9 | 222.9 | 223.1 | 223.1 | 242.0 | 220.6 | 213.4 | 213.4 | 213.5 | 213.5 | 228.1 | 215.8 | 202.6 | 202.6 | 202.7 | 202.7 | 212.8 | 208.8 |
| 8400 | 75 | 197.6 | 197.1 | 223.2 | 151.5 | 244.3 | 92.4 | 186.5 | 186.0 | 210.7 | 146.8 | 229.8 | 87.6 | 175.1 | 174.8 | 197.6 | 141.9 | 213.8 | 82.3 |
| | 80 | 202.5 | 202.5 | 222.6 | 198.2 | 244.5 | 140.0 | 193.8 | 193.8 | 210.2 | 193.5 | 230.1 | 135.2 | 184.2 | 184.2 | 196.9 | 188.5 | 214.3 | 129.9 |
| | 85 | 215.2 | 215.2 | 220.4 | 220.0 | 244.5 | 187.3 | 205.9 | 205.9 | 208.2 | 207.8 | 230.1 | 182.5 | 195.6 | 195.6 | 195.7 | 195.7 | 214.3 | 177.2 |
| | 90 | 227.8 | 227.8 | 228.0 | 228.0 | 243.9 | 234.0 | 217.7 | 217.7 | 217.8 | 217.8 | 229.5 | 226.5 | 206.2 | 206.2 | 206.3 | 206.3 | 213.4 | 212.7 |
| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
| | | 115 | | | | | | 120 | | | | | | 125 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 5600 | 75 | 156.8 | 147.9 | 176.0 | 110.7 | 192.2 | 70.7 | 152.4 | 145.9 | 170.0 | 108.3 | 184.3 | 68.0 | - | - | 164.1 | 106.0 | 176.1 | 65.2 |
| | 80 | 157.8 | 157.8 | 175.8 | 141.9 | 192.3 | 102.5 | 154.1 | 154.1 | 169.9 | 139.6 | 184.5 | 99.8 | - | - | 164.0 | 137.3 | 176.5 | 97.0 |
| | 85 | 167.6 | 167.6 | 175.3 | 171.8 | 192.4 | 134.1 | 163.4 | 163.4 | 169.2 | 167.8 | 184.7 | 131.4 | 159.1 | 159.1 | 163.2 | 162.9 | 176.8 | 128.7 |
| | 90 | 177.1 | 177.1 | 177.2 | 177.2 | 192.2 | 165.3 | 172.1 | 172.1 | 172.2 | 172.2 | 184.5 | 162.6 | 166.9 | 166.9 | 167.0 | 167.0 | 176.5 | 159.9 |
| 6300 | 75 | 159.4 | 157.6 | 178.6 | 117.2 | 193.9 | 72.2 | 154.5 | 154.1 | 172.3 | 114.8 | 185.6 | 69.4 | 150.2 | 149.9 | 166.1 | 112.5 | 177.1 | 66.6 |
| | 80 | 163.0 | 163.0 | 178.4 | 152.4 | 194.2 | 108.0 | 158.9 | 158.9 | 172.1 | 149.9 | 186.0 | 105.2 | 154.9 | 154.9 | 165.9 | 147.6 | 177.7 | 102.4 |
| | 85 | 173.0 | 173.0 | 177.3 | 177.0 | 194.3 | 143.5 | 168.3 | 168.3 | 171.1 | 170.8 | 186.2 | 140.8 | 163.4 | 163.4 | 164.9 | 164.6 | 177.9 | 138.0 |
| | 90 | 182.5 | 182.5 | 182.7 | 182.7 | 194.1 | 178.6 | 177.0 | 177.0 | 177.2 | 177.2 | 186.0 | 175.9 | 171.1 | 171.1 | 171.2 | 171.2 | 177.7 | 172.5 |
| 7000 | 75 | 161.1 | 160.8 | 180.6 | 123.7 | 195.1 | 73.7 | 156.2 | 155.9 | 174.2 | 121.3 | 186.5 | 70.8 | 151.7 | 151.4 | 167.8 | 118.9 | 177.7 | 67.9 |
| | 80 | 167.4 | 167.4 | 180.3 | 162.7 | 195.6 | 113.5 | 162.9 | 162.9 | 173.8 | 160.2 | 187.2 | 110.7 | 158.5 | 158.5 | 167.3 | 157.8 | 178.6 | 107.8 |
| | 85 | 177.4 | 177.4 | 179.1 | 178.7 | 195.7 | 152.9 | 172.2 | 172.2 | 172.7 | 172.5 | 187.3 | 150.1 | 166.8 | 166.8 | 166.9 | 166.9 | 178.6 | 147.2 |
| | 90 | 187.0 | 187.0 | 187.1 | 187.1 | 195.4 | 190.8 | 180.9 | 180.9 | 181.0 | 181.0 | 187.0 | 185.9 | 174.4 | 174.4 | 174.5 | 174.5 | 178.1 | 177.5 |
| 7700 | 75 | 162.7 | 162.4 | 182.3 | 130.3 | 195.9 | 75.2 | 157.6 | 157.3 | 175.7 | 127.8 | 187.1 | 72.3 | 153.1 | 152.9 | 169.2 | 125.3 | 178.1 | 69.3 |
| | 80 | 171.1 | 171.1 | 181.8 | 173.0 | 196.6 | 118.9 | 166.3 | 166.3 | 175.1 | 170.3 | 188.1 | 116.1 | 161.5 | 161.5 | 168.5 | 166.3 | 179.4 | 113.3 |
| | 85 | 181.2 | 181.2 | 181.3 | 181.3 | 196.6 | 162.3 | 175.6 | 175.6 | 175.7 | 175.7 | 188.0 | 159.4 | 169.7 | 169.7 | 169.8 | 169.8 | 179.1 | 156.8 |
| | 90 | 190.5 | 190.5 | 190.6 | 190.6 | 196.0 | 195.3 | 183.8 | 183.8 | 183.9 | 183.9 | 187.2 | 186.7 | 176.6 | 176.6 | 176.7 | 176.7 | 178.2 | 177.7 |
| 8400 | 75 | 164.1 | 163.9 | 183.9 | 136.8 | 196.5 | 76.6 | 159.1 | 159.1 | 177.0 | 134.2 | 187.5 | 73.7 | 154.9 | 154.9 | 170.1 | 131.7 | - | - |
| | 80 | 174.2 | 174.2 | 183.2 | 181.5 | 197.6 | 124.4 | 169.1 | 169.1 | 176.0 | 175.3 | 188.9 | 121.6 | 164.0 | 164.0 | 169.0 | 168.5 | - | - |
| | 85 | 184.4 | 184.4 | 184.5 | 184.5 | 197.3 | 171.6 | 178.5 | 178.5 | 178.6 | 178.6 | 188.5 | 169.2 | 172.2 | 172.2 | 172.2 | 172.2 | - | - |
| | 90 | 193.2 | 193.2 | 193.3 | 193.3 | 196.3 | 195.8 | 185.9 | 185.9 | 186.0 | 186.0 | 187.3 | 186.8 | 177.9 | 177.9 | 177.9 | 177.9 | - | - |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain **NET** cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Stands for both downflow and horizontal unit.

**Table 18. Gross cooling capacities 20 tons three phase standard efficiency T/YS*240G3,4,W,K**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature 85 | | | | | | 95 | | | | | | 105 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Entering Wet Bulb 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 6400 | 75 | 230.4 | 187.9 | 260.3 | 147.4 | 287.7 | 103.3 | 219.7 | 182.8 | 247.5 | 142.0 | 271.7 | 97.5 | 208.2 | 177.5 | 233.5 | 136.2 | 253.6 | 91.0 |
| | 80 | 229.9 | 221.9 | 260.2 | 182.1 | 287.8 | 138.7 | 219.2 | 216.9 | 247.4 | 176.7 | 271.9 | 132.8 | 207.8 | 207.5 | 233.4 | 170.9 | 253.9 | 126.3 |
| | 85 | 231.6 | 231.5 | 260.0 | 216.6 | 287.9 | 173.7 | 222.2 | 222.2 | 247.2 | 211.2 | 272.0 | 167.9 | 213.1 | 213.1 | 233.1 | 205.4 | 254.1 | 161.4 |
| | 90 | 244.0 | 244.0 | 259.2 | 250.6 | 287.9 | 208.5 | 235.1 | 235.1 | 246.5 | 245.2 | 272.1 | 202.7 | 225.2 | 225.2 | 232.8 | 232.5 | 254.4 | 196.3 |
| 7200 | 75 | 236.0 | 200.9 | 265.9 | 154.9 | 292.1 | 105.1 | 224.6 | 195.6 | 252.3 | 149.4 | 275.0 | 99.0 | 212.2 | 190.0 | 237.4 | 143.4 | 255.9 | 92.3 |
| | 80 | 235.3 | 234.9 | 265.7 | 193.9 | 292.3 | 144.8 | 224.0 | 223.7 | 252.1 | 188.4 | 275.2 | 138.7 | 211.9 | 211.7 | 237.3 | 182.4 | 256.1 | 132.0 |
| | 85 | 239.6 | 239.6 | 265.4 | 232.7 | 292.4 | 184.2 | 230.6 | 230.6 | 251.7 | 227.1 | 275.5 | 178.2 | 220.6 | 220.6 | 236.9 | 221.1 | 256.5 | 171.5 |
| | 90 | 253.6 | 253.6 | 264.7 | 264.3 | 292.5 | 223.4 | 244.0 | 244.0 | 251.2 | 250.9 | 275.7 | 217.4 | 233.1 | 233.1 | 236.8 | 236.5 | 256.6 | 211.2 |
| 8000 | 75 | 240.4 | 213.5 | 270.2 | 162.2 | 295.3 | 106.7 | 228.3 | 208.1 | 256.0 | 156.5 | 277.2 | 100.4 | 215.3 | 202.4 | 240.4 | 150.4 | 258.3 | 93.9 |
| | 80 | 239.6 | 239.3 | 270.0 | 205.6 | 295.5 | 150.8 | 227.9 | 227.6 | 255.7 | 199.9 | 277.6 | 144.5 | 215.6 | 215.4 | 240.3 | 193.8 | 258.6 | 138.0 |
| | 85 | 247.4 | 247.4 | 269.5 | 248.5 | 295.8 | 194.6 | 237.8 | 237.8 | 255.2 | 242.8 | 278.0 | 188.4 | 227.0 | 227.0 | 239.7 | 236.7 | 258.8 | 181.7 |
| | 90 | 261.8 | 261.8 | 268.9 | 268.5 | 295.9 | 238.2 | 251.4 | 251.4 | 255.0 | 254.7 | 278.1 | 232.0 | 239.5 | 239.5 | 240.4 | 240.2 | 258.4 | 225.6 |
| 8800 | 75 | 243.8 | 225.9 | 273.8 | 169.4 | 297.6 | 108.2 | 231.2 | 220.4 | 258.9 | 163.6 | 279.5 | 101.9 | 217.8 | 214.6 | 242.7 | 157.3 | 260.1 | 95.4 |
| | 80 | 243.2 | 242.9 | 273.5 | 217.1 | 298.0 | 156.7 | 231.5 | 231.3 | 258.8 | 211.5 | 279.5 | 150.4 | 219.1 | 219.1 | 242.7 | 205.1 | 260.4 | 143.9 |
| | 85 | 254.2 | 254.2 | 272.7 | 264.2 | 298.3 | 204.9 | 243.9 | 243.9 | 258.0 | 257.1 | 279.9 | 198.5 | 232.4 | 232.4 | 242.1 | 241.6 | 260.5 | 192.0 |
| | 90 | 268.8 | 268.8 | 272.5 | 272.3 | 298.4 | 252.8 | 257.6 | 257.6 | 258.7 | 258.4 | 279.8 | 246.5 | 244.7 | 244.7 | 244.9 | 244.9 | 260.4 | 239.8 |
| 9600 | 75 | 246.6 | 238.2 | 276.6 | 176.5 | 299.5 | 109.6 | 233.8 | 232.7 | 261.3 | 170.6 | 281.4 | 103.5 | 219.9 | 219.4 | 244.6 | 164.2 | 261.5 | 96.9 |
| | 80 | 246.7 | 246.5 | 276.5 | 228.6 | 299.8 | 162.5 | 234.7 | 234.7 | 261.3 | 222.7 | 281.7 | 156.4 | 223.6 | 223.6 | 244.5 | 216.3 | 261.9 | 149.8 |
| | 85 | 260.1 | 260.1 | 275.5 | 274.8 | 300.3 | 215.2 | 249.2 | 249.2 | 260.3 | 259.7 | 281.7 | 209.0 | 237.0 | 237.0 | 243.7 | 243.3 | 262.2 | 202.4 |
| | 90 | 274.9 | 274.9 | 276.0 | 275.8 | 300.2 | 267.3 | 262.9 | 262.9 | 263.1 | 263.1 | 281.3 | 260.9 | 249.0 | 249.0 | 249.2 | 249.2 | 261.8 | 254.3 |
| Air Flow cfm | Ent DB (°F) | Ambient Temperature 115 | | | | | | 120 | | | | | | 125 | | | | | |
| | | Entering Wet Bulb 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 6400 | 75 | 196.3 | 172.1 | 218.4 | 130.1 | 234.3 | 84.1 | 190.2 | 169.3 | 210.4 | 126.9 | 224.3 | 80.6 | - | - | 202.2 | 123.7 | 214.0 | 77.1 |
| | 80 | 196.0 | 195.8 | 218.4 | 164.8 | 234.5 | 119.4 | 190.1 | 189.9 | 210.5 | 161.7 | 224.6 | 116.0 | - | - | 202.4 | 158.5 | 214.4 | 112.4 |
| | 85 | 203.1 | 203.1 | 218.1 | 199.3 | 234.6 | 154.4 | 198.0 | 198.0 | 210.2 | 196.1 | 224.9 | 151.0 | - | - | 202.2 | 192.9 | 214.8 | 147.5 |
| | 90 | 214.2 | 214.2 | 218.0 | 217.8 | 234.7 | 189.3 | 208.2 | 208.2 | 210.3 | 210.1 | 225.0 | 185.9 | - | - | 202.5 | 202.3 | 214.9 | 182.4 |
| 7200 | 75 | 199.5 | 184.4 | 221.4 | 137.1 | 236.4 | 85.5 | 193.1 | 181.5 | 213.0 | 133.8 | 226.0 | 82.0 | 186.8 | 178.8 | 204.4 | 130.4 | 215.2 | 78.4 |
| | 80 | 199.6 | 199.5 | 221.4 | 176.2 | 236.7 | 125.3 | 193.6 | 193.5 | 213.1 | 172.9 | 226.4 | 121.7 | 187.8 | 187.8 | 204.6 | 169.6 | 215.7 | 118.1 |
| | 85 | 209.8 | 209.8 | 221.0 | 214.8 | 237.0 | 164.7 | 203.9 | 203.9 | 212.8 | 210.3 | 226.8 | 161.2 | 197.8 | 197.8 | 204.4 | 203.4 | 216.3 | 157.6 |
| | 90 | 220.8 | 220.8 | 221.5 | 221.3 | 237.0 | 203.9 | 214.0 | 214.0 | 214.1 | 214.1 | 226.7 | 200.3 | 206.6 | 206.6 | 206.7 | 206.7 | 216.2 | 196.8 |
| 8000 | 75 | 202.1 | 196.5 | 223.6 | 143.9 | 237.9 | 87.0 | 195.4 | 193.3 | 214.9 | 140.6 | 227.0 | 83.3 | 188.8 | 187.8 | 205.9 | 137.2 | 215.8 | 79.6 |
| | 80 | 203.3 | 203.3 | 223.7 | 187.4 | 238.3 | 131.1 | 197.8 | 197.8 | 215.0 | 184.0 | 227.6 | 127.5 | 192.1 | 192.1 | 206.0 | 180.6 | 216.6 | 123.8 |
| | 85 | 215.2 | 215.2 | 223.3 | 222.8 | 238.5 | 174.9 | 208.8 | 208.8 | 214.6 | 214.3 | 228.2 | 171.5 | 202.0 | 202.0 | 205.8 | 205.4 | 217.2 | 167.8 |
| | 90 | 225.9 | 225.9 | 226.1 | 226.1 | 238.6 | 218.3 | 218.3 | 218.3 | 218.4 | 218.4 | 228.0 | 214.8 | 209.9 | 209.9 | 210.0 | 210.0 | 217.0 | 210.6 |
| 8800 | 75 | 204.1 | 203.6 | 225.4 | 150.7 | 239.0 | 88.4 | 197.3 | 196.8 | 216.3 | 147.3 | 227.7 | 84.7 | 190.4 | 189.9 | 207.1 | 143.8 | - | - |
| | 80 | 207.8 | 207.8 | 225.4 | 198.5 | 239.5 | 136.9 | 201.8 | 201.8 | 216.3 | 195.1 | 228.5 | 133.3 | 195.7 | 195.7 | 207.1 | 191.6 | - | - |
| | 85 | 219.7 | 219.7 | 224.9 | 224.5 | 240.0 | 185.2 | 212.7 | 212.7 | 215.9 | 215.5 | 229.0 | 181.6 | 205.2 | 205.2 | 206.8 | 206.4 | - | - |
| | 90 | 229.8 | 229.8 | 229.9 | 229.9 | 239.7 | 232.8 | 221.2 | 221.2 | 221.3 | 221.3 | 228.9 | 224.7 | 212.2 | 212.2 | 212.3 | 212.3 | - | - |
| 9600 | 75 | 205.8 | 205.3 | 226.7 | 157.5 | 239.7 | 89.8 | 198.5 | 198.1 | 217.4 | 154.0 | 228.2 | 86.0 | 191.4 | 191.0 | - | - | - | - |
| | 80 | 211.6 | 211.6 | 226.6 | 209.5 | 240.4 | 142.7 | 205.2 | 205.2 | 217.3 | 206.0 | 229.1 | 139.1 | 198.5 | 198.5 | - | - | - | - |
| | 85 | 223.3 | 223.3 | 226.1 | 225.7 | 240.9 | 195.4 | 215.8 | 215.8 | 216.9 | 216.5 | 229.6 | 191.7 | 207.7 | 207.7 | - | - | - | - |
| | 90 | 232.6 | 232.6 | 232.7 | 232.7 | 240.7 | 239.0 | 223.6 | 223.6 | 223.7 | 223.7 | 229.5 | 228.8 | 214.5 | 214.5 | - | - | - | - |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain **NET** cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Stands for both downflow and horizontal unit.

**Table 19. Gross cooling capacities 25 tons three phase standard efficiency T/YS*300G3,4,W,K**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 7000 | 75 | 256.6 | 212.5 | 287.4 | 165.3 | 316.4 | 114.6 | 243.4 | 206.4 | 272.2 | 158.9 | 298.1 | 108.0 | 229.5 | 200.0 | 255.8 | 152.2 | 277.9 | 100.7 |
| | 80 | 256.2 | 251.4 | 287.4 | 204.9 | 316.6 | 154.9 | 243.2 | 242.6 | 272.1 | 198.5 | 298.3 | 148.2 | 229.4 | 229.1 | 255.7 | 191.8 | 278.1 | 141.0 |
| | 85 | 259.9 | 259.9 | 287.2 | 244.2 | 316.7 | 194.9 | 249.5 | 249.5 | 271.9 | 237.8 | 298.5 | 188.2 | 238.1 | 238.1 | 255.5 | 231.1 | 278.4 | 181.0 |
| | 90 | 274.2 | 274.2 | 286.8 | 283.1 | 316.8 | 234.5 | 263.2 | 263.2 | 271.7 | 271.3 | 298.6 | 227.9 | 251.0 | 251.0 | 255.4 | 255.1 | 278.7 | 220.8 |
| 8000 | 75 | 262.8 | 229.2 | 293.9 | 175.0 | 321.5 | 117.0 | 248.9 | 222.9 | 277.7 | 168.5 | 302.0 | 110.1 | 234.2 | 216.4 | 260.4 | 161.6 | 280.6 | 102.6 |
| | 80 | 262.4 | 262.1 | 293.8 | 220.2 | 321.8 | 162.9 | 248.6 | 248.3 | 277.6 | 213.7 | 302.4 | 156.1 | 234.5 | 234.4 | 260.4 | 206.9 | 281.0 | 148.6 |
| | 85 | 270.8 | 270.8 | 293.5 | 265.1 | 322.0 | 208.6 | 259.4 | 259.4 | 277.3 | 258.6 | 302.7 | 201.7 | 247.0 | 247.0 | 260.0 | 251.7 | 281.5 | 194.3 |
| | 90 | 285.9 | 285.9 | 292.9 | 292.5 | 322.2 | 254.0 | 273.8 | 273.8 | 277.0 | 276.7 | 302.9 | 247.1 | 260.3 | 260.3 | 260.7 | 260.5 | 281.7 | 239.7 |
| 9000 | 75 | 267.6 | 245.6 | 298.8 | 184.6 | 325.1 | 119.1 | 253.1 | 239.1 | 281.9 | 177.9 | 304.7 | 112.1 | 237.7 | 232.4 | 263.8 | 170.9 | 282.2 | 104.4 |
| | 80 | 267.2 | 266.9 | 298.7 | 235.5 | 325.5 | 170.8 | 253.5 | 253.3 | 282.0 | 228.9 | 305.2 | 163.8 | 240.5 | 240.5 | 263.9 | 221.8 | 282.9 | 156.2 |
| | 85 | 280.0 | 280.0 | 298.2 | 285.8 | 325.8 | 222.2 | 267.8 | 267.8 | 281.4 | 279.1 | 305.6 | 215.2 | 254.4 | 254.4 | 263.4 | 262.7 | 283.6 | 207.7 |
| | 90 | 295.6 | 295.6 | 298.1 | 297.8 | 326.0 | 273.2 | 282.4 | 282.4 | 282.6 | 282.6 | 305.7 | 266.2 | 267.7 | 267.7 | 267.8 | 267.8 | 283.7 | 258.6 |
| 10000 | 75 | 271.3 | 261.7 | 302.7 | 193.9 | 327.8 | 121.2 | 256.3 | 254.3 | 285.2 | 187.2 | 306.5 | 114.0 | 240.6 | 239.9 | 266.4 | 180.0 | 283.2 | 106.3 |
| | 80 | 271.8 | 271.5 | 302.8 | 250.5 | 328.2 | 178.6 | 259.5 | 259.5 | 285.3 | 243.7 | 307.1 | 171.5 | 246.3 | 246.3 | 266.4 | 236.5 | 284.1 | 163.8 |
| | 85 | 287.9 | 287.9 | 302.0 | 301.2 | 328.7 | 235.7 | 274.9 | 274.9 | 284.4 | 283.8 | 307.8 | 228.7 | 260.5 | 260.5 | 265.5 | 265.1 | 284.9 | 221.0 |
| | 90 | 303.6 | 303.6 | 303.8 | 303.8 | 328.7 | 292.3 | 289.4 | 289.4 | 289.6 | 289.6 | 307.8 | 285.2 | 273.4 | 273.4 | 273.6 | 273.6 | 285.0 | 277.5 |
| 11000 | 75 | 274.4 | 273.6 | 305.8 | 203.2 | 329.6 | 123.2 | 259.0 | 258.3 | 287.8 | 196.3 | 307.8 | 116.0 | 242.5 | 241.9 | 268.5 | 189.1 | 284.0 | 108.1 |
| | 80 | 277.9 | 277.9 | 305.8 | 265.4 | 330.2 | 186.4 | 265.2 | 265.2 | 287.7 | 258.5 | 308.6 | 179.2 | 251.3 | 251.3 | 268.4 | 251.2 | 285.1 | 171.5 |
| | 85 | 294.5 | 294.5 | 304.6 | 303.9 | 330.8 | 249.3 | 280.8 | 280.8 | 286.4 | 285.9 | 309.2 | 242.1 | 265.5 | 265.5 | 267.6 | 267.3 | 285.7 | 234.3 |
| | 90 | 310.2 | 310.2 | 310.4 | 310.4 | 330.8 | 311.4 | 295.1 | 295.1 | 295.3 | 295.3 | 309.4 | 304.2 | 277.8 | 277.8 | 277.9 | 277.9 | 286.1 | 284.9 |

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 115 | | | | | | 120 | | | | | | 125 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 7000 | 75 | 215.5 | 193.7 | 238.4 | 145.3 | 255.8 | 93.0 | 208.6 | 190.6 | 229.4 | 141.7 | 244.0 | 88.9 | - | - | - | - | 231.9 | 84.8 |
| | 80 | 215.7 | 215.4 | 238.4 | 184.9 | 256.2 | 133.3 | 209.1 | 208.9 | 229.5 | 181.4 | 244.5 | 129.2 | - | - | - | - | 232.6 | 125.2 |
| | 85 | 225.9 | 225.9 | 238.3 | 224.2 | 256.7 | 173.3 | 219.6 | 219.6 | 229.4 | 220.6 | 245.2 | 169.3 | - | - | - | - | 233.4 | 165.3 |
| | 90 | 237.6 | 237.6 | 238.7 | 238.5 | 256.9 | 213.1 | 230.4 | 230.4 | 230.6 | 230.6 | 245.4 | 209.1 | - | - | - | - | 233.6 | 205.0 |
| 8000 | 75 | 219.4 | 209.8 | 242.0 | 154.5 | 257.2 | 94.7 | 212.0 | 206.6 | 232.5 | 150.8 | 244.8 | 90.5 | - | - | 222.8 | 147.1 | 232.2 | 86.3 |
| | 80 | 221.4 | 221.4 | 242.1 | 199.8 | 257.8 | 140.7 | 215.1 | 215.1 | 232.6 | 196.1 | 245.6 | 136.6 | - | - | 223.0 | 192.4 | 233.2 | 132.4 |
| | 85 | 233.6 | 233.6 | 241.9 | 241.3 | 258.6 | 186.5 | 226.4 | 226.4 | 232.4 | 231.9 | 246.6 | 182.5 | - | - | 222.7 | 222.2 | 234.1 | 178.3 |
| | 90 | 245.3 | 245.3 | 245.5 | 245.5 | 258.7 | 231.8 | 237.0 | 237.0 | 237.2 | 237.2 | 246.6 | 227.7 | - | - | 228.3 | 228.3 | 234.3 | 223.6 |
| 9000 | 75 | 222.3 | 221.7 | 244.7 | 163.5 | 257.8 | 96.3 | 214.5 | 213.9 | 234.7 | 159.8 | 245.1 | 92.1 | - | - | 224.7 | 156.0 | - | - |
| | 80 | 227.3 | 227.3 | 244.7 | 214.5 | 258.8 | 148.2 | 220.4 | 220.4 | 234.8 | 210.7 | 246.2 | 144.0 | - | - | 224.8 | 206.9 | - | - |
| | 85 | 239.8 | 239.8 | 244.2 | 243.6 | 259.6 | 199.7 | 231.9 | 231.9 | 234.3 | 233.9 | 247.0 | 195.5 | - | - | 224.6 | 224.3 | - | - |
| | 90 | 251.0 | 251.0 | 251.1 | 251.1 | 259.8 | 250.6 | 241.7 | 241.7 | 241.8 | 241.8 | 247.3 | 245.5 | - | - | 231.7 | 231.7 | - | - |
| 10000 | 75 | 224.3 | 223.8 | 246.6 | 172.5 | 258.2 | 98.0 | 216.2 | 215.7 | 236.4 | 168.7 | 245.3 | 93.9 | 208.3 | 207.9 | 226.1 | 165.0 | - | - |
| | 80 | 232.2 | 232.2 | 246.6 | 229.1 | 259.3 | 155.6 | 224.8 | 224.8 | 236.4 | 225.3 | 246.6 | 151.5 | 217.0 | 217.0 | 226.1 | 221.4 | - | - |
| | 85 | 244.8 | 244.8 | 246.2 | 245.9 | 260.0 | 212.8 | 236.2 | 236.2 | 236.3 | 236.3 | 247.1 | 208.6 | 227.1 | 227.1 | 227.2 | 227.2 | - | - |
| | 90 | 255.0 | 255.0 | 255.1 | 255.1 | 260.5 | 259.5 | 244.6 | 244.6 | 244.7 | 244.7 | 247.4 | 246.6 | 233.3 | 233.3 | 233.3 | 233.3 | - | - |
| 11000 | 75 | 225.8 | 225.3 | 248.1 | 181.6 | 258.8 | 100.0 | 217.6 | 217.3 | 237.7 | 177.7 | 246.2 | 96.0 | 209.7 | 209.4 | - | - | - | - |
| | 80 | 236.4 | 236.4 | 248.1 | 243.6 | 260.1 | 163.3 | 228.5 | 228.5 | 237.6 | 236.5 | 247.2 | 159.2 | 220.3 | 220.3 | - | - | - | - |
| | 85 | 248.7 | 248.7 | 248.8 | 248.8 | 260.4 | 226.1 | 239.4 | 239.4 | 239.5 | 239.5 | 247.4 | 221.8 | 229.6 | 229.6 | - | - | - | - |
| | 90 | 257.7 | 257.7 | 257.8 | 257.8 | 260.5 | 259.5 | 246.2 | 246.2 | 246.2 | 246.2 | 247.2 | 246.5 | 233.6 | 233.6 | - | - | - | - |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain **NET** cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Stands for both downflow and horizontal unit.

**Table 20. Gross cooling capacities 12½ tons three phase high efficiency T/YH*150G3,4,W (stage 1)**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 2000 | 75 | 42.0 | 39.3 | 45.3 | 31.2 | 49.8 | 15.0 | 39.2 | 37.2 | 42.3 | 29.4 | 46.7 | 13.6 |
| | 80 | 44.2 | 43.5 | 46.2 | 39.1 | 50.3 | 29.0 | 41.5 | 41.2 | 43.3 | 37.1 | 47.2 | 27.2 |
| | 85 | 46.9 | 46.6 | 48.0 | 44.3 | 50.7 | 38.0 | 44.1 | 44.1 | 45.1 | 42.1 | 47.6 | 36.1 |
| | 90 | 49.6 | 49.3 | 50.4 | 48.1 | 52.2 | 44.1 | 46.9 | 46.8 | 47.5 | 45.8 | 49.1 | 42.1 |
| 2500 | 75 | 43.3 | 41.5 | 46.2 | 33.6 | 50.4 | 17.5 | 40.4 | 39.2 | 43.1 | 31.6 | 47.1 | 15.9 |
| | 80 | 45.7 | 45.7 | 47.4 | 41.6 | 51.1 | 31.5 | 42.8 | 42.8 | 44.3 | 39.3 | 47.9 | 29.6 |
| | 85 | 48.5 | 48.5 | 49.5 | 46.9 | 51.8 | 40.7 | 45.6 | 45.6 | 46.4 | 44.6 | 48.6 | 38.6 |
| | 90 | 51.5 | 51.5 | 52.0 | 50.9 | 53.5 | 47.0 | 48.5 | 48.5 | 48.9 | 48.4 | 50.3 | 44.7 |
| 3000 | 75 | 44.4 | 43.3 | 46.9 | 35.5 | 50.8 | 19.5 | 41.3 | 40.8 | 43.7 | 33.3 | 47.3 | 17.7 |
| | 80 | 47.0 | 47.0 | 48.4 | 43.6 | 51.7 | 33.6 | 44.0 | 44.0 | 45.1 | 41.2 | 48.3 | 31.6 |
| | 85 | 50.0 | 50.0 | 50.6 | 49.1 | 52.7 | 42.9 | 46.9 | 46.9 | 47.4 | 46.5 | 49.3 | 40.6 |
| | 90 | 53.0 | 53.0 | 53.3 | 53.2 | 54.6 | 49.3 | 49.9 | 49.9 | 50.1 | 50.1 | 51.2 | 46.9 |
| 3500 | 75 | 45.2 | 44.7 | 47.4 | 37.0 | 50.9 | 21.1 | 42.0 | 42.0 | 44.0 | 34.6 | 47.7 | 19.1 |
| | 80 | 48.1 | 48.1 | 49.1 | 45.2 | 52.1 | 35.3 | 44.8 | 44.8 | 45.7 | 42.6 | 48.5 | 33.0 |
| | 85 | 51.2 | 51.2 | 51.6 | 50.8 | 53.3 | 44.7 | 48.1 | 47.9 | 48.2 | 48.0 | 49.8 | 42.2 |
| | 90 | 54.3 | 54.3 | 54.4 | 54.4 | 55.4 | 51.3 | 50.6 | 50.6 | 51.0 | 51.0 | 51.9 | 48.6 |
| 4000 | 75 | 45.8 | 45.6 | 47.6 | 38.0 | 51.3 | 22.3 | 42.4 | 42.4 | 44.3 | 35.4 | 48.4 | 20.0 |
| | 80 | 48.9 | 48.9 | 49.6 | 46.3 | 52.2 | 36.6 | 45.5 | 45.5 | 46.0 | 43.5 | 48.7 | 34.1 |
| | 85 | 52.1 | 52.1 | 52.3 | 52.1 | 53.7 | 46.1 | 48.6 | 48.6 | 48.7 | 48.7 | 50.0 | 43.4 |
| | 90 | 54.8 | 54.8 | 55.2 | 55.2 | 56.0 | 52.8 | 51.2 | 51.2 | 51.7 | 51.7 | 52.3 | 49.9 |
| 4375 | 75 | 46.1 | 46.0 | 47.6 | 38.5 | 51.9 | 22.8 | 42.6 | 42.6 | 44.6 | 35.8 | 48.7 | 20.5 |
| | 80 | 49.3 | 49.3 | 49.8 | 46.9 | 52.4 | 37.2 | 45.8 | 45.8 | 46.1 | 43.9 | 48.9 | 34.6 |
| | 85 | 52.3 | 52.3 | 52.6 | 52.6 | 53.9 | 46.8 | 48.8 | 48.8 | 49.0 | 49.0 | 50.3 | 44.0 |
| | 90 | 55.2 | 55.2 | 55.7 | 55.7 | 56.3 | 53.6 | 52.0 | 52.0 | 52.1 | 52.1 | 52.5 | 50.6 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

**Table 21. Gross cooling capacities 12½ tons three phase high efficiency T/YH*150G3,4,W (stage 2)**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 2000 | 75 | 87.1 | 69.1 | 97.7 | 56.8 | 108.4 | 33.8 | 83.2 | 66.7 | 92.6 | 54.8 | 102.7 | 32.4 |
| | 80 | 88.4 | 76.3 | 98.3 | 68.1 | 110.1 | 52.4 | 84.5 | 73.5 | 93.8 | 65.7 | 104.8 | 50.5 |
| | 85 | 91.0 | 81.9 | 99.1 | 76.1 | 110.6 | 65.0 | 87.1 | 78.9 | 94.7 | 73.5 | 105.5 | 62.7 |
| | 90 | 94.6 | 86.6 | 101.5 | 82.3 | 111.0 | 73.9 | 90.6 | 83.5 | 97.0 | 79.4 | 106.0 | 71.4 |
| 2500 | 75 | 92.4 | 75.4 | 101.4 | 62.0 | 112.8 | 37.9 | 88.1 | 72.7 | 96.9 | 59.7 | 105.9 | 36.2 |
| | 80 | 94.3 | 83.2 | 103.5 | 74.1 | 114.0 | 57.5 | 90.1 | 80.3 | 98.7 | 71.6 | 109.8 | 55.3 |
| | 85 | 97.5 | 89.5 | 105.0 | 83.0 | 115.8 | 71.0 | 93.3 | 86.3 | 100.2 | 80.1 | 110.4 | 68.5 |
| | 90 | 101.5 | 94.7 | 107.9 | 89.7 | 116.8 | 80.7 | 97.3 | 91.3 | 103.2 | 86.6 | 111.5 | 77.9 |
| 3000 | 75 | 96.8 | 80.9 | 107.7 | 66.4 | 114.3 | 41.2 | 92.3 | 78.0 | 102.4 | 64.0 | 113.2 | 39.3 |
| | 80 | 99.4 | 89.5 | 107.8 | 79.5 | 118.5 | 61.9 | 94.9 | 86.3 | 102.7 | 76.7 | 114.1 | 59.5 |
| | 85 | 103.1 | 96.3 | 110.0 | 89.1 | 120.1 | 76.2 | 98.6 | 92.9 | 105.0 | 86.0 | 114.4 | 73.5 |
| | 90 | 107.6 | 102.0 | 113.5 | 96.4 | 121.8 | 86.7 | 103.1 | 98.4 | 108.5 | 93.1 | 116.2 | 83.7 |
| 3500 | 75 | 100.3 | 85.7 | 110.4 | 70.2 | 120.2 | 43.8 | 95.6 | 82.5 | 104.8 | 67.5 | 115.7 | 41.7 |
| | 80 | 103.6 | 95.0 | 111.4 | 84.2 | 123.3 | 65.5 | 98.9 | 91.6 | 106.0 | 81.1 | 117.2 | 62.9 |
| | 85 | 107.9 | 102.4 | 114.2 | 94.5 | 123.6 | 80.8 | 103.2 | 98.8 | 108.9 | 91.1 | 117.7 | 77.8 |
| | 90 | 112.9 | 108.7 | 118.3 | 102.4 | 126.0 | 92.0 | 108.1 | 104.9 | 112.9 | 98.9 | 120.1 | 88.7 |
| 4000 | 75 | 103.1 | 89.8 | 112.3 | 73.3 | 121.4 | 45.7 | 98.0 | 86.4 | 106.5 | 70.4 | 116.8 | 43.3 |
| | 80 | 107.0 | 99.8 | 114.1 | 88.1 | 125.2 | 68.5 | 102.0 | 96.2 | 108.4 | 84.9 | 118.8 | 65.7 |
| | 85 | 111.9 | 107.9 | 117.5 | 99.1 | 126.3 | 84.6 | 106.9 | 104.0 | 112.0 | 95.6 | 120.0 | 81.5 |
| | 90 | 117.4 | 114.6 | 122.2 | 107.7 | 129.3 | 96.5 | 112.3 | 110.6 | 116.6 | 103.9 | 123.2 | 93.1 |
| 4375 | 75 | 104.6 | 92.4 | 113.2 | 75.1 | 122.6 | 46.7 | 99.3 | 88.8 | 107.1 | 72.0 | 117.4 | 44.1 |
| | 80 | 109.0 | 103.0 | 115.5 | 90.6 | 126.1 | 70.3 | 103.8 | 99.1 | 109.7 | 87.2 | 119.4 | 67.3 |
| | 85 | 114.3 | 111.5 | 119.5 | 102.2 | 127.7 | 87.1 | 109.1 | 107.4 | 113.7 | 98.5 | 121.3 | 83.7 |
| | 90 | 120.1 | 118.6 | 124.6 | 111.2 | 131.3 | 99.5 | 114.8 | 114.4 | 118.8 | 107.3 | 124.9 | 95.9 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

**Table 22. Gross cooling capacities 12½ tons three phase high efficiency T/YH*150G3,4,W (full load)**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 2500 | 75 | 125.0 | 96.9 | 138.0 | 75.5 | 153.6 | 38.3 | 118.3 | 92.7 | 130.4 | 72.3 | 145.1 | 36.2 | 111.1 | 88.1 | 122.3 | 68.7 | 136.2 | 33.8 |
| | 80 | 127.7 | 109.0 | 139.6 | 94.4 | 154.2 | 68.6 | 121.0 | 104.1 | 132.0 | 90.4 | 145.7 | 65.6 | 113.8 | 98.9 | 123.9 | 86.0 | 136.7 | 62.2 |
| | 85 | 132.0 | 118.4 | 141.2 | 108.0 | 154.7 | 89.5 | 125.1 | 113.0 | 133.5 | 103.4 | 146.2 | 85.7 | 117.8 | 107.3 | 125.5 | 98.4 | 137.2 | 81.5 |
| | 90 | 137.2 | 126.3 | 144.6 | 118.4 | 155.2 | 104.6 | 130.0 | 120.5 | 136.8 | 113.3 | 146.7 | 100.1 | 122.5 | 114.3 | 128.6 | 107.7 | 137.8 | 95.3 |
| 3000 | 75 | 131.2 | 104.5 | 143.4 | 82.5 | 158.2 | 44.6 | 124.1 | 99.9 | 135.4 | 78.9 | 149.3 | 42.1 | 116.5 | 94.9 | 126.9 | 74.9 | 140.0 | 39.3 |
| | 80 | 134.4 | 117.1 | 145.5 | 102.0 | 159.3 | 75.6 | 127.3 | 111.8 | 137.5 | 97.6 | 150.4 | 72.2 | 119.7 | 106.2 | 129.0 | 92.9 | 141.0 | 68.4 |
| | 85 | 139.1 | 127.0 | 147.6 | 116.2 | 160.4 | 97.2 | 131.8 | 121.2 | 139.6 | 111.1 | 151.4 | 93.0 | 124.1 | 115.1 | 131.1 | 105.7 | 142.1 | 88.4 |
| | 90 | 144.6 | 135.3 | 151.5 | 127.1 | 161.4 | 112.8 | 137.1 | 129.1 | 143.3 | 121.5 | 152.5 | 107.9 | 129.1 | 122.5 | 134.6 | 115.6 | 143.1 | 102.7 |
| 3500 | 75 | 136.7 | 111.4 | 148.1 | 88.8 | 162.1 | 50.2 | 129.2 | 106.4 | 142.1 | 84.8 | 152.8 | 47.4 | 121.2 | 101.0 | 133.1 | 80.4 | 143.1 | 44.2 |
| | 80 | 140.5 | 124.5 | 150.7 | 108.9 | 163.7 | 82.0 | 132.9 | 118.8 | 142.3 | 104.1 | 154.4 | 78.2 | 124.9 | 112.8 | 133.4 | 99.0 | 144.6 | 74.0 |
| | 85 | 145.6 | 134.9 | 153.4 | 123.6 | 165.3 | 104.2 | 137.8 | 128.7 | 144.9 | 118.2 | 156.0 | 99.5 | 129.7 | 122.2 | 136.0 | 112.4 | 146.2 | 94.6 |
| | 90 | 151.4 | 143.6 | 157.6 | 135.0 | 166.9 | 120.3 | 143.4 | 137.0 | 149.0 | 129.0 | 157.6 | 115.1 | 135.0 | 130.0 | 140.0 | 122.7 | 147.8 | 109.5 |
| 4000 | 75 | 141.5 | 117.6 | 154.6 | 94.4 | 165.3 | 55.2 | 133.5 | 112.2 | 145.6 | 90.0 | 155.6 | 51.9 | 125.1 | 106.4 | 136.1 | 85.3 | 145.4 | 48.3 |
| | 80 | 145.8 | 131.3 | 155.2 | 115.2 | 167.4 | 87.7 | 137.8 | 125.2 | 146.4 | 110.0 | 157.7 | 83.4 | 129.4 | 118.8 | 137.0 | 104.5 | 147.5 | 78.9 |
| | 85 | 151.3 | 142.1 | 158.4 | 130.4 | 169.6 | 110.5 | 143.2 | 135.5 | 149.5 | 124.6 | 159.8 | 105.5 | 134.6 | 128.6 | 140.2 | 118.4 | 149.6 | 100.1 |
| | 90 | 157.4 | 151.2 | 163.1 | 142.3 | 171.7 | 127.2 | 149.1 | 144.2 | 154.0 | 135.9 | 161.9 | 121.5 | 140.2 | 136.9 | 144.6 | 129.2 | 151.7 | 115.5 |
| 4500 | 75 | 145.6 | 123.2 | 157.7 | 99.4 | 173.0 | 59.4 | 137.2 | 117.4 | 148.3 | 94.6 | 162.6 | 55.8 | 128.4 | 111.2 | 138.4 | 89.4 | 151.7 | 51.8 |
| | 80 | 150.4 | 137.3 | 159.0 | 120.8 | 173.0 | 92.7 | 142.0 | 130.9 | 149.7 | 115.2 | 162.7 | 88.1 | 133.2 | 124.1 | 140.0 | 109.3 | 152.0 | 83.1 |
| | 85 | 156.3 | 148.7 | 162.7 | 136.6 | 173.1 | 116.1 | 147.8 | 141.7 | 153.4 | 130.3 | 162.9 | 110.7 | 138.8 | 134.4 | 143.7 | 123.7 | 152.3 | 105.0 |
| | 90 | 162.8 | 158.2 | 167.8 | 148.9 | 175.8 | 133.4 | 154.0 | 150.8 | 158.4 | 142.1 | 165.6 | 127.3 | 144.7 | 143.1 | 148.5 | 135.0 | 155.0 | 120.9 |
| 5000 | 75 | 149.0 | 128.0 | 160.1 | 103.7 | 174.5 | 63.1 | 140.2 | 121.8 | 150.2 | 98.5 | 163.6 | 59.0 | 130.9 | 115.3 | 139.9 | 92.9 | 152.3 | 54.6 |
| | 80 | 154.3 | 142.8 | 162.1 | 125.7 | 175.2 | 97.0 | 145.5 | 135.9 | 152.4 | 119.7 | 164.5 | 92.0 | 136.2 | 128.7 | 142.2 | 113.4 | 153.3 | 86.7 |
| | 85 | 160.6 | 154.5 | 166.3 | 142.0 | 175.9 | 121.1 | 151.6 | 147.2 | 156.6 | 135.4 | 165.3 | 115.3 | 142.2 | 139.5 | 146.5 | 128.4 | 154.3 | 109.1 |
| | 90 | 167.4 | 164.5 | 171.8 | 154.8 | 179.1 | 138.9 | 158.2 | 156.7 | 162.0 | 147.6 | 168.5 | 132.4 | 148.5 | 148.5 | 151.7 | 140.1 | 157.5 | 125.6 |
| 5500 | 75 | 151.6 | 132.3 | 161.8 | 107.3 | 175.2 | 66.0 | 142.4 | 125.7 | 151.5 | 101.7 | 164.0 | 61.5 | 132.7 | 118.7 | 140.8 | 95.8 | 152.8 | 56.8 |
| | 80 | 157.5 | 147.5 | 164.5 | 129.9 | 176.6 | 100.7 | 148.2 | 140.3 | 154.3 | 123.6 | 165.5 | 95.3 | 138.6 | 132.7 | 143.8 | 116.8 | 153.9 | 89.5 |
| | 85 | 164.2 | 159.7 | 169.2 | 146.8 | 178.0 | 125.4 | 154.8 | 152.0 | 159.1 | 139.8 | 167.0 | 119.2 | 145.0 | 143.9 | 148.5 | 132.4 | 155.6 | 112.6 |
| | 90 | 171.3 | 170.1 | 175.1 | 160.0 | 181.8 | 143.7 | 161.7 | 161.7 | 164.9 | 152.5 | 170.7 | 136.9 | 151.6 | 151.6 | 154.2 | 144.6 | 159.3 | 129.7 |
| 6000 | 75 | 153.6 | 135.8 | 162.8 | 110.2 | 175.3 | 68.2 | 143.9 | 128.8 | 152.1 | 104.2 | 164.5 | 63.4 | 133.8 | 121.5 | 140.9 | 97.9 | 153.2 | 58.2 |
| | 80 | 160.0 | 151.6 | 166.1 | 133.5 | 177.4 | 103.7 | 150.3 | 144.0 | 155.6 | 126.7 | 165.8 | 97.9 | 140.2 | 136.0 | 144.6 | 119.6 | 154.5 | 91.7 |
| | 85 | 167.1 | 164.3 | 171.4 | 150.9 | 179.4 | 129.0 | 157.3 | 156.1 | 160.9 | 143.5 | 168.0 | 122.4 | 147.0 | 147.0 | 149.9 | 135.7 | 156.2 | 115.5 |
| | 90 | 174.5 | 174.5 | 177.7 | 164.6 | 183.7 | 147.9 | 164.4 | 164.4 | 167.1 | 156.7 | 172.3 | 140.6 | 154.0 | 154.0 | 155.9 | 148.4 | 160.4 | 133.1 |

**Table 22. Gross cooling capacities 12½ tons three phase high efficiency T/YH*150G3,4,W (full load) (continued)**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 115 | | | | | | 120 | | | | | | 125 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 2500 | 75 | 103.5 | 83.2 | 113.8 | 64.9 | 126.9 | 31.1 | 99.5 | 80.7 | 109.4 | 62.8 | 122.0 | 29.6 | 95.5 | 78.0 | 104.9 | 60.6 | 117.0 | 28.0 |
| | 80 | 106.2 | 93.3 | 115.4 | 81.4 | 127.4 | 58.5 | 102.2 | 90.4 | 110.9 | 78.9 | 122.5 | 56.5 | 98.1 | 87.5 | 106.4 | 76.4 | 117.5 | 54.4 |
| | 85 | 110.0 | 101.2 | 116.9 | 93.0 | 127.9 | 77.0 | 105.9 | 98.1 | 112.5 | 90.3 | 123.0 | 74.7 | 101.8 | 94.8 | 107.9 | 87.4 | 118.0 | 72.2 |
| | 90 | 114.5 | 107.9 | 119.9 | 101.9 | 128.4 | 90.2 | 110.3 | 104.5 | 115.4 | 98.8 | 123.5 | 87.5 | 106.0 | 101.1 | 110.8 | 95.7 | 118.5 | 84.7 |
| 3000 | 75 | 108.5 | 89.6 | 118.0 | 70.6 | 130.2 | 36.2 | 104.3 | 86.8 | 113.3 | 68.4 | 125.1 | 34.5 | 100.0 | 84.0 | 108.6 | 66.0 | 120.0 | 32.7 |
| | 80 | 111.7 | 100.3 | 120.0 | 87.8 | 131.2 | 64.3 | 107.5 | 97.2 | 115.4 | 85.1 | 126.2 | 62.1 | 103.2 | 94.0 | 110.7 | 82.4 | 121.0 | 59.9 |
| | 85 | 115.9 | 108.6 | 122.1 | 100.0 | 132.3 | 83.5 | 111.6 | 105.3 | 117.5 | 97.0 | 127.2 | 80.9 | 107.3 | 101.8 | 112.7 | 94.0 | 122.0 | 78.3 |
| | 90 | 120.7 | 115.7 | 125.5 | 109.3 | 133.3 | 97.2 | 116.3 | 112.1 | 120.8 | 106.1 | 128.2 | 94.3 | 111.8 | 108.5 | 116.0 | 102.7 | 123.1 | 91.3 |
| 3500 | 75 | 112.7 | 95.3 | 123.6 | 75.8 | 132.9 | 40.6 | 108.3 | 92.4 | 118.7 | 73.3 | 127.6 | 38.7 | 103.8 | 89.3 | 113.7 | 70.8 | 122.2 | 36.8 |
| | 80 | 116.4 | 106.5 | 124.0 | 93.5 | 134.4 | 69.5 | 112.0 | 103.2 | 119.2 | 90.7 | 129.1 | 67.1 | 107.5 | 99.8 | 114.2 | 87.7 | 123.8 | 64.7 |
| | 85 | 121.1 | 115.3 | 126.6 | 106.3 | 136.0 | 89.3 | 116.6 | 111.8 | 121.8 | 103.1 | 130.7 | 86.5 | 112.0 | 108.2 | 116.8 | 99.8 | 125.3 | 83.7 |
| | 90 | 126.2 | 122.8 | 130.5 | 116.1 | 137.6 | 103.5 | 121.6 | 119.0 | 125.5 | 112.6 | 132.3 | 100.4 | 116.9 | 115.2 | 120.5 | 109.1 | 126.9 | 97.3 |
| 4000 | 75 | 116.3 | 100.4 | 126.2 | 80.2 | 134.8 | 44.4 | 111.7 | 97.2 | 121.0 | 77.5 | 129.3 | 42.3 | 107.0 | 94.0 | 115.8 | 74.8 | 123.7 | 40.1 |
| | 80 | 120.5 | 112.1 | 127.3 | 98.6 | 136.9 | 74.0 | 115.9 | 108.6 | 122.2 | 95.5 | 131.4 | 71.4 | 111.2 | 105.0 | 117.1 | 92.4 | 125.8 | 68.8 |
| | 85 | 125.6 | 121.4 | 130.4 | 111.9 | 139.0 | 94.4 | 120.9 | 117.6 | 125.4 | 108.5 | 133.5 | 91.5 | 116.1 | 113.8 | 120.2 | 105.1 | 127.9 | 88.4 |
| | 90 | 131.0 | 129.2 | 134.7 | 122.1 | 141.1 | 109.2 | 126.2 | 125.3 | 129.5 | 118.5 | 135.6 | 105.9 | 121.3 | 121.2 | 124.3 | 114.8 | 130.0 | 102.5 |
| 4500 | 75 | 119.1 | 104.7 | 128.0 | 84.0 | 140.3 | 47.5 | 114.3 | 101.4 | 122.7 | 81.1 | 134.5 | 45.2 | 109.4 | 97.9 | 117.3 | 78.2 | 128.6 | 42.8 |
| | 80 | 123.9 | 117.0 | 129.8 | 103.0 | 140.8 | 77.8 | 119.0 | 113.3 | 124.5 | 99.7 | 135.0 | 75.1 | 114.1 | 109.6 | 119.2 | 96.4 | 129.2 | 72.2 |
| | 85 | 129.3 | 126.7 | 133.5 | 116.8 | 141.3 | 98.9 | 124.4 | 122.8 | 128.2 | 113.3 | 135.6 | 95.7 | 119.4 | 118.8 | 122.8 | 109.6 | 129.8 | 92.5 |
| | 90 | 135.1 | 135.0 | 138.1 | 127.6 | 143.9 | 114.2 | 130.0 | 130.0 | 132.8 | 123.7 | 138.2 | 110.7 | 124.9 | 124.9 | 127.4 | 119.8 | 132.4 | 107.1 |
| 5000 | 75 | 121.2 | 108.4 | 129.2 | 87.1 | 140.6 | 49.9 | 116.2 | 104.9 | 123.6 | 84.0 | 134.5 | 47.4 | 111.1 | 101.2 | 118.0 | 80.9 | 129.0 | 44.9 |
| | 80 | 126.5 | 121.2 | 131.6 | 106.7 | 141.7 | 81.0 | 121.5 | 117.4 | 126.2 | 103.3 | 135.7 | 78.0 | 116.4 | 113.4 | 120.6 | 99.7 | 129.6 | 75.0 |
| | 85 | 132.4 | 131.4 | 135.8 | 121.1 | 142.8 | 102.7 | 127.3 | 127.3 | 130.4 | 117.3 | 136.9 | 99.3 | 122.1 | 122.1 | 124.8 | 113.5 | 130.9 | 95.9 |
| | 90 | 138.4 | 138.4 | 140.9 | 132.3 | 146.0 | 118.5 | 133.2 | 133.2 | 135.4 | 128.3 | 140.1 | 114.8 | 127.9 | 127.9 | 129.7 | 124.1 | 134.1 | 111.1 |
| 5500 | 75 | 122.6 | 111.5 | 129.6 | 89.5 | 141.0 | 51.7 | 117.4 | 107.7 | 123.9 | 86.3 | 134.8 | 49.0 | 112.1 | 103.9 | 118.0 | 82.9 | 130.0 | 46.2 |
| | 80 | 128.4 | 124.8 | 132.7 | 109.8 | 141.9 | 83.5 | 123.2 | 120.7 | 127.1 | 106.1 | 136.2 | 80.3 | 117.9 | 116.6 | 121.3 | 102.4 | 130.7 | 77.1 |
| | 85 | 134.7 | 134.7 | 137.5 | 124.7 | 143.7 | 105.8 | 129.4 | 129.4 | 131.8 | 120.7 | 137.6 | 102.2 | 124.0 | 124.0 | 126.0 | 116.7 | 131.4 | 98.6 |
| | 90 | 141.1 | 141.1 | 143.0 | 136.4 | 147.4 | 122.2 | 135.7 | 135.7 | 137.2 | 132.1 | 141.3 | 118.3 | 130.1 | 130.1 | 131.4 | 127.8 | 135.1 | 114.3 |
| 6000 | 75 | 123.3 | 113.8 | 130.0 | 91.3 | 142.0 | 52.7 | 117.9 | 109.9 | 125.0 | 87.8 | 135.3 | 49.9 | 112.3 | 105.8 | 119.0 | 84.3 | 130.2 | 46.9 |
| | 80 | 129.7 | 127.7 | 133.2 | 112.2 | 143.0 | 85.3 | 124.2 | 123.4 | 127.3 | 108.3 | 137.0 | 81.9 | 118.7 | 118.7 | 124.0 | 104.4 | 131.6 | 78.5 |
| | 85 | 136.4 | 136.4 | 138.4 | 127.6 | 143.8 | 108.2 | 130.8 | 130.8 | 132.5 | 123.5 | 139.0 | 104.5 | 125.2 | 125.2 | 126.5 | 119.2 | 133.0 | 100.6 |
| | 90 | 143.0 | 143.0 | 144.3 | 139.8 | 148.1 | 125.2 | 137.4 | 137.4 | 138.4 | 135.3 | 141.8 | 121.1 | 131.6 | 131.6 | 132.3 | 130.8 | 135.3 | 116.9 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

**Table 23. Gross cooling capacities 12½ tons three phase dehumidification (hot gas reheat) option high efficiency T/YHD150G3,4,W (Digit 22 = B)**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 2500[a] | 75 | 119.6 | 86.9 | 135.0 | 60.0 | 154.5 | 54.1 | 112.4 | 82.4 | 127.1 | 56.5 | 145.9 | 51.1 | 104.7 | 77.6 | 118.6 | 52.7 | 136.8 | 47.9 |
| | 80 | 121.1 | 102.6 | 134.0 | 82.6 | 151.3 | 52.9 | 114.0 | 97.4 | 126.2 | 78.4 | 142.8 | 50.0 | 106.3 | 92.0 | 117.9 | 74.0 | 133.7 | 46.8 |
| | 85 | 123.7 | 114.7 | 134.3 | 101.6 | 149.2 | 75.1 | 116.7 | 108.9 | 126.6 | 96.8 | 140.8 | 71.4 | 109.2 | 102.8 | 118.4 | 91.7 | 131.9 | 67.4 |
| | 90 | 127.5 | 123.2 | 135.8 | 116.9 | 148.3 | 97.4 | 120.6 | 116.7 | 128.2 | 111.5 | 140.0 | 93.0 | 113.2 | 110.0 | 120.1 | 105.8 | 131.2 | 88.4 |
| 3250[a] | 75 | 129.1 | 96.7 | 143.2 | 68.4 | 161.5 | 56.5 | 121.5 | 91.9 | 134.9 | 64.6 | 152.5 | 53.4 | 113.3 | 86.8 | 126.0 | 60.5 | 142.9 | 50.0 |
| | 80 | 131.4 | 113.6 | 143.2 | 92.1 | 159.1 | 57.4 | 123.9 | 108.1 | 134.9 | 87.7 | 150.2 | 54.0 | 115.8 | 102.4 | 126.1 | 83.0 | 140.7 | 50.4 |
| | 85 | 134.9 | 126.9 | 144.3 | 112.3 | 157.9 | 84.4 | 127.5 | 120.8 | 136.2 | 107.2 | 149.1 | 80.4 | 119.5 | 114.4 | 127.5 | 101.9 | 139.7 | 76.2 |
| | 90 | 139.7 | 136.5 | 146.7 | 128.8 | 157.9 | 107.9 | 132.3 | 129.8 | 138.6 | 123.1 | 149.2 | 103.2 | 124.4 | 122.8 | 130.0 | 117.2 | 139.9 | 98.3 |
| 4000 | 75 | 137.1 | 105.6 | 149.9 | 75.8 | 167.0 | 58.4 | 129.0 | 100.4 | 141.1 | 71.7 | 157.4 | 55.1 | 120.3 | 95.0 | 131.7 | 67.4 | 147.4 | 51.6 |
| | 80 | 140.2 | 123.6 | 150.7 | 100.7 | 165.4 | 64.5 | 132.2 | 117.8 | 142.0 | 96.0 | 156.0 | 60.9 | 123.7 | 111.8 | 132.7 | 91.0 | 146.1 | 57.0 |
| | 85 | 144.6 | 138.0 | 152.7 | 122.0 | 165.1 | 92.7 | 136.7 | 131.6 | 144.1 | 116.7 | 155.8 | 88.5 | 128.3 | 124.9 | 135.0 | 111.1 | 145.9 | 83.9 |
| | 90 | 150.2 | 148.8 | 156.0 | 139.7 | 166.0 | 117.4 | 142.4 | 141.8 | 147.5 | 133.7 | 156.8 | 112.4 | 134.0 | 134.0 | 138.4 | 127.5 | 147.0 | 107.2 |
| 4500 | 75 | 141.5 | 110.9 | 153.5 | 80.1 | 169.7 | 59.4 | 133.1 | 105.5 | 144.3 | 75.9 | 159.9 | 56.0 | 124.1 | 100.0 | 134.7 | 71.3 | 149.5 | 52.3 |
| | 80 | 145.2 | 129.7 | 154.9 | 105.8 | 168.8 | 68.7 | 136.9 | 123.7 | 145.8 | 100.9 | 159.0 | 64.9 | 128.1 | 117.5 | 136.3 | 95.8 | 148.8 | 60.8 |
| | 85 | 150.2 | 144.9 | 157.5 | 127.9 | 169.0 | 97.7 | 142.0 | 138.3 | 148.6 | 122.4 | 159.4 | 93.2 | 133.2 | 131.4 | 139.1 | 116.6 | 149.2 | 88.5 |
| | 90 | 156.3 | 156.3 | 161.3 | 146.4 | 170.5 | 123.1 | 148.2 | 148.2 | 152.5 | 140.3 | 161.0 | 118.0 | 139.6 | 139.6 | 143.1 | 133.8 | 150.9 | 112.6 |
| 5000 | 75 | 145.2 | 115.7 | 156.3 | 84.0 | 171.8 | 60.1 | 136.5 | 110.2 | 146.9 | 79.6 | 161.6 | 56.6 | 127.2 | 104.5 | 137.0 | 74.9 | 151.0 | 52.8 |
| | 80 | 149.5 | 135.3 | 158.3 | 110.5 | 171.4 | 72.5 | 140.9 | 129.2 | 149.0 | 105.4 | 161.4 | 68.4 | 131.7 | 122.8 | 139.1 | 100.1 | 150.8 | 64.2 |
| | 85 | 155.0 | 151.3 | 161.5 | 133.4 | 172.2 | 102.3 | 146.5 | 144.5 | 152.3 | 127.7 | 162.3 | 97.6 | 137.5 | 137.5 | 142.5 | 121.7 | 151.8 | 92.7 |
| | 90 | 161.8 | 161.8 | 165.9 | 152.7 | 174.3 | 128.4 | 153.4 | 153.4 | 156.8 | 146.3 | 164.4 | 123.1 | 144.4 | 144.4 | 147.1 | 139.7 | 154.1 | 117.6 |
| 5500 | 75 | 148.2 | 120.1 | 158.5 | 87.5 | 173.1 | 60.6 | 139.2 | 114.4 | 148.8 | 82.9 | 162.7 | 56.9 | 129.6 | 108.5 | 138.5 | 78.0 | 151.7 | 53.1 |
| | 80 | 153.1 | 140.5 | 161.1 | 114.8 | 173.3 | 75.8 | 144.2 | 134.2 | 151.4 | 109.5 | 163.0 | 71.6 | 134.7 | 127.6 | 141.3 | 104.0 | 152.1 | 67.1 |
| | 85 | 159.2 | 157.2 | 164.8 | 138.4 | 174.7 | 106.3 | 150.4 | 150.3 | 155.3 | 132.5 | 164.5 | 101.5 | 141.0 | 141.0 | 145.3 | 126.3 | 153.7 | 96.4 |
| | 90 | 166.5 | 166.5 | 169.8 | 158.5 | 177.3 | 133.3 | 157.8 | 157.8 | 160.4 | 151.9 | 167.2 | 127.8 | 148.6 | 148.6 | 150.4 | 145.1 | 156.6 | 122.0 |
| 6000 | 75 | 150.5 | 124.1 | 160.0 | 90.5 | 173.7 | 60.8 | 141.2 | 118.2 | 150.0 | 85.7 | 163.0 | 57.1 | 131.3 | 112.1 | 139.4 | 80.6 | 151.7 | 53.1 |
| | 80 | 156.0 | 145.2 | 163.1 | 118.6 | 174.5 | 78.6 | 146.8 | 138.7 | 153.2 | 113.1 | 163.9 | 74.2 | 137.0 | 131.9 | 142.7 | 107.4 | 152.7 | 69.6 |
| | 85 | 162.7 | 162.7 | 167.5 | 143.0 | 176.5 | 110.0 | 153.6 | 153.6 | 157.6 | 136.9 | 166.0 | 104.9 | 143.9 | 143.9 | 147.3 | 130.5 | 154.9 | 99.6 |
| | 90 | 170.6 | 170.6 | 173.0 | 163.8 | 179.7 | 137.7 | 161.5 | 161.5 | 163.3 | 157.1 | 169.3 | 132.0 | 152.0 | 152.0 | 153.0 | 150.1 | 158.3 | 126.1 |

**Table 23. Gross cooling capacities 12½ tons three phase dehumidification (hot gas reheat) option high efficiency T/YHD150G3,4,W (Digit 22 = B) (continued)**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 115 | | | | | | 120 | | | | | | 125 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 2500[a] | 75 | 96.4 | 72.5 | 109.7 | 48.7 | 127.1 | 44.5 | 92.1 | 69.8 | 105.0 | 46.6 | 122.1 | 42.7 | 87.7 | 67.2 | 100.2 | 44.4 | 116.9 | 40.9 |
| | 80 | 98.2 | 86.3 | 109.0 | 69.4 | 124.1 | 43.5 | 93.9 | 83.3 | 104.4 | 66.9 | 119.2 | 41.7 | 89.5 | 80.3 | 99.6 | 64.4 | 114.0 | 39.9 |
| | 85 | 101.1 | 96.4 | 109.6 | 86.4 | 122.4 | 63.2 | 96.9 | 93.2 | 105.0 | 83.7 | 117.5 | 60.9 | 92.5 | 89.8 | 100.3 | 80.9 | 112.4 | 58.7 |
| | 90 | 105.3 | 103.0 | 111.4 | 99.9 | 121.8 | 83.5 | 101.1 | 99.4 | 106.9 | 96.9 | 116.9 | 81.0 | 96.8 | 95.8 | 102.2 | 93.7 | 111.9 | 78.4 |
| 3250[a] | 75 | 104.6 | 81.4 | 116.5 | 56.2 | 132.7 | 46.5 | 100.0 | 78.7 | 111.6 | 54.0 | 127.5 | 44.6 | 95.3 | 75.8 | 106.6 | 51.7 | 122.1 | 42.7 |
| | 80 | 107.2 | 96.4 | 116.8 | 78.1 | 130.7 | 46.5 | 102.7 | 93.3 | 111.9 | 75.5 | 125.4 | 44.5 | 98.0 | 90.2 | 106.9 | 72.9 | 120.1 | 42.3 |
| | 85 | 111.0 | 107.7 | 118.3 | 96.3 | 129.8 | 71.6 | 106.5 | 104.3 | 113.4 | 93.4 | 124.6 | 69.3 | 101.9 | 100.9 | 108.5 | 90.5 | 119.3 | 66.9 |
| | 90 | 116.0 | 115.5 | 120.9 | 111.0 | 130.1 | 93.2 | 111.6 | 111.6 | 116.2 | 107.8 | 125.0 | 90.5 | 107.1 | 107.1 | 111.3 | 104.5 | 119.7 | 87.8 |
| 4000 | 75 | 111.1 | 89.4 | 121.8 | 62.8 | 136.8 | 47.9 | 106.3 | 86.5 | 116.7 | 60.4 | 131.3 | 46.0 | 101.4 | 83.5 | 111.4 | 57.9 | 125.7 | 44.0 |
| | 80 | 114.6 | 105.5 | 123.0 | 85.8 | 135.6 | 52.8 | 109.9 | 102.3 | 117.9 | 83.1 | 130.1 | 50.6 | 105.0 | 99.0 | 112.7 | 80.3 | 124.6 | 48.4 |
| | 85 | 119.3 | 118.0 | 125.3 | 105.2 | 135.6 | 79.1 | 114.6 | 114.5 | 120.3 | 102.2 | 130.2 | 76.6 | 109.8 | 109.8 | 115.1 | 99.1 | 124.7 | 74.0 |
| | 90 | 125.2 | 125.2 | 128.8 | 121.0 | 136.7 | 101.8 | 120.5 | 120.5 | 123.8 | 117.7 | 131.4 | 99.0 | 115.8 | 115.8 | 118.7 | 114.3 | 125.9 | 96.1 |
| 4500 | 75 | 114.6 | 94.1 | 124.5 | 66.6 | 138.6 | 48.5 | 109.7 | 91.1 | 119.2 | 64.1 | 133.0 | 46.5 | 104.6 | 88.1 | 113.8 | 61.5 | 127.2 | 44.5 |
| | 80 | 118.7 | 111.0 | 126.2 | 90.4 | 138.0 | 56.4 | 113.8 | 107.7 | 121.0 | 87.6 | 132.4 | 54.2 | 108.8 | 104.3 | 115.6 | 84.7 | 126.7 | 51.8 |
| | 85 | 123.9 | 123.9 | 129.1 | 110.6 | 138.6 | 83.5 | 119.1 | 119.1 | 123.9 | 107.4 | 133.0 | 80.9 | 114.1 | 114.1 | 118.6 | 104.3 | 127.3 | 78.3 |
| | 90 | 130.4 | 130.4 | 133.2 | 127.1 | 140.3 | 107.0 | 125.6 | 125.6 | 128.1 | 123.7 | 134.8 | 104.1 | 120.7 | 120.7 | 122.8 | 120.2 | 129.2 | 101.1 |
| 5000 | 75 | 117.4 | 98.4 | 126.5 | 69.9 | 139.8 | 48.9 | 112.3 | 95.3 | 121.0 | 67.4 | 134.0 | 46.9 | 107.1 | 92.2 | 115.4 | 64.7 | 128.0 | 44.8 |
| | 80 | 122.1 | 116.1 | 128.8 | 94.5 | 139.7 | 59.6 | 117.0 | 112.7 | 123.4 | 91.6 | 134.0 | 57.2 | 111.8 | 109.2 | 117.8 | 88.6 | 128.1 | 54.8 |
| | 85 | 127.9 | 127.9 | 132.2 | 115.5 | 140.8 | 87.5 | 122.9 | 122.9 | 126.9 | 112.3 | 135.1 | 84.8 | 117.8 | 117.8 | 121.4 | 109.0 | 129.3 | 82.0 |
| | 90 | 134.9 | 134.9 | 136.9 | 132.8 | 143.2 | 111.7 | 130.0 | 130.0 | 131.6 | 129.3 | 137.5 | 108.7 | 125.0 | 125.0 | 126.2 | 125.7 | 131.8 | 105.7 |
| 5500 | 75 | 119.5 | 102.3 | 127.7 | 72.8 | 140.2 | 49.1 | 114.3 | 99.1 | 122.1 | 70.2 | 134.2 | 47.0 | 108.9 | 95.8 | 116.4 | 67.4 | 128.2 | 44.9 |
| | 80 | 124.7 | 120.7 | 130.6 | 98.2 | 140.7 | 62.3 | 119.5 | 117.2 | 125.0 | 95.2 | 134.8 | 59.9 | 114.2 | 113.6 | 119.4 | 92.1 | 128.8 | 57.4 |
| | 85 | 131.1 | 131.1 | 134.7 | 119.9 | 142.4 | 91.0 | 126.0 | 126.0 | 129.2 | 116.6 | 136.6 | 88.2 | 120.7 | 120.7 | 123.5 | 113.2 | 130.6 | 85.4 |
| | 90 | 138.5 | 138.5 | 139.9 | 138.1 | 145.4 | 116.0 | 133.1 | 133.1 | 134.5 | 134.4 | 139.6 | 112.9 | 128.9 | 128.9 | 128.9 | 128.9 | 133.6 | 109.8 |
| 6000 | 75 | 120.9 | 105.7 | 128.3 | 75.3 | 139.9 | 49.0 | 115.5 | 102.4 | 122.5 | 72.5 | 133.8 | 46.8 | 110.0 | 99.0 | 116.7 | 69.7 | 127.6 | 44.7 |
| | 80 | 126.7 | 124.9 | 131.7 | 101.4 | 141.0 | 64.6 | 121.4 | 121.3 | 126.0 | 98.3 | 135.0 | 62.1 | 115.9 | 115.9 | 120.2 | 95.2 | 128.8 | 59.5 |
| | 85 | 133.7 | 133.7 | 136.4 | 123.9 | 143.3 | 94.1 | 128.4 | 128.4 | 130.7 | 120.5 | 137.3 | 91.2 | 123.0 | 123.0 | 125.0 | 117.1 | 131.2 | 88.2 |
| | 90 | 142.2 | 142.2 | 142.2 | 142.2 | 146.8 | 119.9 | 136.6 | 136.6 | 136.6 | 136.6 | 140.9 | 116.7 | 130.9 | 130.9 | 130.9 | 130.9 | 134.8 | 113.4 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity

(a) For 2500 and 3250 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Dehumidification (Hot Gas Reheat) with Frostat and Crankcage heaters are required on applications below 320 cfm/ton.
- Multi-speed or single zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 24. Gross cooling capacities 15 tons three phase high efficiency T/YH*180G3,4,W (stage 1)**

| Air Flow cfm | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 2400 | 75 | 54.8 | 51.5 | 59.2 | 40.6 | 65.3 | 18.6 | 51.8 | 49.1 | 56.0 | 38.5 | 60.9 | 17.0 |
| | 80 | 57.4 | 56.8 | 60.0 | 50.8 | 65.5 | 37.2 | 54.3 | 54.2 | 56.8 | 48.5 | 62.1 | 35.2 |
| | 85 | 60.3 | 60.3 | 61.9 | 57.4 | 65.5 | 48.8 | 57.1 | 57.1 | 58.6 | 54.8 | 62.1 | 46.6 |
| | 90 | 63.3 | 63.3 | 64.3 | 61.8 | 66.8 | 56.5 | 60.1 | 60.1 | 61.0 | 59.1 | 63.3 | 54.1 |
| 3000 | 75 | 56.6 | 54.6 | 60.5 | 44.0 | 66.3 | 22.4 | 53.4 | 52.0 | 57.1 | 41.7 | 61.6 | 20.5 |
| | 80 | 59.5 | 59.5 | 61.7 | 54.3 | 66.7 | 40.9 | 56.2 | 56.2 | 58.2 | 51.8 | 63.1 | 38.7 |
| | 85 | 62.6 | 62.6 | 63.8 | 60.9 | 67.1 | 52.6 | 59.3 | 59.3 | 60.4 | 58.2 | 63.4 | 50.2 |
| | 90 | 65.7 | 65.7 | 66.4 | 65.5 | 68.6 | 60.4 | 62.3 | 62.3 | 62.9 | 62.6 | 64.9 | 57.7 |
| 3600 | 75 | 58.1 | 57.2 | 61.5 | 46.8 | 66.9 | 25.5 | 54.7 | 54.3 | 57.9 | 44.3 | 62.0 | 23.4 |
| | 80 | 61.2 | 61.2 | 63.0 | 57.2 | 67.5 | 44.0 | 57.8 | 57.8 | 59.4 | 54.4 | 63.8 | 41.6 |
| | 85 | 64.5 | 64.5 | 65.4 | 63.9 | 68.2 | 55.8 | 61.0 | 61.0 | 61.8 | 60.9 | 64.4 | 53.1 |
| | 90 | 67.9 | 67.9 | 68.3 | 68.3 | 70.0 | 63.7 | 64.3 | 64.3 | 64.6 | 64.6 | 66.2 | 60.7 |
| 4200 | 75 | 59.3 | 59.1 | 62.2 | 49.1 | 67.0 | 28.1 | 55.7 | 55.7 | 58.4 | 46.3 | 62.1 | 25.7 |
| | 80 | 62.6 | 62.6 | 64.0 | 59.5 | 68.1 | 46.6 | 59.0 | 59.0 | 60.2 | 56.4 | 64.1 | 43.9 |
| | 85 | 66.2 | 66.2 | 66.7 | 66.3 | 69.1 | 58.4 | 62.5 | 62.5 | 62.9 | 62.9 | 65.1 | 55.5 |
| | 90 | 69.7 | 69.7 | 69.7 | 69.7 | 71.2 | 66.3 | 64.6 | 64.6 | 65.9 | 65.9 | 67.2 | 63.2 |
| 4800 | 75 | 60.1 | 60.1 | 62.5 | 50.7 | 67.1 | 30.0 | 56.4 | 56.4 | 58.6 | 47.7 | 62.7 | 27.4 |
| | 80 | 63.7 | 63.7 | 64.7 | 61.1 | 68.3 | 48.5 | 59.9 | 59.9 | 60.7 | 57.9 | 64.1 | 45.6 |
| | 85 | 67.5 | 67.5 | 67.6 | 67.6 | 69.6 | 60.4 | 63.6 | 63.6 | 63.6 | 63.6 | 65.5 | 57.3 |
| | 90 | 69.8 | 69.8 | 70.9 | 70.9 | 72.0 | 68.5 | 65.9 | 65.9 | 66.8 | 66.8 | 67.8 | 65.1 |
| 5250 | 75 | 60.5 | 60.5 | 62.5 | 51.6 | 67.2 | 31.1 | 56.6 | 56.6 | 58.8 | 48.4 | 63.0 | 28.4 |
| | 80 | 64.3 | 64.3 | 65.0 | 62.0 | 68.5 | 49.6 | 60.4 | 60.4 | 60.9 | 58.6 | 64.1 | 46.5 |
| | 85 | 67.8 | 67.8 | 68.1 | 68.1 | 69.8 | 61.6 | 63.8 | 63.8 | 64.0 | 64.0 | 65.5 | 58.2 |
| | 90 | 70.7 | 70.7 | 71.5 | 71.5 | 72.4 | 69.6 | 66.7 | 66.7 | 67.4 | 67.4 | 68.0 | 66.1 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

**Table 25. Gross cooling capacities 15 tons three phase high efficiency T/YH*180G3,4,W (stage 2)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 2400 | 75 | 102.0 | 81.9 | 111.7 | 65.6 | 123.0 | 36.1 | 96.8 | 78.4 | 105.8 | 62.6 | 116.0 | 33.6 |
| | 80 | 104.0 | 90.7 | 113.0 | 79.9 | 123.8 | 59.7 | 98.9 | 86.9 | 107.3 | 76.5 | 117.7 | 56.7 |
| | 85 | 107.1 | 97.4 | 114.3 | 89.8 | 124.6 | 75.5 | 102.0 | 93.4 | 108.8 | 86.1 | 118.5 | 72.1 |
| | 90 | 111.0 | 102.8 | 117.0 | 97.1 | 125.4 | 86.5 | 105.8 | 98.6 | 111.5 | 93.2 | 119.3 | 82.9 |
| 3000 | 75 | 107.2 | 88.8 | 117.9 | 71.7 | 126.6 | 41.1 | 101.7 | 85.0 | 111.7 | 68.3 | 120.0 | 38.3 |
| | 80 | 109.8 | 98.2 | 118.0 | 86.6 | 128.0 | 65.6 | 104.4 | 94.1 | 112.0 | 82.9 | 121.5 | 62.3 |
| | 85 | 113.4 | 105.4 | 120.0 | 97.2 | 129.4 | 82.2 | 108.0 | 101.1 | 114.1 | 93.2 | 123.0 | 78.5 |
| | 90 | 117.8 | 111.3 | 123.2 | 105.1 | 130.8 | 93.9 | 112.3 | 106.7 | 117.3 | 100.8 | 124.5 | 89.9 |
| 3600 | 75 | 111.5 | 94.8 | 121.2 | 76.7 | 133.1 | 45.2 | 105.7 | 90.6 | 114.7 | 73.0 | 125.9 | 42.1 |
| | 80 | 114.7 | 104.8 | 122.0 | 92.5 | 133.2 | 70.6 | 109.0 | 100.4 | 115.7 | 88.4 | 126.2 | 67.0 |
| | 85 | 118.9 | 112.5 | 124.7 | 103.7 | 133.3 | 87.9 | 113.2 | 107.9 | 118.5 | 99.3 | 126.5 | 84.0 |
| | 90 | 123.7 | 118.9 | 128.4 | 112.1 | 135.3 | 100.3 | 117.8 | 114.0 | 122.2 | 107.5 | 128.7 | 96.0 |
| 4200 | 75 | 114.9 | 99.8 | 123.6 | 80.9 | 134.5 | 48.4 | 108.8 | 95.3 | 116.8 | 76.9 | 127.0 | 44.9 |
| | 80 | 118.8 | 110.4 | 125.2 | 97.4 | 135.4 | 74.7 | 112.7 | 105.7 | 118.6 | 93.0 | 128.1 | 70.7 |
| | 85 | 123.5 | 118.7 | 128.5 | 109.2 | 136.3 | 92.8 | 117.4 | 113.7 | 122.0 | 104.6 | 129.2 | 88.5 |
| | 90 | 128.6 | 125.5 | 132.8 | 118.2 | 139.0 | 105.7 | 122.5 | 120.3 | 126.3 | 113.2 | 132.0 | 101.1 |
| 4800 | 75 | 117.4 | 103.9 | 125.1 | 84.1 | 135.0 | 50.6 | 111.0 | 99.1 | 117.9 | 79.7 | 128.0 | 46.8 |
| | 80 | 121.9 | 115.2 | 127.5 | 101.4 | 136.7 | 77.8 | 115.6 | 110.1 | 120.6 | 96.7 | 129.1 | 73.5 |
| | 85 | 127.1 | 123.9 | 131.5 | 113.9 | 138.4 | 96.7 | 120.8 | 118.6 | 124.6 | 108.8 | 131.0 | 92.0 |
| | 90 | 132.7 | 131.1 | 136.3 | 123.3 | 141.8 | 110.3 | 126.3 | 125.6 | 129.4 | 118.1 | 134.5 | 105.3 |
| 5250 | 75 | 118.7 | 106.3 | 125.6 | 85.9 | 135.5 | 51.7 | 112.0 | 101.3 | 118.2 | 81.3 | 129.0 | 47.6 |
| | 80 | 123.7 | 118.1 | 128.7 | 103.7 | 137.1 | 79.5 | 117.1 | 112.7 | 121.5 | 98.8 | 129.3 | 75.0 |
| | 85 | 129.3 | 127.3 | 133.1 | 116.7 | 139.4 | 99.0 | 122.7 | 121.7 | 126.0 | 111.4 | 131.8 | 94.1 |
| | 90 | 135.2 | 134.8 | 138.3 | 126.6 | 143.3 | 113.0 | 128.5 | 128.5 | 131.2 | 121.1 | 135.7 | 107.9 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 2400, 3000, 3600, and 4200 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 26. Gross cooling capacities 15 tons three phase high efficiency T/YH*180G3,4,W (full load)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature 85 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 95 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 105 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3000 | 75 | 149.8 | 116.6 | 163.9 | 91.6 | 180.9 | 48.7 | 142.5 | 112.1 | 155.7 | 88.3 | 172.0 | 46.6 | 134.3 | 106.9 | 146.7 | 84.2 | 162.1 | 43.8 |
| | 80 | 153.0 | 130.6 | 165.9 | 113.6 | 181.8 | 83.7 | 145.7 | 125.4 | 157.8 | 109.4 | 172.9 | 80.6 | 137.5 | 119.5 | 148.7 | 104.5 | 163.1 | 76.8 |
| | 85 | 157.9 | 141.6 | 167.9 | 129.4 | 182.8 | 108.0 | 150.5 | 135.8 | 159.8 | 124.5 | 173.8 | 104.0 | 142.2 | 129.4 | 150.8 | 118.9 | 164.0 | 99.3 |
| | 90 | 163.8 | 150.7 | 171.9 | 141.5 | 183.7 | 125.5 | 156.2 | 144.5 | 163.7 | 136.0 | 174.7 | 120.8 | 147.7 | 137.7 | 154.6 | 129.9 | 164.9 | 115.5 |
| 3600 | 75 | 156.6 | 125.2 | 169.8 | 99.5 | 186.1 | 55.7 | 148.9 | 120.2 | 161.3 | 95.7 | 176.7 | 53.2 | 140.3 | 114.6 | 151.8 | 91.2 | 166.5 | 50.1 |
| | 80 | 160.4 | 139.8 | 172.4 | 122.2 | 187.5 | 91.6 | 152.7 | 134.2 | 163.9 | 117.5 | 178.2 | 88.1 | 144.1 | 127.9 | 154.4 | 112.2 | 168.0 | 83.9 |
| | 85 | 165.7 | 151.3 | 175.0 | 138.6 | 189.0 | 116.6 | 157.9 | 145.1 | 166.5 | 133.2 | 179.7 | 112.2 | 149.2 | 138.3 | 157.0 | 127.2 | 169.4 | 107.1 |
| | 90 | 172.0 | 160.9 | 179.5 | 151.2 | 190.5 | 134.7 | 163.9 | 154.2 | 170.8 | 145.3 | 181.2 | 129.6 | 155.0 | 147.0 | 161.3 | 138.7 | 170.9 | 123.8 |
| 4200 | 75 | 162.6 | 133.0 | 177.9 | 106.6 | 190.4 | 62.0 | 154.5 | 127.6 | 168.8 | 102.4 | 180.7 | 59.1 | 145.5 | 121.6 | 158.9 | 97.5 | 170.0 | 55.5 |
| | 80 | 166.9 | 148.2 | 178.1 | 129.9 | 192.5 | 98.7 | 158.8 | 142.1 | 169.2 | 124.9 | 182.7 | 94.8 | 149.8 | 135.4 | 159.4 | 119.1 | 172.1 | 90.1 |
| | 85 | 172.7 | 160.2 | 181.3 | 147.0 | 194.5 | 124.4 | 164.5 | 153.6 | 172.3 | 141.2 | 184.8 | 119.5 | 155.4 | 146.3 | 162.5 | 134.8 | 174.1 | 114.1 |
| | 90 | 179.3 | 170.2 | 186.2 | 160.1 | 196.6 | 143.1 | 170.9 | 163.1 | 177.2 | 153.8 | 186.8 | 137.6 | 161.6 | 155.5 | 167.2 | 146.8 | 176.2 | 131.4 |
| 4800 | 75 | 167.9 | 139.9 | 182.2 | 112.8 | 194.0 | 67.4 | 159.3 | 134.2 | 172.7 | 108.2 | 183.8 | 64.1 | 149.9 | 127.7 | 162.3 | 102.9 | 172.8 | 60.2 |
| | 80 | 172.7 | 155.7 | 183.1 | 136.9 | 196.6 | 105.0 | 164.2 | 149.3 | 173.7 | 131.4 | 186.5 | 100.6 | 154.8 | 142.2 | 163.5 | 125.3 | 175.4 | 95.6 |
| | 85 | 179.0 | 168.2 | 186.8 | 154.5 | 199.2 | 131.4 | 170.3 | 161.2 | 177.5 | 148.4 | 189.1 | 126.1 | 160.8 | 153.6 | 167.2 | 141.5 | 178.0 | 120.2 |
| | 90 | 185.9 | 178.7 | 192.2 | 168.2 | 201.9 | 150.7 | 177.1 | 171.3 | 182.7 | 161.4 | 191.7 | 144.7 | 167.3 | 163.2 | 172.4 | 154.0 | 180.7 | 138.2 |
| 5400 | 75 | 172.3 | 146.1 | 185.6 | 118.3 | 202.7 | 72.1 | 163.4 | 139.9 | 175.7 | 113.3 | 191.8 | 68.4 | 153.6 | 133.1 | 164.9 | 107.6 | 180.1 | 64.0 |
| | 80 | 177.8 | 162.5 | 187.3 | 143.1 | 202.9 | 110.5 | 168.8 | 155.6 | 177.5 | 137.2 | 192.2 | 105.7 | 159.0 | 148.1 | 166.9 | 130.6 | 180.6 | 100.3 |
| | 85 | 184.4 | 175.5 | 191.6 | 161.3 | 203.2 | 137.6 | 175.4 | 168.1 | 181.8 | 154.7 | 192.6 | 131.9 | 165.5 | 160.0 | 171.2 | 147.5 | 181.2 | 125.6 |
| | 90 | 191.7 | 186.4 | 197.4 | 175.5 | 206.4 | 157.5 | 182.5 | 178.6 | 187.5 | 168.3 | 195.8 | 151.1 | 172.3 | 170.1 | 176.8 | 160.5 | 184.4 | 144.1 |
| 6000 | 75 | 176.0 | 151.5 | 188.3 | 123.0 | 204.4 | 76.0 | 166.7 | 144.9 | 178.0 | 117.5 | 193.1 | 71.9 | 156.5 | 137.6 | 166.8 | 111.4 | 181.0 | 67.1 |
| | 80 | 182.0 | 168.5 | 190.7 | 148.5 | 205.4 | 115.2 | 172.7 | 161.2 | 180.5 | 142.2 | 194.3 | 110.0 | 162.5 | 153.3 | 169.5 | 135.2 | 182.3 | 104.1 |
| | 85 | 189.1 | 182.0 | 195.5 | 167.3 | 206.3 | 143.0 | 179.7 | 174.2 | 185.4 | 160.3 | 195.4 | 136.9 | 169.3 | 165.7 | 174.3 | 152.6 | 183.5 | 130.2 |
| | 90 | 196.8 | 193.3 | 201.8 | 181.9 | 210.1 | 163.5 | 187.1 | 185.1 | 191.5 | 174.4 | 199.1 | 156.7 | 176.6 | 176.2 | 180.4 | 166.2 | 187.3 | 149.3 |
| 6600 | 75 | 178.9 | 156.1 | 190.2 | 126.9 | 205.4 | 79.1 | 169.2 | 149.1 | 179.5 | 121.0 | 193.7 | 74.5 | 158.6 | 141.4 | 167.9 | 114.5 | 181.2 | 69.3 |
| | 80 | 185.5 | 173.7 | 193.3 | 153.1 | 207.0 | 119.1 | 175.7 | 166.0 | 182.7 | 146.3 | 195.5 | 113.5 | 165.1 | 157.6 | 171.3 | 139.0 | 183.1 | 107.2 |
| | 85 | 193.0 | 187.7 | 198.7 | 172.5 | 208.7 | 147.6 | 183.2 | 179.5 | 188.2 | 165.1 | 197.3 | 141.1 | 172.4 | 170.6 | 176.7 | 157.0 | 185.1 | 134.0 |
| | 90 | 201.0 | 199.5 | 205.5 | 187.6 | 213.0 | 168.7 | 190.9 | 190.8 | 194.8 | 179.7 | 201.7 | 161.5 | 180.0 | 180.0 | 183.2 | 171.1 | 189.4 | 153.7 |
| 7200 | 75 | 181.0 | 159.9 | 191.4 | 130.0 | 205.6 | 81.4 | 170.9 | 152.5 | 180.3 | 123.7 | 194.3 | 76.4 | 159.9 | 144.4 | 168.3 | 116.8 | 181.3 | 70.8 |
| | 80 | 188.2 | 178.1 | 195.2 | 156.8 | 207.9 | 122.2 | 178.0 | 170.0 | 184.2 | 149.7 | 196.0 | 116.2 | 167.0 | 161.2 | 172.3 | 141.9 | 183.2 | 109.5 |
| | 85 | 196.1 | 192.6 | 201.1 | 176.9 | 210.3 | 151.4 | 185.9 | 184.0 | 190.2 | 169.0 | 198.5 | 144.5 | 174.7 | 174.6 | 178.3 | 160.6 | 185.9 | 137.0 |
| | 90 | 204.5 | 204.5 | 208.3 | 192.5 | 215.2 | 173.1 | 194.0 | 194.0 | 197.2 | 184.2 | 203.4 | 165.5 | 182.7 | 182.7 | 185.3 | 175.1 | 190.8 | 157.3 |

**Table 26. Gross cooling capacities 15 tons three phase high efficiency T/YH*180G3,4,W (full load) (continued)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature 115 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 120 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 125 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3000 | 75 | 125.3 | 101.0 | 136.8 | 79.5 | 151.4 | 40.4 | 120.4 | 97.8 | 131.5 | 76.9 | 145.7 | 38.5 | 115.3 | 94.5 | 126.0 | 74.1 | 139.8 | 36.4 |
| | 80 | 128.5 | 113.0 | 138.8 | 98.9 | 152.4 | 72.3 | 123.6 | 109.5 | 133.6 | 95.9 | 146.7 | 69.9 | 118.5 | 105.8 | 128.1 | 92.7 | 140.8 | 67.2 |
| | 85 | 133.0 | 122.3 | 140.9 | 112.6 | 153.3 | 94.0 | 128.1 | 118.5 | 135.6 | 109.3 | 147.6 | 91.1 | 122.9 | 114.6 | 130.1 | 105.7 | 141.7 | 88.1 |
| | 90 | 138.3 | 130.2 | 144.6 | 123.1 | 154.2 | 109.5 | 133.3 | 126.2 | 139.2 | 119.4 | 148.5 | 106.2 | 128.0 | 122.0 | 133.7 | 115.6 | 142.6 | 102.8 |
| 3600 | 75 | 130.9 | 108.3 | 141.5 | 86.1 | 155.4 | 46.3 | 125.8 | 105.0 | 138.6 | 83.3 | 149.5 | 44.1 | 120.5 | 101.4 | 132.9 | 80.4 | 143.4 | 41.8 |
| | 80 | 134.6 | 120.9 | 144.1 | 106.2 | 156.8 | 79.0 | 129.5 | 117.2 | 138.7 | 103.0 | 151.0 | 76.3 | 124.3 | 113.3 | 133.0 | 99.6 | 144.9 | 73.5 |
| | 85 | 139.6 | 130.8 | 146.7 | 120.6 | 158.3 | 101.4 | 134.5 | 126.8 | 141.3 | 117.0 | 152.5 | 98.3 | 129.1 | 122.6 | 135.6 | 113.3 | 146.4 | 95.0 |
| | 90 | 145.2 | 139.0 | 150.9 | 131.5 | 159.8 | 117.4 | 140.0 | 134.8 | 145.3 | 127.7 | 153.9 | 113.9 | 134.5 | 130.5 | 139.6 | 123.6 | 147.9 | 110.3 |
| 4200 | 75 | 135.7 | 114.9 | 148.0 | 92.0 | 158.5 | 51.3 | 130.4 | 111.3 | 142.2 | 88.9 | 152.4 | 48.9 | 124.9 | 107.5 | 136.3 | 85.8 | 146.1 | 46.4 |
| | 80 | 140.0 | 128.0 | 148.7 | 112.7 | 160.6 | 84.8 | 134.7 | 124.1 | 143.0 | 109.3 | 154.5 | 82.0 | 129.2 | 120.0 | 137.1 | 105.7 | 148.2 | 78.9 |
| | 85 | 145.4 | 138.4 | 151.8 | 127.7 | 162.6 | 107.9 | 140.1 | 134.2 | 146.1 | 123.9 | 156.5 | 104.6 | 134.5 | 129.8 | 140.2 | 120.0 | 150.2 | 101.1 |
| | 90 | 151.4 | 147.1 | 156.4 | 139.2 | 164.7 | 124.6 | 145.9 | 142.7 | 150.7 | 135.1 | 158.6 | 120.9 | 140.3 | 138.1 | 144.7 | 130.9 | 152.3 | 117.1 |
| 4800 | 75 | 139.7 | 120.6 | 151.0 | 97.0 | 160.9 | 55.5 | 134.2 | 116.8 | 145.1 | 93.8 | 159.7 | 53.0 | 128.5 | 112.9 | 138.9 | 90.4 | 153.1 | 50.2 |
| | 80 | 144.6 | 134.4 | 152.4 | 118.5 | 163.5 | 89.9 | 139.1 | 130.2 | 146.5 | 114.8 | 159.8 | 86.8 | 133.4 | 125.9 | 140.4 | 111.0 | 153.2 | 83.5 |
| | 85 | 150.4 | 145.3 | 156.1 | 134.0 | 166.1 | 113.7 | 144.9 | 140.8 | 150.2 | 130.0 | 159.8 | 110.2 | 139.1 | 136.3 | 144.1 | 125.9 | 153.3 | 106.5 |
| | 90 | 156.7 | 154.4 | 161.2 | 146.0 | 168.7 | 130.9 | 151.1 | 149.8 | 155.2 | 141.7 | 162.5 | 127.0 | 145.2 | 145.0 | 149.1 | 137.3 | 156.0 | 123.0 |
| 5400 | 75 | 142.9 | 125.6 | 153.3 | 101.2 | 167.5 | 59.0 | 137.3 | 121.6 | 147.1 | 97.8 | 160.8 | 56.2 | 131.4 | 117.4 | 140.7 | 94.2 | 154.0 | 53.2 |
| | 80 | 148.4 | 139.9 | 155.4 | 123.4 | 168.2 | 94.2 | 142.7 | 135.6 | 149.3 | 119.6 | 161.6 | 90.9 | 136.8 | 131.1 | 143.0 | 115.6 | 154.8 | 87.4 |
| | 85 | 154.7 | 151.3 | 159.7 | 139.6 | 168.8 | 118.6 | 148.9 | 146.7 | 153.6 | 135.4 | 162.4 | 114.9 | 143.0 | 141.9 | 147.3 | 131.0 | 155.6 | 111.0 |
| | 90 | 161.3 | 160.9 | 165.1 | 152.1 | 172.0 | 136.5 | 155.5 | 155.5 | 159.0 | 147.6 | 165.6 | 132.4 | 149.4 | 149.4 | 152.6 | 142.9 | 158.8 | 128.2 |
| 6000 | 75 | 145.4 | 129.7 | 154.8 | 104.7 | 168.0 | 61.6 | 139.5 | 125.5 | 148.4 | 101.0 | 161.2 | 58.6 | 133.4 | 121.1 | 141.8 | 97.3 | 154.1 | 55.5 |
| | 80 | 151.4 | 144.7 | 157.6 | 127.6 | 169.4 | 97.6 | 145.5 | 140.1 | 151.3 | 123.5 | 162.6 | 94.1 | 139.4 | 135.4 | 144.8 | 119.3 | 155.6 | 90.5 |
| | 85 | 158.1 | 156.6 | 162.4 | 144.3 | 170.8 | 122.8 | 152.2 | 151.7 | 156.1 | 139.9 | 164.1 | 118.9 | 146.0 | 146.0 | 149.6 | 135.4 | 157.2 | 114.8 |
| | 90 | 165.1 | 165.1 | 168.4 | 157.3 | 174.6 | 141.2 | 159.1 | 159.1 | 162.0 | 152.6 | 167.9 | 137.0 | 152.8 | 152.8 | 155.4 | 147.8 | 161.0 | 132.5 |
| 6600 | 75 | 147.1 | 133.1 | 155.5 | 107.3 | 168.5 | 63.4 | 141.0 | 128.7 | 148.9 | 103.5 | 161.5 | 60.3 | 134.7 | 124.1 | 142.1 | 99.5 | 154.2 | 56.9 |
| | 80 | 153.6 | 148.6 | 159.0 | 130.9 | 169.9 | 100.3 | 147.6 | 143.9 | 152.5 | 126.7 | 162.9 | 96.6 | 141.3 | 138.9 | 145.8 | 122.2 | 155.7 | 92.7 |
| | 85 | 160.8 | 160.8 | 164.4 | 148.3 | 172.0 | 126.2 | 154.7 | 154.7 | 157.9 | 143.7 | 165.1 | 122.0 | 148.3 | 148.3 | 151.2 | 138.9 | 158.0 | 117.7 |
| | 90 | 168.2 | 168.2 | 170.8 | 161.8 | 176.3 | 145.2 | 161.9 | 161.9 | 164.2 | 156.9 | 169.4 | 140.7 | 155.5 | 155.5 | 157.5 | 151.8 | 162.3 | 136.1 |
| 7200 | 75 | 148.0 | 135.6 | 156.1 | 109.2 | 169.1 | 64.5 | 141.7 | 131.0 | 149.4 | 105.1 | 161.8 | 61.1 | 135.2 | 126.2 | 142.4 | 100.9 | 154.4 | 57.5 |
| | 80 | 155.1 | 151.8 | 159.6 | 133.5 | 170.3 | 102.2 | 148.8 | 146.8 | 152.9 | 129.0 | 163.2 | 98.3 | 142.3 | 141.7 | 146.0 | 124.4 | 155.8 | 94.2 |
| | 85 | 162.7 | 162.7 | 165.6 | 151.4 | 172.4 | 128.8 | 156.4 | 156.4 | 158.9 | 146.6 | 165.3 | 124.4 | 149.8 | 149.8 | 152.0 | 141.6 | 158.7 | 119.9 |
| | 90 | 170.4 | 170.4 | 172.4 | 165.4 | 177.3 | 148.4 | 164.0 | 164.0 | 165.7 | 160.4 | 170.2 | 143.7 | 157.3 | 157.3 | 158.7 | 155.1 | 162.8 | 138.8 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 3000, 3600, and 4200 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Dehumidification (Hot Gas Reheat) with Frostat and Crankcage heaters are required on applications below 320 cfm/ton.
- Multi-speed or single zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 27. Gross cooling capacities 15 tons three phase dehumidification (hot gas reheat) option high efficiency T/YHD180G3,4,W (Digit 22 = B)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature 85 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 95 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 105 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3000 | 75 | 149.8 | 108.9 | 167.7 | 71.3 | 190.8 | 66.8 | 141.5 | 104.7 | 158.6 | 68.7 | 180.8 | 63.3 | 132.6 | 99.7 | 148.8 | 65.2 | 170.1 | 59.5 |
| | 80 | 151.5 | 129.2 | 166.7 | 101.1 | 187.0 | 65.5 | 143.4 | 124.3 | 157.7 | 97.7 | 177.1 | 62.0 | 134.7 | 118.5 | 148.1 | 93.4 | 166.7 | 58.3 |
| | 85 | 154.6 | 144.8 | 167.0 | 126.0 | 184.5 | 89.1 | 146.7 | 139.2 | 158.2 | 121.9 | 174.9 | 86.5 | 138.1 | 132.6 | 148.8 | 116.9 | 164.6 | 83.0 |
| | 90 | 159.1 | 155.7 | 168.7 | 146.3 | 183.5 | 118.7 | 151.3 | 149.2 | 160.1 | 141.4 | 174.0 | 115.3 | 143.0 | 141.9 | 150.9 | 135.6 | 163.9 | 111.1 |
| 3900 | 75 | 160.4 | 120.9 | 176.9 | 82.0 | 198.6 | 69.5 | 151.6 | 116.3 | 167.3 | 79.0 | 188.1 | 65.8 | 142.3 | 110.9 | 157.1 | 75.1 | 177.0 | 61.9 |
| | 80 | 163.1 | 142.6 | 176.9 | 113.1 | 195.8 | 68.5 | 154.6 | 137.2 | 167.5 | 109.3 | 185.5 | 64.9 | 145.4 | 131.0 | 157.4 | 104.6 | 174.5 | 61.1 |
| | 85 | 167.2 | 159.5 | 178.2 | 139.4 | 194.4 | 101.1 | 158.8 | 153.4 | 169.0 | 134.8 | 184.2 | 98.1 | 149.8 | 146.4 | 159.1 | 129.4 | 173.5 | 94.2 |
| | 90 | 172.7 | 171.6 | 180.9 | 160.9 | 194.3 | 132.0 | 164.5 | 164.5 | 171.9 | 155.6 | 184.3 | 128.2 | 155.7 | 155.7 | 162.2 | 149.4 | 173.8 | 123.5 |
| 4800 | 75 | 169.3 | 131.7 | 184.4 | 91.5 | 204.6 | 71.6 | 160.0 | 126.7 | 174.3 | 88.0 | 193.7 | 67.8 | 150.2 | 120.8 | 163.6 | 83.7 | 182.1 | 63.7 |
| | 80 | 173.0 | 154.7 | 185.4 | 123.8 | 202.8 | 74.8 | 164.0 | 148.9 | 175.5 | 119.6 | 192.1 | 72.1 | 154.3 | 142.3 | 164.9 | 114.5 | 180.7 | 68.6 |
| | 85 | 178.1 | 172.9 | 187.7 | 151.4 | 202.4 | 111.8 | 169.3 | 166.4 | 178.0 | 146.5 | 191.8 | 108.4 | 159.8 | 159.0 | 167.7 | 140.6 | 180.6 | 104.0 |
| | 90 | 184.6 | 184.6 | 191.4 | 174.3 | 203.4 | 144.0 | 176.0 | 176.0 | 181.9 | 168.5 | 192.9 | 139.8 | 166.7 | 166.7 | 171.7 | 161.9 | 181.9 | 134.7 |
| 5400 | 75 | 174.2 | 138.2 | 188.4 | 97.1 | 207.7 | 72.7 | 164.7 | 132.9 | 178.0 | 93.4 | 196.4 | 68.7 | 154.6 | 126.8 | 167.0 | 88.8 | 184.5 | 64.6 |
| | 80 | 178.6 | 162.0 | 190.0 | 130.3 | 206.6 | 80.4 | 169.3 | 156.0 | 179.8 | 125.8 | 195.5 | 77.4 | 159.3 | 149.1 | 169.0 | 120.4 | 183.8 | 73.6 |
| | 85 | 184.4 | 181.1 | 193.1 | 158.8 | 206.8 | 118.2 | 175.3 | 174.3 | 183.0 | 153.5 | 195.9 | 114.5 | 165.5 | 165.5 | 172.4 | 147.4 | 184.4 | 109.9 |
| | 90 | 191.6 | 191.6 | 197.4 | 182.5 | 208.4 | 151.4 | 182.6 | 182.6 | 187.6 | 176.5 | 197.7 | 146.9 | 173.0 | 173.0 | 177.2 | 169.5 | 186.4 | 141.5 |
| 6000 | 75 | 178.4 | 144.1 | 191.6 | 102.1 | 210.0 | 73.5 | 168.5 | 138.6 | 180.9 | 98.1 | 198.4 | 69.4 | 158.1 | 132.1 | 169.6 | 93.2 | 186.2 | 65.2 |
| | 80 | 183.5 | 168.8 | 193.9 | 136.2 | 209.5 | 85.4 | 173.8 | 162.5 | 183.4 | 131.4 | 198.1 | 82.2 | 163.6 | 155.3 | 172.3 | 125.8 | 186.1 | 78.1 |
| | 85 | 189.9 | 188.8 | 197.6 | 165.5 | 210.4 | 124.1 | 180.5 | 180.5 | 187.3 | 160.0 | 199.2 | 120.1 | 170.4 | 170.4 | 176.4 | 153.6 | 187.4 | 115.3 |
| | 90 | 197.8 | 197.8 | 202.7 | 190.1 | 212.7 | 158.1 | 188.5 | 188.5 | 192.6 | 183.8 | 201.7 | 153.4 | 178.6 | 178.6 | 181.8 | 176.6 | 190.1 | 147.7 |
| 6600 | 75 | 181.8 | 149.5 | 194.1 | 106.6 | 211.5 | 74.0 | 171.6 | 143.7 | 183.0 | 102.3 | 199.6 | 69.9 | 160.9 | 137.0 | 171.4 | 97.1 | 187.1 | 65.5 |
| | 80 | 187.5 | 175.0 | 197.1 | 141.5 | 211.7 | 89.9 | 177.6 | 168.5 | 186.2 | 136.5 | 200.0 | 86.4 | 167.0 | 161.0 | 174.8 | 130.6 | 187.7 | 82.0 |
| | 85 | 194.7 | 194.7 | 201.4 | 171.8 | 213.3 | 129.5 | 184.9 | 184.9 | 190.8 | 166.0 | 201.8 | 125.2 | 174.5 | 174.5 | 179.5 | 159.2 | 189.7 | 120.0 |
| | 90 | 203.2 | 203.2 | 207.2 | 197.2 | 216.3 | 164.3 | 193.6 | 193.6 | 196.7 | 190.6 | 204.9 | 159.3 | 183.4 | 183.4 | 185.6 | 183.2 | 193.0 | 153.3 |
| 7200 | 75 | 184.4 | 154.3 | 195.7 | 110.5 | 212.2 | 74.3 | 173.9 | 148.2 | 184.4 | 105.9 | 200.0 | 70.0 | 162.9 | 141.2 | 172.5 | 100.5 | 187.2 | 65.5 |
| | 80 | 190.8 | 180.7 | 199.4 | 146.3 | 213.1 | 93.8 | 180.6 | 173.9 | 188.3 | 141.0 | 201.1 | 90.0 | 169.7 | 166.1 | 176.5 | 134.8 | 188.5 | 85.3 |
| | 85 | 198.7 | 198.7 | 204.5 | 177.4 | 215.4 | 134.2 | 188.6 | 188.6 | 193.5 | 171.3 | 203.6 | 129.7 | 177.9 | 177.9 | 181.9 | 164.3 | 191.1 | 124.2 |
| | 90 | 207.8 | 207.8 | 210.9 | 203.8 | 219.0 | 170.0 | 198.0 | 198.0 | 200.1 | 196.9 | 207.4 | 164.6 | 188.7 | 188.7 | 188.7 | 188.7 | 195.1 | 158.4 |

**Table 27. Gross cooling capacities 15 tons three phase dehumidification (hot gas reheat) option high efficiency T/YHD180G3,4,W (Digit 22 = B) (continued)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature 115 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 120 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 125 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3000 | 75 | 123.1 | 93.8 | 138.4 | 60.9 | 158.9 | 55.6 | 118.1 | 90.5 | 133.0 | 58.3 | 153.0 | 53.5 | 112.9 | 87.0 | 127.4 | 55.6 | 147.0 | 51.4 |
| | 80 | 125.3 | 111.8 | 137.9 | 88.3 | 155.6 | 54.5 | 120.4 | 108.1 | 132.6 | 85.4 | 149.8 | 52.4 | 115.4 | 104.2 | 127.1 | 82.2 | 143.9 | 50.4 |
| | 85 | 129.0 | 125.1 | 138.8 | 111.0 | 153.7 | 78.6 | 124.2 | 121.1 | 133.5 | 107.7 | 148.0 | 76.1 | 119.2 | 116.8 | 128.1 | 104.1 | 142.2 | 73.3 |
| | 90 | 134.0 | 133.7 | 141.0 | 128.9 | 153.1 | 105.9 | 129.3 | 129.2 | 135.9 | 125.2 | 147.6 | 103.0 | 124.4 | 124.4 | 130.6 | 121.3 | 141.8 | 99.9 |
| 3900 | 75 | 132.3 | 104.6 | 146.2 | 70.3 | 165.3 | 57.8 | 127.1 | 101.1 | 140.6 | 67.6 | 159.2 | 55.7 | 121.7 | 97.3 | 134.7 | 64.6 | 152.9 | 53.5 |
| | 80 | 135.6 | 123.9 | 146.7 | 99.0 | 163.0 | 57.1 | 130.5 | 120.0 | 141.2 | 95.9 | 157.0 | 54.9 | 125.2 | 115.9 | 135.4 | 92.6 | 150.8 | 52.8 |
| | 85 | 140.2 | 138.5 | 148.6 | 123.0 | 162.1 | 89.3 | 135.2 | 134.2 | 143.1 | 119.5 | 156.2 | 86.6 | 130.0 | 129.7 | 137.5 | 115.8 | 150.1 | 83.6 |
| | 90 | 146.3 | 146.3 | 151.9 | 142.3 | 162.6 | 118.0 | 141.3 | 141.3 | 146.5 | 138.4 | 156.8 | 114.8 | 136.2 | 136.2 | 140.9 | 134.2 | 150.8 | 111.5 |
| 4800 | 75 | 139.8 | 114.1 | 152.3 | 78.5 | 169.9 | 59.5 | 134.3 | 110.4 | 146.4 | 75.5 | 163.6 | 57.3 | 128.7 | 106.4 | 140.4 | 72.4 | 157.1 | 55.0 |
| | 80 | 144.1 | 134.7 | 153.8 | 108.5 | 168.7 | 64.1 | 138.7 | 130.6 | 148.0 | 105.2 | 162.4 | 61.6 | 133.2 | 126.3 | 142.1 | 101.6 | 156.0 | 58.8 |
| | 85 | 149.8 | 149.8 | 156.7 | 133.8 | 168.8 | 98.8 | 144.5 | 144.5 | 151.0 | 130.1 | 162.6 | 95.9 | 139.1 | 139.1 | 145.1 | 126.2 | 156.4 | 92.7 |
| | 90 | 156.8 | 156.8 | 161.0 | 154.4 | 170.3 | 128.7 | 151.6 | 151.6 | 155.4 | 150.3 | 164.2 | 125.4 | 146.3 | 146.3 | 149.6 | 145.9 | 158.0 | 121.8 |
| 5400 | 75 | 143.8 | 119.7 | 155.4 | 83.3 | 172.0 | 60.2 | 138.2 | 115.9 | 149.3 | 80.2 | 165.6 | 57.9 | 132.4 | 111.8 | 143.1 | 76.9 | 158.9 | 55.6 |
| | 80 | 148.8 | 141.3 | 157.6 | 114.2 | 171.5 | 68.9 | 143.3 | 137.0 | 151.6 | 110.7 | 165.1 | 66.2 | 137.6 | 132.6 | 145.5 | 107.0 | 158.5 | 63.3 |
| | 85 | 155.1 | 155.1 | 161.1 | 140.3 | 172.3 | 104.4 | 149.7 | 149.7 | 155.3 | 136.5 | 166.0 | 101.3 | 144.1 | 144.1 | 149.3 | 132.4 | 159.5 | 98.0 |
| | 90 | 162.8 | 162.8 | 166.1 | 161.7 | 174.4 | 135.2 | 157.5 | 157.5 | 160.3 | 157.5 | 168.2 | 131.7 | 152.9 | 152.0 | 154.4 | 153.0 | 161.9 | 128.0 |
| 6000 | 75 | 147.1 | 124.8 | 157.7 | 87.5 | 173.4 | 60.7 | 141.3 | 120.8 | 151.5 | 84.2 | 166.8 | 58.4 | 135.4 | 116.6 | 145.1 | 80.8 | 160.0 | 56.0 |
| | 80 | 152.7 | 147.2 | 160.5 | 119.2 | 173.5 | 73.1 | 147.0 | 142.8 | 154.4 | 115.6 | 167.0 | 70.2 | 141.2 | 138.2 | 148.2 | 111.8 | 160.3 | 67.2 |
| | 85 | 159.7 | 159.7 | 164.8 | 146.3 | 175.0 | 109.5 | 154.2 | 154.2 | 158.8 | 142.3 | 168.5 | 106.2 | 148.4 | 148.4 | 152.6 | 138.0 | 161.9 | 102.8 |
| | 90 | 168.7 | 168.1 | 170.4 | 168.5 | 177.8 | 141.1 | 162.8 | 162.8 | 164.5 | 164.2 | 171.5 | 137.5 | 158.4 | 158.4 | 158.4 | 158.4 | 165.0 | 133.7 |
| 6600 | 75 | 149.5 | 129.4 | 159.2 | 91.1 | 174.0 | 60.9 | 143.6 | 125.2 | 152.8 | 87.7 | 167.2 | 58.5 | 137.6 | 120.9 | 146.3 | 84.1 | 160.3 | 56.1 |
| | 80 | 155.9 | 152.6 | 162.7 | 123.7 | 174.8 | 76.7 | 150.0 | 148.1 | 156.5 | 120.0 | 168.1 | 73.7 | 144.1 | 143.4 | 150.1 | 116.0 | 161.2 | 70.5 |
| | 85 | 163.6 | 163.6 | 167.7 | 151.6 | 176.9 | 114.0 | 157.8 | 157.8 | 161.5 | 147.5 | 170.3 | 110.6 | 151.9 | 151.9 | 155.2 | 143.1 | 163.6 | 107.0 |
| | 90 | 174.0 | 174.0 | 174.0 | 174.0 | 180.4 | 146.5 | 167.9 | 167.9 | 167.9 | 167.9 | 173.9 | 142.7 | 161.7 | 161.7 | 161.7 | 161.7 | 167.3 | 138.8 |
| 7200 | 75 | 151.2 | 133.3 | 159.9 | 94.2 | 173.8 | 60.8 | 145.2 | 129.0 | 153.4 | 90.7 | 166.9 | 58.4 | 138.9 | 124.6 | 146.8 | 86.9 | 159.8 | 55.9 |
| | 80 | 158.2 | 157.5 | 164.2 | 127.7 | 175.2 | 79.7 | 152.3 | 152.3 | 157.8 | 123.8 | 168.4 | 76.6 | 146.1 | 146.1 | 151.2 | 119.7 | 161.4 | 73.3 |
| | 85 | 166.6 | 166.6 | 169.8 | 156.5 | 178.1 | 117.9 | 160.7 | 160.7 | 163.5 | 152.2 | 171.3 | 114.4 | 154.7 | 154.7 | 157.0 | 147.7 | 164.4 | 110.7 |
| | 90 | 176.7 | 176.7 | 176.7 | 176.7 | 182.3 | 151.3 | 170.5 | 170.5 | 170.5 | 170.5 | 175.6 | 147.4 | 164.1 | 164.1 | 164.1 | 164.1 | 168.8 | 143.3 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain **NET** cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity

(a) For 3000 and 3900 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Dehumidification (Hot Gas Reheat) with Frostat and Crankcage heaters are required on applications below 320 cfm/ton.
- Multi-speed or single zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 28. Gross cooling capacities 17½ tons three phase high efficiency T/YH*210G3,4,W (stage 1)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 2800 | 75 | 63.9 | 60.0 | 68.3 | 47.4 | 74.6 | 22.7 | 59.8 | 56.7 | 64.0 | 44.6 | 70.2 | 20.3 |
| | 80 | 67.5 | 66.8 | 70.0 | 59.7 | 75.7 | 44.0 | 63.4 | 63.4 | 65.8 | 56.6 | 71.3 | 41.4 |
| | 85 | 71.6 | 71.6 | 73.0 | 68.1 | 76.7 | 58.1 | 67.5 | 67.5 | 68.8 | 64.8 | 72.4 | 55.2 |
| | 90 | 75.8 | 75.8 | 76.7 | 74.3 | 79.2 | 67.9 | 71.7 | 71.7 | 72.5 | 70.9 | 74.8 | 64.8 |
| 3500 | 75 | 65.8 | 63.2 | 69.7 | 50.8 | 75.5 | 26.3 | 61.5 | 59.7 | 65.2 | 47.7 | 70.8 | 23.7 |
| | 80 | 69.8 | 69.8 | 71.9 | 63.3 | 77.0 | 47.8 | 65.5 | 65.5 | 67.4 | 59.9 | 72.3 | 44.9 |
| | 85 | 74.1 | 74.1 | 75.2 | 71.9 | 78.4 | 62.1 | 69.8 | 69.8 | 70.8 | 68.3 | 73.8 | 58.9 |
| | 90 | 78.6 | 78.6 | 79.1 | 78.4 | 81.2 | 72.1 | 74.2 | 74.2 | 74.7 | 74.7 | 76.7 | 68.7 |
| 4200 | 75 | 67.3 | 65.7 | 70.6 | 53.5 | 76.0 | 29.2 | 62.8 | 61.9 | 65.9 | 50.1 | 71.1 | 26.3 |
| | 80 | 71.6 | 71.6 | 73.2 | 66.2 | 77.8 | 50.9 | 67.0 | 67.0 | 68.5 | 62.5 | 73.0 | 47.7 |
| | 85 | 76.2 | 76.2 | 76.9 | 75.0 | 79.7 | 65.4 | 71.6 | 71.6 | 72.2 | 71.2 | 74.9 | 61.9 |
| | 90 | 80.9 | 80.9 | 81.1 | 81.1 | 82.8 | 75.6 | 76.3 | 76.3 | 76.4 | 76.4 | 78.0 | 71.9 |
| 4900 | 75 | 68.4 | 67.6 | 71.1 | 55.5 | 76.8 | 31.5 | 63.6 | 63.5 | 66.2 | 51.9 | 71.5 | 28.2 |
| | 80 | 72.9 | 72.9 | 74.1 | 68.4 | 77.9 | 53.3 | 68.2 | 68.2 | 69.2 | 64.5 | 73.1 | 49.7 |
| | 85 | 77.8 | 77.8 | 78.1 | 77.4 | 80.5 | 67.9 | 73.0 | 73.0 | 73.2 | 73.2 | 75.5 | 64.1 |
| | 90 | 81.0 | 81.0 | 82.6 | 82.6 | 84.0 | 78.3 | 76.5 | 75.0 | 77.7 | 77.7 | 79.0 | 74.4 |
| 5600 | 75 | 68.9 | 68.7 | 71.2 | 56.9 | 77.0 | 33.0 | 63.7 | 63.7 | 67.0 | 52.9 | 72.2 | 29.5 |
| | 80 | 73.9 | 73.9 | 74.6 | 69.9 | 78.2 | 55.0 | 68.9 | 68.9 | 69.5 | 65.7 | 73.9 | 51.1 |
| | 85 | 78.0 | 78.0 | 78.9 | 78.9 | 80.9 | 69.8 | 73.2 | 71.0 | 73.8 | 73.8 | 75.6 | 65.7 |
| | 90 | 82.1 | 82.1 | 83.7 | 83.7 | 84.7 | 80.4 | 77.0 | 77.0 | 78.6 | 78.6 | 79.4 | 76.1 |
| 6125 | 75 | 69.1 | 69.1 | 71.6 | 57.4 | 77.4 | 33.7 | 63.9 | 63.9 | 68.0 | 53.2 | 73.0 | 30.0 |
| | 80 | 74.3 | 74.3 | 74.7 | 70.5 | 78.4 | 55.8 | 69.1 | 69.1 | 71.0 | 66.1 | 74.4 | 51.7 |
| | 85 | 78.6 | 78.6 | 79.3 | 79.3 | 81.8 | 70.7 | 73.5 | 73.5 | 74.0 | 74.0 | 77.0 | 66.4 |
| | 90 | 83.5 | 83.5 | 84.2 | 84.2 | 84.9 | 81.5 | 77.2 | 77.2 | 78.9 | 78.9 | 79.5 | 77.0 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 2800, 3500, 4200, and 4900 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 29. Gross cooling capacities 17½ tons three phase high efficiency T/YH*210G3,4,W (stage 2)**

| Air Flow cfm[(a)] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 2800 | 75 | 123.5 | 100.2 | 134.4 | 80.1 | 147.8 | 44.0 | 117.3 | 96.3 | 127.4 | 77.0 | 139.9 | 41.8 |
| | 80 | 126.3 | 111.0 | 136.4 | 97.8 | 148.9 | 73.2 | 120.1 | 106.7 | 129.4 | 94.1 | 141.1 | 70.2 |
| | 85 | 130.4 | 119.4 | 138.3 | 110.3 | 150.0 | 92.9 | 124.2 | 114.7 | 131.3 | 106.1 | 142.3 | 89.4 |
| | 90 | 135.4 | 126.3 | 141.8 | 119.6 | 151.1 | 106.9 | 129.0 | 121.3 | 134.8 | 115.0 | 143.4 | 102.8 |
| 3500 | 75 | 129.9 | 108.5 | 142.2 | 87.5 | 152.2 | 50.4 | 123.2 | 104.2 | 134.6 | 84.0 | 143.9 | 47.6 |
| | 80 | 133.3 | 120.2 | 142.4 | 106.1 | 154.0 | 80.6 | 126.7 | 115.4 | 135.0 | 102.0 | 145.8 | 77.2 |
| | 85 | 138.0 | 129.2 | 145.1 | 119.4 | 155.8 | 101.2 | 131.3 | 124.0 | 137.7 | 114.7 | 147.7 | 97.2 |
| | 90 | 143.5 | 136.7 | 149.2 | 129.3 | 157.7 | 115.9 | 136.7 | 131.2 | 141.7 | 124.3 | 149.6 | 111.4 |
| 4200 | 75 | 135.1 | 115.8 | 146.3 | 93.8 | 160.5 | 55.6 | 128.0 | 111.0 | 138.3 | 89.8 | 151.6 | 52.4 |
| | 80 | 139.3 | 128.2 | 147.4 | 113.3 | 160.5 | 86.9 | 132.2 | 122.9 | 139.6 | 108.7 | 151.8 | 83.0 |
| | 85 | 144.5 | 137.8 | 150.7 | 127.3 | 160.6 | 108.4 | 137.4 | 132.2 | 142.9 | 122.2 | 152.0 | 103.9 |
| | 90 | 150.5 | 145.9 | 155.4 | 137.9 | 163.1 | 123.8 | 143.2 | 139.9 | 147.6 | 132.5 | 154.6 | 118.9 |
| 4900 | 75 | 139.2 | 121.9 | 149.3 | 99.0 | 162.4 | 59.6 | 131.7 | 116.7 | 140.9 | 94.5 | 153.0 | 56.0 |
| | 80 | 144.1 | 135.1 | 151.3 | 119.4 | 163.3 | 92.0 | 136.6 | 129.4 | 143.0 | 114.3 | 154.1 | 87.7 |
| | 85 | 149.9 | 145.4 | 155.3 | 134.1 | 164.2 | 114.4 | 142.4 | 139.3 | 147.1 | 128.6 | 155.2 | 109.5 |
| | 90 | 156.3 | 153.9 | 160.6 | 145.4 | 167.5 | 130.6 | 148.6 | 147.5 | 152.3 | 139.5 | 158.5 | 125.3 |
| 5600 | 75 | 142.3 | 126.9 | 151.2 | 103.0 | 163.2 | 62.6 | 134.3 | 121.2 | 142.3 | 98.1 | 153.4 | 58.5 |
| | 80 | 147.8 | 140.8 | 154.1 | 124.3 | 165.0 | 96.0 | 139.9 | 134.7 | 145.3 | 118.8 | 155.4 | 91.2 |
| | 85 | 154.2 | 151.7 | 158.8 | 139.8 | 166.8 | 119.3 | 146.3 | 145.2 | 150.1 | 133.8 | 157.4 | 114.0 |
| | 90 | 161.1 | 160.8 | 164.6 | 151.7 | 170.7 | 136.3 | 152.9 | 152.9 | 155.9 | 145.4 | 161.4 | 130.5 |
| 6125 | 75 | 143.8 | 129.9 | 151.9 | 105.3 | 164.1 | 64.0 | 135.5 | 123.9 | 142.7 | 100.0 | 154.0 | 59.6 |
| | 80 | 149.9 | 144.4 | 155.4 | 127.3 | 165.5 | 98.3 | 141.7 | 137.9 | 146.4 | 121.4 | 155.6 | 93.2 |
| | 85 | 156.7 | 155.8 | 160.7 | 143.3 | 168.0 | 122.3 | 148.4 | 148.4 | 151.7 | 137.0 | 158.2 | 116.6 |
| | 90 | 163.9 | 163.9 | 167.0 | 155.7 | 172.5 | 139.8 | 155.4 | 155.4 | 157.9 | 149.0 | 162.8 | 133.6 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 2800, 3500, 4200, and 4900 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 30. Gross cooling capacities 17½ tons three phase high efficiency T/YH*210G3,4,W (full load)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature 85 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 95 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 105 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3500 | 75 | 178.2 | 140.1 | 193.8 | 111.1 | 207.3 | 60.7 | 169.5 | 134.8 | 186.6 | 107.2 | 204.8 | 58.4 | 159.9 | 128.9 | 174.5 | 102.7 | 183.6 | 55.5 |
| | 80 | 182.3 | 156.6 | 197.4 | 136.9 | 211.8 | 102.1 | 173.6 | 150.4 | 187.6 | 132.0 | 205.4 | 98.5 | 164.0 | 143.7 | 177.0 | 126.4 | 187.8 | 94.3 |
| | 85 | 188.5 | 169.5 | 200.2 | 155.6 | 217.6 | 130.7 | 179.6 | 162.7 | 190.4 | 149.7 | 206.7 | 126.0 | 169.9 | 155.2 | 179.7 | 143.3 | 195.0 | 120.8 |
| | 90 | 195.9 | 180.3 | 205.3 | 169.8 | 219.0 | 151.3 | 186.7 | 172.9 | 195.3 | 163.3 | 208.1 | 145.8 | 176.7 | 164.9 | 184.5 | 156.2 | 196.4 | 139.7 |
| 4200 | 75 | 186.2 | 150.2 | 194.6 | 120.2 | 212.8 | 68.8 | 177.0 | 144.4 | 193.2 | 115.8 | 211.6 | 66.0 | 166.9 | 138.0 | 183.6 | 110.8 | 196.3 | 62.6 |
| | 80 | 191.0 | 167.4 | 205.2 | 147.0 | 223.4 | 111.3 | 181.8 | 160.8 | 194.9 | 141.5 | 212.2 | 107.2 | 171.7 | 153.5 | 183.7 | 135.5 | 198.7 | 102.5 |
| | 85 | 197.7 | 181.0 | 208.6 | 166.4 | 225.1 | 140.8 | 188.3 | 173.7 | 198.3 | 160.1 | 213.7 | 135.6 | 178.1 | 165.7 | 187.1 | 153.2 | 201.5 | 129.9 |
| | 90 | 205.5 | 192.4 | 214.2 | 181.3 | 227.2 | 162.2 | 195.9 | 184.5 | 203.8 | 174.3 | 215.8 | 156.2 | 185.3 | 176.0 | 192.4 | 166.7 | 203.5 | 149.6 |
| 4900 | 75 | 193.4 | 159.4 | 211.5 | 128.5 | 229.7 | 76.0 | 183.6 | 153.0 | 200.5 | 123.6 | 217.5 | 72.7 | 173.0 | 146.1 | 188.6 | 118.0 | 204.6 | 68.8 |
| | 80 | 198.8 | 177.4 | 212.0 | 156.2 | 230.6 | 119.6 | 189.1 | 170.2 | 201.2 | 150.2 | 218.2 | 114.9 | 178.5 | 162.4 | 189.5 | 143.6 | 205.4 | 109.7 |
| | 85 | 206.0 | 191.6 | 216.1 | 176.3 | 231.7 | 150.0 | 196.1 | 183.7 | 205.2 | 169.5 | 219.8 | 144.3 | 185.4 | 175.3 | 193.6 | 162.1 | 207.0 | 138.0 |
| | 90 | 214.3 | 203.5 | 222.3 | 191.9 | 234.4 | 172.2 | 204.1 | 195.1 | 211.3 | 184.4 | 222.5 | 165.6 | 193.0 | 186.1 | 199.4 | 176.3 | 209.8 | 158.5 |
| 5600 | 75 | 199.6 | 167.6 | 216.7 | 135.8 | 236.2 | 82.3 | 189.4 | 160.8 | 205.1 | 130.4 | 223.6 | 78.5 | 178.3 | 153.3 | 192.7 | 124.3 | 206.4 | 74.0 |
| | 80 | 205.7 | 186.4 | 218.0 | 164.4 | 237.1 | 126.9 | 195.5 | 178.7 | 206.6 | 157.9 | 224.2 | 121.8 | 184.4 | 170.4 | 194.4 | 150.8 | 211.7 | 116.0 |
| | 85 | 213.5 | 201.3 | 222.7 | 185.3 | 237.4 | 158.2 | 203.1 | 192.9 | 211.4 | 178.0 | 225.0 | 152.0 | 191.8 | 183.9 | 199.1 | 170.0 | 211.7 | 145.2 |
| | 90 | 222.1 | 213.8 | 229.4 | 201.6 | 240.8 | 181.2 | 211.4 | 204.9 | 217.9 | 193.6 | 228.4 | 174.2 | 199.8 | 195.3 | 205.5 | 184.9 | 215.1 | 166.5 |
| 6300 | 75 | 205.0 | 174.9 | 220.9 | 142.2 | 240.8 | 87.7 | 194.2 | 167.6 | 208.8 | 136.2 | 227.7 | 83.3 | 182.6 | 159.6 | 195.9 | 129.7 | 208.9 | 78.4 |
| | 80 | 211.7 | 194.5 | 223.1 | 171.7 | 241.7 | 133.3 | 201.0 | 186.3 | 211.2 | 164.7 | 228.6 | 127.7 | 189.4 | 177.4 | 198.5 | 157.1 | 214.6 | 121.4 |
| | 85 | 220.0 | 210.0 | 228.4 | 193.4 | 242.2 | 165.6 | 209.1 | 201.1 | 216.6 | 185.6 | 229.3 | 158.8 | 197.3 | 191.6 | 203.8 | 177.1 | 215.5 | 151.5 |
| | 90 | 229.1 | 223.1 | 235.7 | 210.4 | 246.2 | 189.3 | 217.8 | 213.7 | 223.6 | 201.8 | 233.3 | 181.8 | 205.7 | 203.6 | 210.8 | 192.6 | 219.5 | 173.6 |
| 7000 | 75 | 209.4 | 181.3 | 224.2 | 147.7 | 243.2 | 92.1 | 198.2 | 173.4 | 211.7 | 141.2 | 230.3 | 87.2 | 186.0 | 165.0 | 198.2 | 134.1 | 210.2 | 81.8 |
| | 80 | 216.9 | 201.6 | 227.2 | 178.1 | 244.8 | 138.8 | 205.6 | 192.9 | 214.8 | 170.5 | 231.2 | 132.7 | 193.4 | 183.6 | 201.6 | 162.4 | 216.7 | 125.9 |
| | 85 | 225.6 | 217.8 | 233.3 | 200.6 | 246.1 | 172.0 | 214.2 | 208.4 | 220.9 | 192.2 | 232.7 | 164.7 | 201.9 | 198.4 | 207.6 | 183.2 | 218.4 | 156.9 |
| | 90 | 235.1 | 231.5 | 241.0 | 218.2 | 250.8 | 196.5 | 223.4 | 221.5 | 228.5 | 209.1 | 237.4 | 188.4 | 210.8 | 210.8 | 215.1 | 199.4 | 223.1 | 179.7 |
| 7700 | 75 | 213.0 | 186.8 | 226.7 | 152.2 | 245.6 | 95.6 | 201.2 | 178.4 | 213.6 | 145.2 | 231.9 | 90.2 | 188.6 | 169.4 | 199.6 | 137.6 | 210.6 | 84.2 |
| | 80 | 221.1 | 207.9 | 230.5 | 183.5 | 247.0 | 143.4 | 209.3 | 198.6 | 217.6 | 175.5 | 232.8 | 136.7 | 196.6 | 188.8 | 203.8 | 166.8 | 217.9 | 129.4 |
| | 85 | 230.4 | 224.7 | 237.2 | 206.8 | 249.1 | 177.5 | 218.4 | 214.8 | 224.3 | 197.9 | 235.2 | 169.7 | 205.6 | 204.3 | 210.5 | 188.4 | 220.4 | 161.4 |
| | 90 | 240.3 | 238.9 | 245.5 | 225.1 | 254.5 | 202.8 | 228.0 | 228.0 | 232.4 | 215.5 | 240.5 | 194.2 | 214.9 | 214.9 | 218.5 | 205.3 | 225.7 | 185.0 |
| 8400 | 75 | 215.7 | 191.3 | 228.2 | 155.8 | 246.8 | 98.2 | 203.4 | 182.4 | 214.6 | 148.3 | 232.7 | 92.3 | 190.2 | 172.9 | 200.2 | 140.2 | 220.4 | 85.8 |
| | 80 | 224.4 | 213.2 | 232.9 | 188.1 | 248.3 | 147.1 | 212.1 | 203.4 | 219.5 | 179.5 | 233.6 | 139.9 | 199.0 | 193.1 | 205.2 | 170.3 | 220.8 | 132.1 |
| | 85 | 234.2 | 230.7 | 240.2 | 212.1 | 251.3 | 182.0 | 221.8 | 220.3 | 226.8 | 202.7 | 236.8 | 173.8 | 208.4 | 208.4 | 212.6 | 192.7 | 221.5 | 164.9 |
| | 90 | 244.5 | 244.5 | 249.1 | 231.1 | 257.3 | 208.1 | 231.8 | 231.8 | 235.5 | 221.0 | 242.8 | 199.0 | 218.1 | 218.1 | 221.1 | 210.2 | 227.5 | 189.3 |

**Table 30. Gross cooling capacities 17½ tons three phase high efficiency T/YH*210G3,4,W (full load) (continued)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature 115 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 120 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 125 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3500 | 75 | 149.5 | 122.4 | 158.0 | 97.6 | 172.5 | 52.1 | 144.0 | 119.0 | 155.8 | 94.8 | 165.9 | 50.1 | 138.2 | 115.3 | 148.3 | 91.9 | 160.8 | 48.0 |
| | 80 | 153.6 | 136.3 | 165.4 | 120.3 | 176.7 | 89.5 | 148.1 | 132.4 | 159.3 | 117.0 | 169.4 | 86.9 | 142.3 | 128.4 | 153.0 | 113.5 | 163.4 | 84.1 |
| | 85 | 159.3 | 147.2 | 168.2 | 136.3 | 182.4 | 114.9 | 153.7 | 143.0 | 162.1 | 132.6 | 175.8 | 111.8 | 147.8 | 138.6 | 155.8 | 128.7 | 169.0 | 108.4 |
| | 90 | 165.8 | 156.4 | 172.8 | 148.5 | 183.8 | 133.0 | 160.1 | 151.8 | 166.7 | 144.4 | 177.2 | 129.4 | 154.1 | 147.2 | 160.3 | 140.2 | 170.4 | 125.7 |
| 4200 | 75 | 156.0 | 131.0 | 171.4 | 105.2 | 184.6 | 58.6 | 150.2 | 127.2 | 164.9 | 102.2 | 174.8 | 56.4 | 144.2 | 123.3 | 158.3 | 99.0 | 162.4 | 54.0 |
| | 80 | 160.8 | 145.6 | 171.6 | 128.8 | 186.8 | 97.2 | 155.0 | 141.5 | 165.3 | 125.2 | 175.3 | 94.3 | 149.0 | 137.2 | 158.7 | 121.5 | 168.6 | 91.2 |
| | 85 | 167.0 | 157.2 | 175.0 | 145.6 | 188.4 | 123.5 | 161.1 | 152.7 | 168.7 | 141.6 | 181.5 | 120.1 | 155.0 | 148.0 | 162.1 | 137.5 | 174.4 | 116.5 |
| | 90 | 173.9 | 166.9 | 180.2 | 158.5 | 190.4 | 142.3 | 167.9 | 162.1 | 173.8 | 154.1 | 183.6 | 138.5 | 161.6 | 157.2 | 167.1 | 149.6 | 176.5 | 134.5 |
| 4900 | 75 | 161.6 | 138.6 | 175.9 | 111.9 | 190.2 | 64.3 | 155.5 | 134.6 | 169.2 | 108.6 | 180.7 | 61.8 | 149.3 | 130.4 | 162.3 | 105.2 | 175.1 | 59.2 |
| | 80 | 167.0 | 154.0 | 176.9 | 136.4 | 192.8 | 103.9 | 161.0 | 149.6 | 170.3 | 132.6 | 181.3 | 100.7 | 154.7 | 145.0 | 163.5 | 128.6 | 176.4 | 97.4 |
| | 85 | 173.7 | 166.2 | 181.0 | 154.0 | 193.4 | 131.1 | 167.6 | 161.4 | 174.4 | 149.8 | 186.3 | 127.4 | 161.3 | 156.5 | 167.6 | 145.3 | 178.9 | 123.6 |
| | 90 | 181.1 | 176.5 | 186.7 | 167.5 | 196.1 | 150.7 | 174.8 | 171.5 | 180.0 | 162.9 | 189.0 | 146.6 | 168.3 | 166.3 | 173.1 | 158.2 | 181.7 | 142.4 |
| 5600 | 75 | 166.3 | 145.3 | 179.4 | 117.7 | 192.5 | 69.0 | 160.0 | 141.0 | 172.5 | 114.1 | 184.5 | 66.3 | 153.5 | 136.6 | 165.3 | 110.4 | 176.9 | 63.4 |
| | 80 | 172.4 | 161.5 | 181.4 | 143.1 | 197.4 | 109.7 | 166.1 | 156.8 | 174.5 | 139.0 | 189.9 | 106.3 | 159.6 | 152.0 | 167.4 | 134.8 | 182.2 | 102.7 |
| | 85 | 179.6 | 174.3 | 186.1 | 161.5 | 197.6 | 137.8 | 173.2 | 169.3 | 179.2 | 157.0 | 190.2 | 133.9 | 166.6 | 164.1 | 172.1 | 152.3 | 182.6 | 129.8 |
| | 90 | 187.4 | 185.2 | 192.3 | 175.7 | 201.0 | 158.2 | 180.9 | 179.9 | 185.4 | 170.8 | 193.6 | 153.9 | 174.1 | 174.1 | 178.2 | 165.8 | 186.0 | 149.3 |
| 6300 | 75 | 170.1 | 151.0 | 182.1 | 122.5 | 194.1 | 72.8 | 163.6 | 146.5 | 174.9 | 118.7 | 185.6 | 69.8 | 156.8 | 141.9 | 167.5 | 114.8 | 178.3 | 66.7 |
| | 80 | 176.9 | 168.0 | 184.9 | 148.8 | 199.8 | 114.6 | 170.3 | 163.1 | 177.8 | 144.5 | 192.1 | 110.9 | 163.5 | 158.0 | 170.4 | 140.0 | 184.1 | 107.1 |
| | 85 | 184.6 | 181.5 | 190.2 | 168.0 | 200.8 | 143.6 | 178.0 | 176.2 | 183.1 | 163.2 | 193.2 | 139.4 | 171.1 | 170.8 | 175.8 | 158.3 | 185.3 | 135.1 |
| | 90 | 192.8 | 192.8 | 197.0 | 182.9 | 204.9 | 164.8 | 186.0 | 186.0 | 189.8 | 177.7 | 197.2 | 160.2 | 179.0 | 179.0 | 182.4 | 172.5 | 189.4 | 155.4 |
| 7000 | 75 | 173.0 | 155.9 | 183.9 | 126.5 | 194.4 | 75.7 | 166.2 | 151.1 | 176.5 | 122.4 | 186.5 | 72.4 | 159.2 | 146.2 | 168.8 | 118.2 | 178.8 | 69.0 |
| | 80 | 180.4 | 173.6 | 187.5 | 153.7 | 201.3 | 118.5 | 173.6 | 168.4 | 180.1 | 149.1 | 193.3 | 114.6 | 166.6 | 163.1 | 172.5 | 144.3 | 185.1 | 110.5 |
| | 85 | 188.7 | 187.8 | 193.5 | 173.6 | 203.2 | 148.5 | 181.8 | 181.8 | 186.2 | 168.6 | 195.3 | 144.0 | 174.7 | 174.7 | 178.6 | 163.4 | 187.2 | 139.4 |
| | 90 | 197.3 | 197.3 | 200.8 | 189.1 | 207.9 | 170.4 | 190.2 | 190.2 | 193.4 | 183.8 | 200.0 | 165.5 | 183.0 | 183.0 | 185.7 | 178.2 | 191.9 | 160.5 |
| 7700 | 75 | 175.1 | 159.8 | 184.8 | 129.4 | 195.2 | 77.6 | 168.0 | 154.8 | 177.1 | 125.1 | 187.2 | 74.1 | 160.7 | 149.6 | 169.2 | 120.7 | 179.2 | 70.5 |
| | 80 | 183.1 | 178.3 | 189.2 | 157.6 | 202.0 | 121.5 | 176.0 | 172.9 | 181.6 | 152.7 | 193.7 | 117.4 | 168.7 | 167.3 | 173.8 | 147.7 | 185.3 | 113.0 |
| | 85 | 191.9 | 191.9 | 195.9 | 178.3 | 204.7 | 152.4 | 184.8 | 184.8 | 188.3 | 173.0 | 196.5 | 147.7 | 177.4 | 177.4 | 180.4 | 167.6 | 188.1 | 142.8 |
| | 90 | 200.9 | 200.9 | 203.8 | 194.5 | 210.1 | 175.1 | 193.6 | 193.6 | 196.0 | 188.8 | 201.9 | 170.0 | 186.1 | 186.1 | 188.1 | 183.1 | 193.5 | 164.7 |
| 8400 | 75 | 176.2 | 162.8 | 184.8 | 131.5 | 195.6 | 78.7 | 168.9 | 157.5 | 177.8 | 126.9 | 187.9 | 74.9 | 161.3 | 152.0 | 170.0 | 122.2 | 180.3 | 71.0 |
| | 80 | 184.9 | 182.1 | 190.1 | 160.6 | 202.4 | 123.6 | 177.6 | 176.4 | 182.2 | 155.4 | 194.3 | 119.2 | 170.0 | 170.0 | 174.1 | 150.2 | 184.4 | 114.6 |
| | 85 | 194.2 | 194.2 | 197.4 | 182.1 | 205.3 | 155.4 | 186.8 | 186.8 | 189.5 | 176.5 | 196.8 | 150.4 | 179.2 | 179.2 | 181.4 | 170.8 | 188.2 | 145.3 |
| | 90 | 203.6 | 203.6 | 205.8 | 198.9 | 211.3 | 178.9 | 196.1 | 196.1 | 197.8 | 193.0 | 202.9 | 173.5 | 188.3 | 188.3 | 189.6 | 187.0 | 194.2 | 168.0 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 3500, 4200, and 4900 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 31. Gross cooling capacities 17½ tons three phase dehumidification (hot gas reheat) option high efficiency T/YHD210G3,4,W (Digit 22 = B)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 3500 | 75 | 157.6 | 122.6 | 174.5 | 95.9 | 196.1 | 56.8 | 151.2 | 119.5 | 166.8 | 93.6 | 187.2 | 55.2 | 143.7 | 115.7 | 158.2 | 90.5 | 177.3 | 53.0 |
| | 80 | 160.6 | 140.5 | 174.2 | 120.6 | 192.5 | 88.1 | 154.0 | 136.7 | 166.5 | 117.6 | 183.6 | 85.9 | 146.5 | 132.2 | 157.8 | 113.8 | 173.6 | 83.0 |
| | 85 | 165.2 | 154.7 | 175.6 | 141.4 | 190.7 | 115.7 | 158.6 | 150.2 | 167.8 | 137.7 | 181.7 | 112.8 | 151.0 | 145.0 | 159.0 | 133.3 | 171.6 | 109.2 |
| | 90 | 171.5 | 165.0 | 178.7 | 158.5 | 190.5 | 139.5 | 164.8 | 159.9 | 170.8 | 154.1 | 181.4 | 135.9 | 157.2 | 154.0 | 161.9 | 149.1 | 171.3 | 131.6 |
| 4550 | 75 | 167.1 | 138.7 | 182.4 | 110.5 | 202.3 | 69.8 | 160.1 | 134.8 | 174.2 | 107.4 | 192.8 | 67.5 | 152.2 | 130.2 | 164.9 | 103.5 | 182.4 | 64.4 |
| | 80 | 171.1 | 158.1 | 183.1 | 136.6 | 199.7 | 102.6 | 164.0 | 153.5 | 174.8 | 132.7 | 190.2 | 99.5 | 156.0 | 148.2 | 165.5 | 128.2 | 179.7 | 95.8 |
| | 85 | 176.7 | 173.6 | 185.5 | 158.8 | 198.9 | 131.5 | 169.6 | 168.3 | 177.1 | 154.3 | 189.3 | 127.8 | 161.4 | 161.4 | 167.7 | 149.1 | 178.7 | 123.4 |
| | 90 | 184.0 | 184.0 | 189.5 | 177.3 | 199.7 | 156.7 | 176.8 | 176.8 | 181.1 | 172.1 | 190.0 | 152.3 | 168.6 | 168.6 | 171.6 | 166.2 | 179.4 | 147.2 |
| 5600 | 75 | 174.9 | 145.5 | 188.5 | 116.5 | 206.7 | 75.0 | 167.3 | 141.2 | 179.7 | 113.0 | 196.7 | 72.3 | 158.8 | 136.2 | 169.9 | 108.7 | 185.7 | 68.8 |
| | 80 | 179.8 | 165.5 | 190.1 | 143.2 | 205.1 | 108.5 | 172.2 | 160.6 | 181.3 | 139.0 | 195.1 | 105.0 | 163.6 | 154.9 | 171.5 | 134.1 | 184.0 | 100.9 |
| | 85 | 186.4 | 181.8 | 193.5 | 166.2 | 205.3 | 138.1 | 178.7 | 176.1 | 184.6 | 161.3 | 195.1 | 134.0 | 170.0 | 169.7 | 174.7 | 155.7 | 184.0 | 129.2 |
| | 90 | 194.7 | 194.2 | 198.5 | 185.3 | 207.0 | 164.0 | 186.9 | 186.9 | 189.5 | 179.8 | 196.8 | 159.2 | 178.1 | 178.1 | 179.6 | 173.5 | 185.7 | 153.7 |
| 6300 | 75 | 179.1 | 151.4 | 191.5 | 121.6 | 208.6 | 79.4 | 171.1 | 146.7 | 182.4 | 117.7 | 198.3 | 76.2 | 162.2 | 141.3 | 172.3 | 113.1 | 187.0 | 72.4 |
| | 80 | 184.6 | 172.1 | 193.9 | 149.1 | 207.7 | 113.5 | 176.6 | 166.8 | 184.7 | 144.5 | 197.3 | 109.7 | 167.7 | 160.7 | 174.5 | 139.1 | 185.9 | 105.1 |
| | 85 | 191.9 | 189.1 | 197.9 | 172.7 | 208.5 | 143.9 | 183.8 | 183.0 | 188.6 | 167.4 | 198.0 | 139.3 | 174.8 | 174.8 | 178.3 | 161.4 | 186.5 | 134.1 |
| | 90 | 200.8 | 200.8 | 203.5 | 192.6 | 210.9 | 170.4 | 192.6 | 192.6 | 194.2 | 186.6 | 200.4 | 165.2 | 183.5 | 183.5 | 183.9 | 179.9 | 188.8 | 159.3 |
| 7000 | 75 | 182.4 | 156.5 | 193.8 | 125.9 | 209.8 | 82.9 | 174.2 | 151.4 | 184.3 | 121.6 | 199.1 | 79.3 | 164.9 | 145.6 | 173.8 | 116.6 | 187.4 | 75.1 |
| | 80 | 188.6 | 177.9 | 196.8 | 154.0 | 209.5 | 117.7 | 180.3 | 172.1 | 187.2 | 149.0 | 198.8 | 113.5 | 171.0 | 165.6 | 176.7 | 143.3 | 187.0 | 108.5 |
| | 85 | 196.5 | 195.5 | 201.4 | 178.4 | 211.0 | 148.7 | 188.1 | 188.1 | 191.8 | 172.7 | 200.1 | 143.8 | 178.7 | 178.7 | 181.2 | 166.3 | 188.3 | 138.2 |
| | 90 | 206.1 | 206.1 | 207.7 | 198.9 | 214.1 | 176.0 | 197.6 | 197.6 | 198.0 | 192.5 | 203.1 | 170.4 | 185.5 | 185.5 | 187.3 | 185.5 | 191.2 | 164.1 |
| 7700 | 75 | 185.0 | 160.6 | 195.3 | 129.3 | 210.2 | 85.5 | 176.4 | 155.2 | 185.4 | 124.6 | 199.1 | 81.5 | 166.7 | 149.0 | 174.6 | 119.2 | 187.0 | 76.9 |
| | 80 | 191.9 | 182.8 | 198.9 | 158.1 | 210.6 | 121.0 | 183.2 | 176.6 | 189.0 | 152.7 | 199.4 | 116.4 | 173.5 | 169.7 | 178.0 | 146.6 | 187.3 | 111.0 |
| | 85 | 200.4 | 200.4 | 204.2 | 183.1 | 212.6 | 152.7 | 191.6 | 191.6 | 194.2 | 177.1 | 201.4 | 147.4 | 181.9 | 181.9 | 183.2 | 170.3 | 189.2 | 141.4 |
| | 90 | 210.6 | 210.6 | 211.2 | 204.4 | 216.4 | 180.7 | 201.8 | 201.8 | 201.1 | 197.6 | 205.1 | 174.7 | 190.0 | 190.0 | 190.0 | 190.0 | 192.8 | 168.0 |
| 8400 | 75 | 186.8 | 164.0 | 195.9 | 131.8 | 209.7 | 87.2 | 177.8 | 158.1 | 185.7 | 126.7 | 198.3 | 82.9 | 167.8 | 151.5 | 174.5 | 120.9 | 185.9 | 77.8 |
| | 80 | 194.3 | 186.8 | 200.2 | 161.3 | 210.8 | 123.5 | 185.2 | 180.2 | 189.9 | 155.6 | 199.3 | 118.4 | 175.2 | 172.9 | 178.6 | 149.0 | 186.8 | 112.7 |
| | 85 | 203.5 | 203.5 | 206.2 | 187.1 | 213.5 | 155.9 | 194.4 | 194.4 | 195.8 | 180.6 | 201.9 | 150.2 | 184.2 | 184.2 | 184.5 | 173.4 | 189.3 | 143.8 |
| | 90 | 214.4 | 214.4 | 213.8 | 209.0 | 217.9 | 184.5 | 201.3 | 201.3 | 203.4 | 201.8 | 206.2 | 178.1 | 191.9 | 191.9 | 191.9 | 191.9 | 193.6 | 171.1 |

**Table 31. Gross cooling capacities 17½ tons three phase dehumidification (hot gas reheat) option high efficiency T/YHD210G3,4,W (Digit 22 = B) (continued)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature 115 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 120 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 125 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3500 | 75 | 135.3 | 111.1 | 148.5 | 86.8 | 166.4 | 50.0 | 130.7 | 108.6 | 143.3 | 84.7 | 160.6 | 48.2 | 125.9 | 105.9 | 137.9 | 82.4 | 154.5 | 46.3 |
| | 80 | 138.0 | 127.0 | 148.0 | 109.4 | 162.7 | 79.3 | 133.4 | 124.2 | 142.8 | 106.9 | 156.8 | 77.2 | 128.5 | 121.1 | 137.3 | 104.3 | 150.8 | 75.0 |
| | 85 | 142.4 | 139.2 | 149.2 | 128.2 | 160.6 | 104.8 | 137.8 | 136.0 | 143.9 | 125.4 | 154.8 | 102.4 | 132.9 | 132.6 | 138.4 | 122.4 | 148.6 | 99.8 |
| | 90 | 148.5 | 147.5 | 152.1 | 143.3 | 160.3 | 126.6 | 143.8 | 143.8 | 146.8 | 140.1 | 154.3 | 123.8 | 138.9 | 138.9 | 141.2 | 136.8 | 148.2 | 120.9 |
| 4550 | 75 | 143.2 | 124.9 | 154.8 | 99.0 | 171.0 | 60.6 | 138.3 | 119.0 | 149.3 | 93.8 | 164.9 | 56.2 | 133.2 | 118.9 | 143.6 | 93.8 | 158.6 | 56.2 |
| | 80 | 146.9 | 142.2 | 155.2 | 123.0 | 168.2 | 91.3 | 142.0 | 135.6 | 149.7 | 117.2 | 162.1 | 86.3 | 136.9 | 135.5 | 144.0 | 117.1 | 155.8 | 86.2 |
| | 85 | 152.3 | 152.3 | 157.4 | 143.2 | 167.2 | 118.3 | 147.4 | 147.4 | 151.9 | 136.7 | 161.0 | 112.5 | 142.2 | 142.2 | 146.1 | 136.6 | 154.6 | 112.4 |
| | 90 | 159.6 | 159.6 | 161.2 | 159.6 | 167.8 | 141.4 | 154.4 | 154.4 | 155.7 | 152.4 | 161.6 | 134.9 | 149.8 | 149.8 | 149.8 | 149.8 | 155.1 | 134.9 |
| 5600 | 75 | 149.3 | 130.5 | 159.2 | 103.8 | 173.8 | 64.6 | 144.2 | 127.4 | 153.5 | 101.1 | 167.4 | 62.3 | 138.8 | 124.1 | 147.5 | 98.2 | 160.8 | 59.8 |
| | 80 | 154.0 | 148.5 | 160.7 | 128.5 | 172.0 | 96.1 | 148.8 | 145.0 | 154.9 | 125.4 | 165.6 | 93.4 | 143.4 | 141.4 | 148.9 | 122.2 | 159.0 | 90.5 |
| | 85 | 160.4 | 160.4 | 163.8 | 149.4 | 171.9 | 123.7 | 155.2 | 155.2 | 158.0 | 146.0 | 165.5 | 120.6 | 149.7 | 149.7 | 151.9 | 142.4 | 158.8 | 117.4 |
| | 90 | 168.4 | 168.4 | 168.6 | 166.5 | 173.5 | 147.5 | 162.8 | 162.8 | 162.8 | 162.8 | 167.0 | 144.1 | 156.7 | 156.7 | 156.7 | 156.7 | 160.3 | 140.6 |
| 6300 | 75 | 152.4 | 135.2 | 161.2 | 107.7 | 174.6 | 67.8 | 147.0 | 131.9 | 155.2 | 104.8 | 168.1 | 65.3 | 141.5 | 128.4 | 149.1 | 101.7 | 161.3 | 62.5 |
| | 80 | 157.7 | 153.9 | 163.3 | 133.1 | 173.5 | 99.9 | 152.4 | 150.2 | 157.3 | 129.9 | 166.9 | 97.0 | 146.8 | 146.4 | 151.1 | 126.4 | 160.1 | 94.0 |
| | 85 | 164.7 | 164.7 | 167.1 | 154.7 | 174.1 | 128.2 | 159.4 | 159.4 | 161.1 | 151.1 | 167.5 | 125.0 | 153.7 | 153.7 | 154.8 | 147.3 | 160.6 | 121.6 |
| | 90 | 172.5 | 172.5 | 172.5 | 172.5 | 176.3 | 152.7 | 166.5 | 166.5 | 166.5 | 166.5 | 169.7 | 149.2 | 160.2 | 160.2 | 160.2 | 160.2 | 162.8 | 145.4 |
| 7000 | 75 | 154.6 | 139.1 | 162.3 | 110.8 | 174.7 | 70.1 | 149.1 | 135.5 | 156.2 | 107.7 | 168.0 | 67.4 | 143.4 | 131.9 | 149.9 | 104.4 | 161.0 | 64.4 |
| | 80 | 160.6 | 158.4 | 165.1 | 136.9 | 174.2 | 102.9 | 155.1 | 154.6 | 159.0 | 133.4 | 167.5 | 99.8 | 149.3 | 149.3 | 152.6 | 129.8 | 160.5 | 96.6 |
| | 85 | 168.3 | 168.3 | 169.6 | 159.2 | 175.4 | 131.9 | 162.8 | 162.8 | 163.4 | 155.4 | 168.7 | 128.5 | 156.9 | 156.9 | 157.0 | 151.4 | 161.6 | 124.9 |
| | 90 | 175.7 | 175.7 | 175.7 | 175.7 | 178.3 | 157.1 | 169.4 | 169.4 | 169.4 | 169.4 | 171.5 | 153.3 | 163.0 | 163.0 | 163.0 | 163.0 | 164.4 | 149.4 |
| 7700 | 75 | 156.1 | 142.0 | 162.7 | 113.0 | 174.0 | 71.5 | 150.5 | 138.3 | 156.4 | 109.7 | 167.1 | 68.6 | 144.5 | 134.4 | 149.9 | 106.2 | 159.9 | 65.5 |
| | 80 | 162.8 | 162.1 | 166.1 | 139.8 | 174.2 | 105.0 | 157.1 | 157.1 | 159.8 | 136.1 | 167.2 | 101.7 | 151.1 | 151.1 | 153.3 | 132.3 | 160.0 | 98.3 |
| | 85 | 171.1 | 171.1 | 171.2 | 162.8 | 176.0 | 134.7 | 165.4 | 165.4 | 164.9 | 158.8 | 169.0 | 131.1 | 159.4 | 159.4 | 158.3 | 154.6 | 161.8 | 127.3 |
| | 90 | 178.0 | 178.0 | 178.0 | 178.0 | 179.5 | 160.6 | 171.6 | 171.6 | 171.6 | 171.6 | 172.5 | 156.7 | 165.0 | 165.0 | 165.0 | 165.0 | 165.3 | 152.5 |
| 8400 | 75 | 156.8 | 144.2 | 162.3 | 114.4 | 172.5 | 72.1 | 151.0 | 140.3 | 155.8 | 110.8 | 165.4 | 69.0 | 144.9 | 136.2 | 149.1 | 107.1 | 158.0 | 65.6 |
| | 80 | 164.1 | 164.1 | 166.4 | 141.8 | 173.3 | 106.3 | 158.2 | 158.2 | 159.9 | 138.0 | 166.2 | 102.8 | 152.1 | 152.1 | 153.1 | 133.9 | 158.8 | 99.1 |
| | 85 | 173.1 | 173.1 | 172.1 | 165.5 | 175.8 | 136.7 | 167.2 | 167.2 | 165.6 | 161.3 | 168.6 | 132.8 | 157.2 | 157.2 | 158.8 | 156.9 | 161.2 | 128.8 |
| | 90 | 179.5 | 179.5 | 179.5 | 179.5 | 180.0 | 163.3 | 173.0 | 173.0 | 173.0 | 173.0 | 172.8 | 159.1 | 166.1 | 166.1 | 166.1 | 166.1 | 165.3 | 154.8 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain **NET** cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity

(a) For 3500, and 4550 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 32. Gross cooling capacities 20 tons three phase high efficiency T/YH*240G3,4,W (stage 1)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 3200 | 75 | 71.7 | 67.2 | 76.0 | 52.7 | 82.4 | 24.7 | 66.8 | 63.4 | 70.9 | 49.4 | 77.0 | 21.9 |
| | 80 | 76.1 | 75.4 | 78.6 | 67.1 | 84.3 | 49.4 | 71.3 | 71.3 | 73.5 | 63.4 | 78.9 | 46.1 |
| | 85 | 81.1 | 81.1 | 82.5 | 77.1 | 86.2 | 65.8 | 76.3 | 76.3 | 77.4 | 73.1 | 80.9 | 62.2 |
| | 90 | 86.3 | 86.3 | 87.1 | 84.6 | 89.5 | 77.4 | 81.4 | 81.4 | 82.0 | 80.5 | 84.3 | 73.6 |
| 4000 | 75 | 73.6 | 70.6 | 77.4 | 56.5 | 83.2 | 28.8 | 68.4 | 66.4 | 71.9 | 52.7 | 79.9 | 25.6 |
| | 80 | 78.5 | 78.5 | 80.4 | 71.0 | 85.6 | 53.6 | 73.3 | 73.3 | 75.0 | 66.9 | 79.9 | 50.0 |
| | 85 | 83.8 | 83.8 | 84.8 | 81.2 | 88.0 | 70.2 | 78.6 | 78.6 | 79.4 | 76.9 | 82.3 | 66.3 |
| | 90 | 89.3 | 89.3 | 89.8 | 89.1 | 91.8 | 82.0 | 84.1 | 84.1 | 84.4 | 84.4 | 86.2 | 77.9 |
| 4800 | 75 | 75.0 | 73.3 | 78.2 | 59.4 | 85.9 | 32.1 | 69.5 | 68.6 | 72.5 | 55.2 | 80.0 | 28.5 |
| | 80 | 80.3 | 80.3 | 81.8 | 74.2 | 86.4 | 57.1 | 74.8 | 74.8 | 76.1 | 69.7 | 80.4 | 53.0 |
| | 85 | 86.0 | 86.0 | 86.6 | 84.7 | 89.3 | 73.9 | 80.5 | 80.5 | 80.9 | 79.9 | 83.4 | 69.6 |
| | 90 | 91.8 | 91.8 | 91.9 | 91.9 | 93.6 | 86.0 | 85.0 | 85.0 | 86.2 | 86.2 | 87.6 | 81.4 |
| 5600 | 75 | 76.0 | 75.2 | 78.6 | 61.6 | 86.0 | 34.7 | 70.2 | 70.1 | 72.5 | 57.1 | 80.2 | 30.7 |
| | 80 | 81.7 | 81.7 | 82.7 | 76.6 | 86.8 | 59.8 | 75.9 | 75.9 | 76.7 | 71.7 | 80.5 | 55.4 |
| | 85 | 87.8 | 87.8 | 87.9 | 87.3 | 90.2 | 76.8 | 81.0 | 81.0 | 81.9 | 81.9 | 83.9 | 72.1 |
| | 90 | 92.0 | 92.0 | 93.6 | 93.6 | 94.9 | 89.2 | 87.0 | 88.0 | 87.6 | 87.6 | 88.6 | 84.2 |
| 6400 | 75 | 76.5 | 76.3 | 79.0 | 63.1 | 87.0 | 36.5 | 70.3 | 70.3 | 73.0 | 58.1 | 81.0 | 32.1 |
| | 80 | 82.6 | 82.6 | 83.2 | 78.3 | 88.0 | 61.8 | 76.5 | 76.5 | 76.8 | 73.0 | 82.5 | 56.9 |
| | 85 | 88.2 | 88.2 | 88.8 | 88.8 | 90.6 | 79.0 | 82.0 | 82.0 | 82.4 | 82.4 | 84.0 | 73.9 |
| | 90 | 93.5 | 93.5 | 94.8 | 94.8 | 95.7 | 91.6 | 88.2 | 88.2 | 88.5 | 88.5 | 89.1 | 86.2 |
| 7000 | 75 | 76.5 | 76.5 | 81.0 | 63.7 | 88.0 | 37.4 | 70.2 | 70.2 | 75.0 | 58.4 | 82.0 | 32.7 |
| | 80 | 83.0 | 83.0 | 83.2 | 79.0 | 91.0 | 62.7 | 76.6 | 76.6 | 78.0 | 73.4 | 84.0 | 57.6 |
| | 85 | 89.0 | 89.0 | 89.1 | 89.1 | 94.0 | 80.1 | 82.2 | 82.2 | 82.5 | 82.5 | 86.0 | 74.7 |
| | 90 | 95.0 | 95.0 | 95.4 | 95.4 | 96.0 | 92.9 | 88.4 | 89.0 | 88.8 | 88.8 | 89.1 | 87.3 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 3200, 4000, 4800, and 5600 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 33. Gross cooling capacities 20 tons three phase high efficiency T/YH*240G3,4,W (stage 2)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 3200 | 75 | 147.4 | 116.5 | 161.9 | 94.0 | 179.6 | 54.5 | 139.3 | 111.3 | 153.0 | 89.7 | 169.9 | 51.2 |
| | 80 | 150.8 | 130.2 | 164.3 | 114.7 | 181.0 | 87.0 | 142.8 | 124.5 | 155.5 | 109.7 | 171.4 | 82.9 |
| | 85 | 155.8 | 141.5 | 166.7 | 130.2 | 182.4 | 110.0 | 147.8 | 135.4 | 158.0 | 124.7 | 172.9 | 105.2 |
| | 90 | 161.9 | 151.4 | 170.9 | 142.5 | 183.7 | 127.2 | 153.7 | 144.9 | 162.2 | 136.6 | 174.4 | 121.9 |
| 4000 | 75 | 155.6 | 127.1 | 171.7 | 103.0 | 185.5 | 61.7 | 147.0 | 121.3 | 162.1 | 98.1 | 175.3 | 57.9 |
| | 80 | 160.1 | 142.0 | 172.3 | 125.2 | 187.9 | 96.0 | 151.5 | 135.8 | 163.0 | 119.7 | 177.7 | 91.4 |
| | 85 | 165.9 | 154.4 | 175.7 | 141.9 | 190.2 | 120.5 | 157.3 | 147.7 | 166.4 | 135.9 | 180.2 | 115.2 |
| | 90 | 172.5 | 165.2 | 180.7 | 155.4 | 192.5 | 138.9 | 163.9 | 158.2 | 171.5 | 148.9 | 182.6 | 133.1 |
| 4800 | 75 | 162.5 | 136.3 | 177.1 | 110.6 | 195.7 | 67.6 | 153.4 | 130.0 | 167.0 | 105.3 | 184.6 | 63.2 |
| | 80 | 167.9 | 152.5 | 178.9 | 134.3 | 196.1 | 103.6 | 158.8 | 145.7 | 169.0 | 128.3 | 185.3 | 98.5 |
| | 85 | 174.5 | 166.0 | 183.2 | 152.3 | 196.6 | 129.6 | 165.4 | 158.8 | 173.5 | 145.8 | 186.0 | 123.8 |
| | 90 | 181.8 | 177.7 | 189.1 | 166.9 | 199.9 | 149.3 | 172.6 | 170.2 | 179.3 | 159.9 | 189.4 | 143.0 |
| 5600 | 75 | 168.0 | 144.2 | 181.2 | 116.9 | 198.4 | 72.1 | 158.3 | 137.4 | 170.5 | 111.0 | 186.8 | 67.2 |
| | 80 | 174.3 | 161.7 | 184.1 | 142.1 | 200.0 | 109.9 | 164.7 | 154.3 | 173.7 | 135.6 | 188.6 | 104.2 |
| | 85 | 181.7 | 176.2 | 189.4 | 161.4 | 201.6 | 137.4 | 172.0 | 168.4 | 179.1 | 154.3 | 190.5 | 131.1 |
| | 90 | 189.6 | 188.8 | 196.1 | 177.1 | 205.9 | 158.4 | 179.9 | 179.9 | 185.7 | 169.6 | 194.9 | 151.5 |
| 6400 | 75 | 172.1 | 150.7 | 183.8 | 121.9 | 199.6 | 75.3 | 161.8 | 143.4 | 172.6 | 115.5 | 187.5 | 69.9 |
| | 80 | 179.3 | 169.5 | 187.9 | 148.6 | 202.4 | 114.9 | 169.2 | 161.6 | 177.0 | 141.5 | 190.5 | 108.7 |
| | 85 | 187.5 | 185.1 | 194.2 | 169.2 | 205.2 | 143.9 | 177.3 | 176.8 | 183.3 | 161.6 | 193.5 | 137.0 |
| | 90 | 196.0 | 196.0 | 201.6 | 185.9 | 210.4 | 166.2 | 185.8 | 185.8 | 190.7 | 177.9 | 198.9 | 158.8 |
| 7000 | 75 | 174.2 | 154.7 | 184.8 | 124.8 | 199.6 | 76.8 | 163.5 | 147.0 | 173.2 | 117.9 | 190.8 | 71.0 |
| | 80 | 182.2 | 174.4 | 189.9 | 152.6 | 203.3 | 117.8 | 171.6 | 166.2 | 178.5 | 145.1 | 191.0 | 111.1 |
| | 85 | 190.9 | 190.8 | 196.8 | 174.1 | 207.0 | 147.9 | 180.3 | 180.3 | 185.5 | 166.1 | 194.9 | 140.6 |
| | 90 | 199.9 | 199.9 | 204.9 | 191.6 | 212.9 | 171.1 | 189.3 | 189.3 | 193.6 | 183.2 | 201.0 | 163.3 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 3200, 4000, 4800, and 5600 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 34. Gross cooling capacities 20 tons three phase high efficiency T/YH*240G3,4,W (full load)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 4000 | 75 | 204.7 | 159.8 | 224.3 | 126.6 | 248.0 | 69.4 | 194.8 | 153.5 | 213.3 | 121.7 | 235.9 | 66.2 | 184.1 | 146.6 | 201.4 | 116.3 | 223.0 | 62.4 |
| | 80 | 209.6 | 179.2 | 227.5 | 156.5 | 249.7 | 116.6 | 199.7 | 172.0 | 216.5 | 150.5 | 237.6 | 112.1 | 189.0 | 164.2 | 204.7 | 143.9 | 224.8 | 106.9 |
| | 85 | 217.0 | 194.6 | 230.8 | 178.3 | 251.4 | 149.6 | 206.9 | 186.7 | 219.8 | 171.4 | 239.4 | 143.9 | 195.9 | 178.1 | 208.0 | 163.9 | 226.5 | 137.7 |
| | 90 | 225.7 | 207.7 | 236.9 | 195.3 | 253.2 | 173.8 | 215.3 | 199.2 | 225.7 | 187.6 | 241.1 | 167.2 | 204.1 | 190.1 | 213.7 | 179.4 | 228.2 | 160.0 |
| 4800 | 75 | 214.2 | 171.5 | 232.6 | 137.1 | 255.1 | 78.6 | 203.7 | 164.6 | 225.1 | 131.7 | 242.5 | 74.8 | 192.4 | 157.1 | 212.5 | 125.6 | 229.0 | 70.4 |
| | 80 | 220.0 | 191.9 | 236.7 | 168.2 | 257.7 | 127.2 | 209.5 | 184.0 | 225.1 | 161.6 | 245.1 | 122.0 | 198.1 | 175.6 | 212.7 | 154.4 | 231.6 | 116.3 |
| | 85 | 228.0 | 208.1 | 240.9 | 191.0 | 260.3 | 161.4 | 217.3 | 199.6 | 229.2 | 183.5 | 247.7 | 155.1 | 205.7 | 190.4 | 216.8 | 175.4 | 234.2 | 148.2 |
| | 90 | 237.3 | 221.9 | 247.6 | 208.8 | 262.9 | 186.5 | 226.3 | 212.8 | 235.9 | 200.6 | 250.2 | 179.3 | 214.5 | 203.1 | 223.2 | 191.7 | 236.7 | 171.5 |
| 5600 | 75 | 222.7 | 182.1 | 243.9 | 146.6 | 261.2 | 86.7 | 211.5 | 174.6 | 231.5 | 140.5 | 248.0 | 82.3 | 199.6 | 166.5 | 218.3 | 133.9 | 233.9 | 77.4 |
| | 80 | 229.3 | 203.5 | 244.8 | 178.8 | 264.7 | 136.7 | 218.1 | 195.0 | 232.6 | 171.6 | 251.4 | 130.9 | 206.2 | 186.0 | 219.5 | 163.8 | 237.3 | 124.6 |
| | 85 | 237.9 | 220.6 | 249.8 | 202.6 | 268.1 | 172.0 | 226.6 | 211.4 | 237.6 | 194.5 | 254.8 | 165.1 | 214.5 | 201.7 | 224.5 | 185.8 | 240.7 | 157.6 |
| | 90 | 247.8 | 235.1 | 257.3 | 221.2 | 271.6 | 198.1 | 236.2 | 225.3 | 244.9 | 212.4 | 258.3 | 190.3 | 223.7 | 215.0 | 231.6 | 203.0 | 244.2 | 181.9 |
| 6400 | 75 | 230.0 | 191.6 | 249.9 | 154.9 | 274.8 | 93.8 | 218.3 | 183.5 | 236.8 | 148.3 | 260.5 | 88.8 | 205.7 | 174.8 | 223.0 | 141.0 | 245.5 | 83.2 |
| | 80 | 237.5 | 214.0 | 251.8 | 188.3 | 274.8 | 145.1 | 225.7 | 204.9 | 239.0 | 180.5 | 260.7 | 138.7 | 213.1 | 195.3 | 225.3 | 172.1 | 245.9 | 131.8 |
| | 85 | 246.8 | 231.9 | 257.6 | 213.1 | 274.8 | 181.6 | 234.9 | 222.1 | 244.8 | 204.4 | 260.9 | 174.1 | 222.1 | 211.8 | 231.1 | 195.1 | 246.2 | 166.0 |
| | 90 | 257.2 | 247.1 | 265.8 | 232.6 | 279.1 | 208.6 | 245.0 | 236.8 | 252.8 | 223.1 | 265.2 | 200.2 | 231.9 | 225.9 | 239.0 | 213.1 | 250.5 | 191.2 |
| 7200 | 75 | 236.2 | 200.1 | 254.7 | 162.2 | 278.3 | 99.8 | 223.9 | 191.4 | 241.1 | 155.0 | 263.4 | 94.2 | 210.7 | 182.0 | 226.6 | 147.1 | 247.8 | 88.0 |
| | 80 | 244.5 | 223.4 | 257.7 | 196.7 | 279.4 | 152.5 | 232.2 | 213.7 | 244.3 | 188.3 | 264.7 | 145.5 | 219.0 | 203.5 | 230.0 | 179.4 | 249.2 | 137.9 |
| | 85 | 254.6 | 242.2 | 264.4 | 222.5 | 280.4 | 190.0 | 242.0 | 231.8 | 250.9 | 213.2 | 265.9 | 181.9 | 228.7 | 220.8 | 236.7 | 203.3 | 250.6 | 173.3 |
| | 90 | 265.5 | 258.1 | 273.2 | 242.8 | 285.6 | 218.1 | 252.6 | 247.2 | 259.6 | 232.8 | 271.1 | 209.1 | 239.0 | 235.6 | 245.2 | 222.2 | 255.8 | 199.5 |
| 8000 | 75 | 241.4 | 207.5 | 258.4 | 168.5 | 280.7 | 104.7 | 228.4 | 198.1 | 244.2 | 160.6 | 265.2 | 98.5 | 214.6 | 188.2 | 229.1 | 152.1 | 249.0 | 91.7 |
| | 80 | 250.5 | 231.7 | 262.5 | 204.1 | 282.8 | 158.7 | 237.6 | 221.5 | 248.5 | 195.1 | 267.5 | 151.1 | 223.8 | 210.7 | 233.6 | 185.5 | 251.4 | 143.0 |
| | 85 | 261.2 | 251.3 | 270.1 | 230.8 | 284.9 | 197.4 | 248.1 | 240.4 | 256.0 | 220.9 | 269.8 | 188.7 | 234.1 | 228.8 | 241.1 | 210.5 | 253.9 | 179.4 |
| | 90 | 272.7 | 268.0 | 279.6 | 252.0 | 291.0 | 226.5 | 259.2 | 256.5 | 265.4 | 241.4 | 275.8 | 216.9 | 245.0 | 244.3 | 250.3 | 230.2 | 259.9 | 206.7 |
| 8800 | 75 | 245.4 | 213.8 | 261.1 | 173.6 | 282.0 | 108.5 | 231.9 | 203.8 | 246.2 | 165.1 | 265.9 | 101.7 | 217.5 | 193.3 | 230.6 | 156.1 | 249.1 | 94.3 |
| | 80 | 255.4 | 239.0 | 266.2 | 210.4 | 285.2 | 163.9 | 241.8 | 228.2 | 251.6 | 200.8 | 269.3 | 155.7 | 227.4 | 216.7 | 236.1 | 190.6 | 252.6 | 146.9 |
| | 85 | 266.8 | 259.4 | 274.6 | 238.1 | 288.4 | 203.8 | 253.0 | 247.9 | 259.9 | 227.6 | 272.6 | 194.4 | 238.5 | 235.7 | 244.4 | 216.5 | 256.1 | 184.6 |
| | 90 | 278.8 | 276.8 | 284.8 | 260.1 | 295.2 | 233.8 | 264.7 | 264.7 | 270.0 | 248.9 | 279.5 | 223.6 | 249.9 | 249.9 | 254.3 | 237.1 | 263.0 | 212.8 |
| 9600 | 75 | 248.4 | 219.0 | 262.6 | 177.6 | 282.2 | 111.2 | 234.2 | 208.4 | 247.2 | 168.6 | 265.5 | 103.8 | 219.2 | 197.3 | 230.9 | 158.9 | 248.1 | 95.8 |
| | 80 | 259.2 | 245.2 | 268.8 | 215.6 | 286.4 | 168.0 | 245.0 | 233.7 | 253.6 | 205.4 | 270.0 | 159.2 | 230.0 | 221.7 | 237.5 | 194.6 | 252.6 | 149.8 |
| | 85 | 271.3 | 266.5 | 278.1 | 244.3 | 290.7 | 209.0 | 256.9 | 254.3 | 262.8 | 233.2 | 274.4 | 199.1 | 241.7 | 241.5 | 246.7 | 221.5 | 257.2 | 188.6 |
| | 90 | 283.8 | 283.8 | 289.0 | 267.2 | 298.4 | 240.0 | 269.1 | 269.1 | 273.5 | 255.3 | 282.1 | 229.2 | 253.7 | 253.7 | 257.3 | 242.9 | 264.9 | 217.8 |

**Table 34. Gross cooling capacities 20 tons three phase high efficiency T/YH*240G3,4,W (full load) (continued)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature 115 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 120 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 125 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4000 | 75 | 172.5 | 139.1 | 188.8 | 110.3 | 209.3 | 58.1 | 166.4 | 135.1 | 182.1 | 107.1 | 202.2 | 55.7 | 160.1 | 131.0 | 175.3 | 103.7 | 194.8 | 53.1 |
| | 80 | 177.4 | 155.8 | 192.0 | 136.8 | 211.0 | 101.2 | 171.3 | 151.4 | 185.4 | 133.0 | 203.9 | 98.1 | 164.9 | 146.8 | 178.5 | 129.1 | 196.5 | 94.9 |
| | 85 | 184.2 | 169.0 | 195.3 | 155.9 | 212.8 | 130.8 | 178.0 | 164.3 | 188.6 | 151.7 | 205.6 | 127.2 | 171.6 | 159.4 | 181.8 | 147.3 | 198.2 | 123.4 |
| | 90 | 192.0 | 180.4 | 200.9 | 170.7 | 214.5 | 152.2 | 185.7 | 175.3 | 194.2 | 166.1 | 207.3 | 148.1 | 179.1 | 170.1 | 187.2 | 161.3 | 199.9 | 143.9 |
| 4800 | 75 | 180.2 | 149.0 | 199.0 | 119.0 | 214.7 | 65.5 | 173.8 | 144.7 | 192.0 | 115.5 | 207.2 | 62.8 | 167.2 | 140.3 | 184.7 | 111.8 | 199.6 | 60.0 |
| | 80 | 185.9 | 166.6 | 199.4 | 146.7 | 217.3 | 110.0 | 179.5 | 161.9 | 192.4 | 142.6 | 209.8 | 106.6 | 172.9 | 157.1 | 185.3 | 138.4 | 202.1 | 103.1 |
| | 85 | 193.4 | 180.7 | 203.5 | 166.8 | 219.8 | 140.7 | 186.9 | 175.7 | 196.5 | 162.2 | 212.3 | 136.8 | 180.2 | 170.5 | 189.4 | 157.5 | 204.7 | 132.7 |
| | 90 | 201.8 | 192.8 | 209.8 | 182.4 | 222.4 | 163.1 | 195.2 | 187.4 | 202.7 | 177.5 | 214.9 | 158.7 | 188.3 | 181.9 | 195.5 | 172.4 | 207.2 | 154.2 |
| 5600 | 75 | 186.8 | 157.8 | 204.2 | 126.7 | 219.0 | 71.8 | 180.1 | 153.2 | 196.9 | 122.8 | 211.2 | 68.8 | 173.2 | 148.5 | 189.3 | 118.9 | 203.2 | 65.7 |
| | 80 | 193.4 | 176.4 | 205.6 | 155.5 | 222.4 | 117.6 | 186.6 | 171.4 | 198.4 | 151.1 | 214.6 | 114.0 | 179.7 | 166.2 | 190.9 | 146.5 | 206.6 | 110.1 |
| | 85 | 201.5 | 191.3 | 210.6 | 176.5 | 225.8 | 149.6 | 194.7 | 186.0 | 203.3 | 171.7 | 218.0 | 145.3 | 187.7 | 180.5 | 195.9 | 166.7 | 210.0 | 141.0 |
| | 90 | 210.5 | 204.1 | 217.6 | 193.0 | 229.2 | 172.9 | 203.5 | 198.5 | 210.2 | 187.8 | 221.4 | 168.3 | 196.4 | 192.7 | 202.7 | 182.4 | 213.4 | 163.4 |
| 6400 | 75 | 192.3 | 165.5 | 208.3 | 133.2 | 229.6 | 77.1 | 185.3 | 160.6 | 200.7 | 129.1 | 221.3 | 73.8 | 178.1 | 155.6 | 192.8 | 124.8 | 212.9 | 70.3 |
| | 80 | 199.7 | 185.1 | 210.8 | 163.2 | 230.1 | 124.3 | 192.7 | 179.8 | 203.3 | 158.5 | 222.0 | 120.3 | 185.5 | 174.3 | 195.5 | 153.7 | 213.6 | 116.1 |
| | 85 | 208.5 | 200.9 | 216.6 | 185.2 | 230.7 | 157.3 | 201.4 | 195.2 | 209.1 | 180.1 | 222.6 | 152.8 | 194.1 | 189.4 | 201.3 | 174.8 | 214.3 | 148.1 |
| | 90 | 218.0 | 214.4 | 224.3 | 202.5 | 235.0 | 181.7 | 210.8 | 208.4 | 216.7 | 197.0 | 226.9 | 176.7 | 203.3 | 202.3 | 208.8 | 191.4 | 218.6 | 171.5 |
| 7200 | 75 | 196.7 | 172.1 | 211.3 | 138.7 | 231.3 | 81.2 | 189.4 | 167.0 | 203.4 | 134.3 | 222.7 | 77.7 | 181.9 | 161.7 | 195.2 | 129.7 | 213.9 | 73.9 |
| | 80 | 205.0 | 192.7 | 214.9 | 169.8 | 232.9 | 129.8 | 197.7 | 187.1 | 207.0 | 164.8 | 224.4 | 125.5 | 190.1 | 181.4 | 199.0 | 159.7 | 215.7 | 121.1 |
| | 85 | 214.5 | 209.3 | 221.6 | 192.9 | 234.5 | 164.0 | 207.1 | 203.4 | 213.7 | 187.4 | 226.1 | 159.2 | 199.4 | 197.2 | 205.6 | 181.8 | 217.5 | 154.2 |
| | 90 | 224.5 | 223.5 | 229.9 | 211.0 | 239.6 | 189.3 | 216.9 | 216.9 | 222.0 | 205.2 | 231.2 | 184.0 | 209.2 | 209.2 | 213.8 | 199.2 | 222.6 | 178.6 |
| 8000 | 75 | 200.0 | 177.7 | 213.3 | 143.1 | 231.9 | 84.3 | 192.4 | 172.2 | 205.0 | 138.4 | 223.0 | 80.4 | 184.6 | 166.6 | 196.5 | 133.5 | 213.9 | 76.4 |
| | 80 | 209.1 | 199.3 | 217.9 | 175.4 | 234.5 | 134.2 | 201.5 | 193.4 | 209.7 | 170.1 | 225.7 | 129.6 | 193.7 | 187.3 | 201.3 | 164.7 | 216.7 | 124.9 |
| | 85 | 219.3 | 216.7 | 225.4 | 199.4 | 237.1 | 169.6 | 211.6 | 210.4 | 217.2 | 193.6 | 228.5 | 164.4 | 203.7 | 203.7 | 208.8 | 187.8 | 219.6 | 159.2 |
| | 90 | 229.9 | 229.9 | 234.4 | 218.4 | 243.1 | 195.9 | 222.0 | 222.0 | 226.2 | 212.3 | 234.4 | 190.3 | 214.0 | 214.0 | 217.7 | 206.0 | 225.5 | 184.6 |
| 8800 | 75 | 202.2 | 182.2 | 214.1 | 146.4 | 231.3 | 86.3 | 194.3 | 176.4 | 205.5 | 141.4 | 222.2 | 82.2 | 186.2 | 170.5 | 196.7 | 136.2 | 213.5 | 77.8 |
| | 80 | 212.2 | 204.7 | 219.7 | 179.9 | 235.0 | 137.6 | 204.3 | 198.5 | 211.3 | 174.3 | 226.0 | 132.7 | 196.1 | 192.1 | 202.6 | 168.5 | 217.0 | 127.7 |
| | 85 | 223.1 | 223.0 | 228.1 | 204.8 | 238.7 | 174.1 | 215.0 | 215.0 | 219.6 | 198.8 | 229.7 | 168.7 | 206.8 | 206.8 | 211.0 | 192.6 | 220.5 | 163.1 |
| | 90 | 234.2 | 234.2 | 237.8 | 224.7 | 245.6 | 201.4 | 226.0 | 226.0 | 229.3 | 218.3 | 236.6 | 195.5 | 217.6 | 217.6 | 220.5 | 211.7 | 227.4 | 189.5 |
| 9600 | 75 | 203.4 | 185.6 | 216.0 | 148.7 | 233.2 | 87.3 | 195.1 | 179.5 | 207.0 | 143.3 | 224.1 | 82.8 | 186.7 | 173.3 | 198.0 | 137.9 | 213.0 | 78.1 |
| | 80 | 214.2 | 209.1 | 220.5 | 183.2 | 236.2 | 139.9 | 205.9 | 202.6 | 211.8 | 177.4 | 227.0 | 134.7 | 197.5 | 195.9 | 202.8 | 171.3 | 218.0 | 129.4 |
| | 85 | 225.7 | 225.7 | 229.8 | 209.2 | 239.2 | 177.5 | 217.4 | 217.4 | 221.0 | 202.9 | 229.9 | 171.8 | 208.9 | 208.9 | 212.0 | 196.4 | 223.0 | 165.9 |
| | 90 | 237.4 | 237.4 | 240.2 | 229.9 | 246.9 | 205.8 | 228.9 | 228.9 | 231.3 | 223.2 | 237.6 | 199.6 | 220.2 | 220.2 | 222.3 | 216.3 | 228.1 | 193.3 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 4000, 4800, and 5600 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 35. Gross cooling capacities 20 tons three phase dehumidification (hot gas reheat) option high efficiency T/YHD240G3,4,W (Digit 22 = B)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 4000 | 75 | 203.7 | 145.0 | 228.5 | 96.2 | 259.7 | 90.9 | 193.4 | 139.5 | 217.0 | 92.5 | 247.0 | 86.4 | 182.4 | 133.4 | 204.8 | 88.3 | 233.5 | 81.7 |
| | 80 | 206.0 | 171.4 | 227.3 | 134.7 | 254.8 | 89.2 | 195.8 | 164.9 | 215.8 | 130.0 | 242.1 | 84.7 | 184.8 | 157.8 | 203.6 | 124.6 | 228.6 | 80.0 |
| | 85 | 210.1 | 191.8 | 227.8 | 167.0 | 251.7 | 118.8 | 199.9 | 184.2 | 216.3 | 161.3 | 239.0 | 114.9 | 189.0 | 176.0 | 204.1 | 154.9 | 225.5 | 110.4 |
| | 90 | 216.1 | 206.0 | 230.1 | 193.2 | 250.4 | 157.1 | 205.9 | 197.4 | 218.6 | 186.5 | 237.7 | 152.1 | 194.9 | 188.2 | 206.4 | 179.1 | 224.2 | 146.5 |
| 5200 | 75 | 218.6 | 159.9 | 241.6 | 108.8 | 271.0 | 94.8 | 207.5 | 153.9 | 229.3 | 104.6 | 257.4 | 90.1 | 195.7 | 147.3 | 216.2 | 99.8 | 243.0 | 85.1 |
| | 80 | 222.2 | 188.3 | 241.6 | 149.2 | 267.3 | 93.6 | 211.1 | 181.3 | 229.3 | 144.0 | 253.7 | 88.8 | 199.3 | 173.6 | 216.2 | 138.2 | 239.4 | 83.8 |
| | 85 | 227.6 | 210.6 | 243.4 | 183.5 | 265.5 | 133.0 | 216.5 | 202.5 | 231.1 | 177.3 | 251.9 | 128.6 | 204.7 | 193.8 | 218.0 | 170.4 | 237.6 | 123.5 |
| | 90 | 234.8 | 226.8 | 247.0 | 211.7 | 265.4 | 173.2 | 223.7 | 217.7 | 234.6 | 204.4 | 251.9 | 167.7 | 211.9 | 207.9 | 221.6 | 196.5 | 237.5 | 161.6 |
| 6400 | 75 | 231.3 | 173.2 | 252.5 | 119.7 | 280.0 | 98.0 | 219.3 | 166.7 | 239.3 | 115.1 | 265.5 | 92.9 | 206.6 | 159.6 | 225.3 | 109.8 | 250.3 | 87.6 |
| | 80 | 236.2 | 203.6 | 253.7 | 162.1 | 277.6 | 97.2 | 224.2 | 196.0 | 240.5 | 156.4 | 263.2 | 93.4 | 211.5 | 187.9 | 226.6 | 150.1 | 248.0 | 88.8 |
| | 85 | 242.8 | 227.8 | 256.8 | 198.4 | 277.0 | 145.5 | 230.9 | 219.3 | 243.6 | 191.6 | 262.6 | 140.6 | 218.2 | 210.0 | 229.7 | 184.2 | 247.4 | 135.0 |
| | 90 | 251.2 | 245.9 | 261.6 | 228.5 | 278.2 | 187.7 | 239.3 | 236.3 | 248.4 | 220.7 | 263.8 | 181.7 | 226.7 | 226.1 | 234.5 | 212.3 | 248.6 | 175.1 |
| 7200 | 75 | 238.5 | 181.2 | 258.5 | 126.2 | 284.8 | 99.7 | 226.0 | 174.4 | 244.7 | 121.2 | 269.7 | 94.4 | 212.7 | 166.9 | 230.2 | 115.5 | 253.9 | 88.9 |
| | 80 | 244.2 | 212.9 | 260.6 | 169.9 | 283.2 | 103.4 | 231.7 | 205.0 | 246.8 | 163.8 | 268.2 | 99.2 | 218.5 | 196.5 | 232.3 | 157.1 | 252.4 | 94.3 |
| | 85 | 251.7 | 238.4 | 264.4 | 207.4 | 283.5 | 153.0 | 239.2 | 229.5 | 250.7 | 200.3 | 268.4 | 147.7 | 226.0 | 220.0 | 236.2 | 192.6 | 252.7 | 141.8 |
| | 90 | 261.0 | 257.9 | 270.1 | 238.9 | 285.5 | 196.5 | 248.5 | 247.9 | 256.3 | 230.7 | 270.5 | 190.2 | 235.3 | 235.3 | 241.9 | 222.0 | 254.7 | 183.2 |
| 8000 | 75 | 244.8 | 188.5 | 263.5 | 131.9 | 288.6 | 101.0 | 231.7 | 181.3 | 249.2 | 126.5 | 272.9 | 95.5 | 217.8 | 173.5 | 234.1 | 120.5 | 256.6 | 89.8 |
| | 80 | 251.3 | 221.5 | 266.4 | 176.9 | 287.8 | 108.9 | 238.2 | 213.2 | 252.1 | 170.5 | 272.2 | 104.3 | 224.4 | 204.4 | 237.0 | 163.5 | 255.9 | 99.1 |
| | 85 | 259.6 | 248.3 | 271.1 | 215.8 | 288.9 | 159.8 | 246.5 | 239.1 | 256.8 | 208.3 | 273.3 | 154.2 | 232.7 | 229.2 | 241.7 | 200.2 | 257.0 | 147.9 |
| | 90 | 269.7 | 269.0 | 277.6 | 248.5 | 291.8 | 204.5 | 256.7 | 256.7 | 263.3 | 240.0 | 276.2 | 197.9 | 242.9 | 242.9 | 248.2 | 230.9 | 259.9 | 190.6 |
| 8800 | 75 | 250.0 | 195.1 | 267.5 | 136.9 | 291.3 | 102.0 | 236.3 | 187.5 | 252.6 | 131.2 | 275.2 | 96.3 | 221.9 | 179.4 | 236.9 | 124.9 | 258.2 | 90.4 |
| | 80 | 257.4 | 229.3 | 271.3 | 183.2 | 291.5 | 113.6 | 243.7 | 220.8 | 256.4 | 176.5 | 275.3 | 108.7 | 229.3 | 211.6 | 240.7 | 169.1 | 258.4 | 103.2 |
| | 85 | 266.5 | 257.5 | 276.8 | 223.4 | 293.4 | 165.8 | 252.9 | 247.9 | 261.9 | 215.6 | 277.2 | 159.9 | 238.5 | 237.7 | 246.3 | 207.2 | 260.3 | 153.3 |
| | 90 | 277.5 | 277.5 | 284.1 | 257.4 | 297.1 | 211.9 | 263.8 | 263.8 | 269.2 | 248.6 | 280.9 | 204.9 | 249.5 | 249.5 | 253.6 | 239.2 | 264.0 | 197.3 |
| 9600 | 75 | 254.3 | 200.9 | 270.6 | 141.2 | 293.1 | 102.6 | 240.0 | 193.1 | 255.1 | 135.2 | 276.4 | 96.7 | 225.0 | 184.6 | 238.8 | 128.5 | 258.9 | 90.6 |
| | 80 | 262.5 | 236.5 | 275.1 | 188.8 | 294.1 | 117.7 | 248.2 | 227.6 | 259.7 | 181.7 | 277.4 | 112.4 | 233.3 | 218.1 | 243.4 | 174.0 | 259.9 | 106.5 |
| | 85 | 272.4 | 266.0 | 281.5 | 230.3 | 296.8 | 171.2 | 258.2 | 256.0 | 266.0 | 222.2 | 280.1 | 164.9 | 243.3 | 243.3 | 249.8 | 213.4 | 262.6 | 157.9 |
| | 90 | 284.2 | 284.2 | 289.6 | 265.7 | 301.4 | 218.6 | 270.0 | 270.0 | 274.2 | 256.5 | 284.7 | 211.2 | 255.1 | 255.1 | 258.0 | 246.7 | 267.2 | 203.2 |

**Table 35. Gross cooling capacities 20 tons three phase dehumidification (hot gas reheat) option high efficiency T/YHD240G3,4,W (Digit 22 = B) (continued)**

| Air Flow cfm[b] | Ent DB (°F) | Ambient Temperature 115 | | | | | | 120 | | | | | | 125 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Entering Wet Bulb 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 4000 | 75 | 170.7 | 126.7 | 191.8 | 83.3 | 219.2 | 76.7 | 164.5 | 123.1 | 185.0 | 80.6 | 211.8 | 74.1 | 158.2 | 119.3 | 178.1 | 77.8 | 204.2 | 71.5 |
| | 80 | 173.1 | 150.0 | 190.6 | 118.7 | 214.4 | 75.0 | 166.9 | 145.9 | 183.8 | 115.5 | 207.0 | 72.4 | 160.6 | 141.6 | 176.8 | 112.1 | 199.4 | 69.8 |
| | 85 | 177.3 | 167.2 | 191.1 | 147.9 | 211.3 | 105.2 | 171.1 | 162.6 | 184.4 | 144.2 | 203.9 | 102.4 | 164.8 | 157.7 | 177.4 | 140.3 | 196.3 | 99.4 |
| | 90 | 183.2 | 178.3 | 193.5 | 171.0 | 210.0 | 140.3 | 177.1 | 173.1 | 186.7 | 166.8 | 202.6 | 137.0 | 170.8 | 167.8 | 179.8 | 162.3 | 195.1 | 133.5 |
| 5200 | 75 | 183.1 | 140.0 | 202.3 | 94.4 | 227.9 | 79.8 | 176.5 | 136.2 | 195.1 | 91.4 | 220.1 | 77.0 | 169.7 | 132.1 | 187.7 | 88.3 | 212.0 | 74.2 |
| | 80 | 186.7 | 165.3 | 202.4 | 131.7 | 224.3 | 78.5 | 180.1 | 160.9 | 195.2 | 128.2 | 216.5 | 75.8 | 173.4 | 156.4 | 187.8 | 124.6 | 208.4 | 73.0 |
| | 85 | 192.1 | 184.5 | 204.2 | 162.9 | 222.5 | 117.8 | 185.6 | 179.6 | 197.0 | 158.9 | 214.7 | 114.7 | 178.8 | 174.5 | 189.6 | 154.7 | 206.7 | 111.5 |
| | 90 | 199.4 | 197.5 | 207.8 | 187.9 | 222.5 | 154.9 | 192.8 | 192.1 | 200.6 | 183.4 | 214.6 | 151.3 | 186.1 | 186.1 | 193.2 | 178.7 | 206.6 | 147.5 |
| 6400 | 75 | 193.2 | 151.8 | 210.6 | 103.8 | 234.3 | 82.0 | 186.2 | 147.7 | 203.0 | 100.6 | 226.1 | 79.1 | 179.0 | 143.4 | 195.2 | 97.2 | 217.6 | 76.2 |
| | 80 | 198.1 | 179.1 | 211.9 | 143.1 | 232.0 | 83.6 | 191.1 | 174.4 | 204.3 | 139.3 | 223.7 | 80.8 | 183.9 | 169.6 | 196.5 | 135.4 | 215.3 | 77.8 |
| | 85 | 204.8 | 200.2 | 215.0 | 176.2 | 231.4 | 128.8 | 197.8 | 195.0 | 207.4 | 172.0 | 223.2 | 125.5 | 190.6 | 189.7 | 199.5 | 167.5 | 214.8 | 122.0 |
| | 90 | 213.3 | 213.3 | 219.8 | 203.2 | 232.7 | 167.8 | 206.3 | 206.3 | 212.2 | 198.5 | 224.4 | 164.0 | 199.1 | 199.1 | 204.4 | 193.5 | 216.0 | 160.0 |
| 7200 | 75 | 198.7 | 158.8 | 214.9 | 109.2 | 237.4 | 83.1 | 191.4 | 154.5 | 207.0 | 105.8 | 228.9 | 80.1 | 183.9 | 150.0 | 198.9 | 102.3 | 220.1 | 77.0 |
| | 80 | 204.4 | 187.3 | 217.0 | 149.8 | 235.9 | 88.8 | 197.2 | 182.5 | 209.1 | 145.9 | 227.4 | 85.8 | 189.7 | 177.5 | 201.0 | 141.8 | 218.6 | 82.6 |
| | 85 | 212.0 | 209.8 | 220.9 | 184.2 | 236.2 | 135.3 | 204.7 | 204.4 | 213.0 | 179.8 | 227.6 | 131.7 | 197.2 | 197.2 | 204.9 | 175.2 | 218.9 | 128.1 |
| | 90 | 221.3 | 221.3 | 226.6 | 212.5 | 238.2 | 175.6 | 214.0 | 214.0 | 218.7 | 207.6 | 229.7 | 171.6 | 206.6 | 206.6 | 210.6 | 202.5 | 221.0 | 167.4 |
| 8000 | 75 | 203.2 | 165.0 | 218.2 | 113.9 | 239.5 | 83.8 | 195.7 | 160.6 | 210.0 | 110.3 | 230.6 | 80.7 | 187.9 | 155.9 | 201.6 | 106.6 | 221.6 | 77.6 |
| | 80 | 209.8 | 194.9 | 221.2 | 155.8 | 238.8 | 93.2 | 202.2 | 189.9 | 213.0 | 151.7 | 230.0 | 90.1 | 194.5 | 184.7 | 204.6 | 147.5 | 221.0 | 86.7 |
| | 85 | 218.2 | 218.2 | 225.9 | 191.5 | 239.9 | 141.0 | 210.6 | 210.6 | 217.7 | 186.9 | 231.1 | 137.3 | 202.9 | 202.9 | 209.3 | 182.2 | 222.1 | 133.5 |
| | 90 | 228.3 | 228.3 | 232.4 | 221.2 | 242.8 | 182.7 | 220.8 | 220.8 | 224.2 | 216.0 | 234.0 | 178.4 | 213.0 | 213.0 | 215.9 | 210.8 | 225.0 | 174.1 |
| 8800 | 75 | 206.8 | 170.6 | 220.5 | 117.9 | 240.6 | 84.2 | 198.9 | 165.9 | 212.0 | 114.2 | 231.4 | 81.0 | 190.9 | 161.1 | 203.3 | 110.3 | 222.1 | 77.7 |
| | 80 | 214.2 | 201.7 | 224.3 | 161.1 | 240.7 | 97.0 | 206.3 | 196.6 | 215.8 | 156.8 | 231.6 | 93.6 | 198.3 | 191.2 | 207.1 | 152.4 | 222.3 | 90.1 |
| | 85 | 223.4 | 223.4 | 229.9 | 198.1 | 242.7 | 146.0 | 215.5 | 215.5 | 221.4 | 193.3 | 233.6 | 142.2 | 207.5 | 207.5 | 212.7 | 188.4 | 224.3 | 138.1 |
| | 90 | 234.3 | 234.3 | 237.2 | 229.1 | 246.4 | 189.0 | 226.5 | 226.5 | 228.8 | 223.8 | 237.3 | 184.6 | 217.9 | 217.9 | 220.1 | 218.3 | 228.0 | 180.1 |
| 9600 | 75 | 209.3 | 175.4 | 221.8 | 121.2 | 240.6 | 84.2 | 201.2 | 170.6 | 213.0 | 117.3 | 231.2 | 80.9 | 192.8 | 165.6 | 204.1 | 113.2 | 221.6 | 77.6 |
| | 80 | 217.5 | 207.9 | 226.4 | 165.6 | 241.6 | 100.0 | 209.4 | 202.5 | 217.7 | 161.2 | 232.2 | 96.5 | 201.1 | 197.0 | 208.7 | 156.6 | 222.6 | 92.8 |
| | 85 | 227.6 | 227.6 | 232.8 | 204.0 | 244.4 | 150.4 | 219.4 | 219.4 | 224.1 | 199.1 | 235.0 | 146.3 | 211.1 | 211.1 | 215.1 | 194.0 | 225.4 | 142.1 |
| | 90 | 239.4 | 239.4 | 241.0 | 236.2 | 249.0 | 194.6 | 230.0 | 230.0 | 232.3 | 230.8 | 239.6 | 190.1 | 223.3 | 223.3 | 223.3 | 223.3 | 230.0 | 185.3 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain **NET** cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity[a]

(a) For 4000, and 5200 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) For 4000, and 5200 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 36. Gross cooling capacities 25 tons three phase high efficiency T/YH*300G3,4,W (stage 1)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 4000 | 75 | 80.5 | 78.0 | 85.7 | 62.9 | 93.7 | 32.5 | 75.1 | 73.7 | 80.0 | 59.3 | 87.7 | 29.5 |
| | 80 | 85.2 | 85.2 | 87.8 | 78.2 | 94.6 | 59.2 | 79.7 | 79.7 | 82.1 | 74.1 | 88.6 | 55.8 |
| | 85 | 90.1 | 90.1 | 91.3 | 88.2 | 95.4 | 76.5 | 84.6 | 84.6 | 85.6 | 83.8 | 89.4 | 72.6 |
| | 90 | 94.9 | 94.9 | 95.3 | 95.3 | 97.8 | 88.2 | 89.3 | 89.3 | 89.5 | 89.5 | 91.8 | 83.9 |
| 5000 | 75 | 83.0 | 82.1 | 87.6 | 67.4 | 95.0 | 37.4 | 77.3 | 77.3 | 81.6 | 63.4 | 88.7 | 34.1 |
| | 80 | 88.1 | 88.1 | 90.2 | 82.7 | 96.3 | 64.2 | 82.3 | 82.3 | 84.2 | 78.3 | 90.0 | 60.3 |
| | 85 | 93.3 | 93.3 | 94.0 | 92.9 | 97.6 | 81.6 | 87.5 | 87.5 | 88.0 | 88.0 | 91.3 | 77.2 |
| | 90 | 98.3 | 98.3 | 98.3 | 98.3 | 100.3 | 93.3 | 92.0 | 92.0 | 92.2 | 92.2 | 94.0 | 88.7 |
| 6000 | 75 | 85.1 | 85.1 | 89.0 | 71.1 | 95.7 | 41.5 | 79.1 | 79.1 | 82.7 | 66.7 | 89.2 | 37.8 |
| | 80 | 90.5 | 90.5 | 92.0 | 86.5 | 97.5 | 68.3 | 84.5 | 84.5 | 85.8 | 81.6 | 90.9 | 64.1 |
| | 85 | 96.0 | 96.0 | 96.2 | 96.2 | 99.2 | 85.8 | 89.9 | 89.9 | 89.9 | 89.9 | 92.7 | 81.1 |
| | 90 | 99.8 | 99.8 | 100.8 | 100.8 | 102.3 | 97.7 | 94.0 | 94.0 | 94.4 | 94.4 | 95.8 | 92.6 |
| 7000 | 75 | 86.6 | 86.6 | 89.8 | 74.0 | 96.0 | 44.9 | 80.3 | 80.3 | 83.3 | 69.2 | 89.5 | 40.7 |
| | 80 | 92.4 | 92.4 | 93.4 | 89.5 | 98.2 | 71.7 | 86.1 | 86.1 | 86.8 | 84.2 | 91.3 | 67.0 |
| | 85 | 96.0 | 96.0 | 97.9 | 97.9 | 100.4 | 89.2 | 91.0 | 91.0 | 91.3 | 91.3 | 93.6 | 84.1 |
| | 90 | 101.0 | 101.0 | 102.8 | 102.8 | 103.8 | 101.2 | 95.8 | 95.8 | 96.1 | 96.1 | 97.0 | 95.8 |
| 8000 | 75 | 87.7 | 87.7 | 90.2 | 76.1 | 98.2 | 47.4 | 81.1 | 81.1 | 83.3 | 70.9 | 91.0 | 42.9 |
| | 80 | 93.8 | 93.8 | 94.2 | 91.6 | 98.4 | 74.2 | 87.2 | 87.2 | 87.3 | 86.0 | 92.0 | 69.1 |
| | 85 | 98.4 | 98.4 | 99.1 | 99.1 | 101.0 | 91.8 | 92.0 | 92.0 | 92.2 | 92.2 | 93.9 | 86.3 |
| | 90 | 103.7 | 103.7 | 104.2 | 104.2 | 104.8 | 104.0 | 96.0 | 96.0 | 97.3 | 97.3 | 97.7 | 97.7 |
| 8750 | 75 | 88.1 | 88.1 | 91.0 | 77.1 | 98.5 | 48.8 | 81.3 | 81.3 | 84.0 | 71.6 | 92.0 | 43.9 |
| | 80 | 94.0 | 94.0 | 94.5 | 92.7 | 99.0 | 75.6 | 87.3 | 87.3 | 87.4 | 86.7 | 93.5 | 70.2 |
| | 85 | 99.0 | 99.0 | 99.7 | 99.7 | 101.2 | 93.2 | 92.4 | 92.4 | 92.6 | 92.6 | 95.0 | 87.4 |
| | 90 | 104.0 | 104.0 | 105.0 | 105.0 | 105.2 | 105.2 | 97.0 | 97.0 | 97.8 | 97.8 | 97.9 | 97.9 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 4000, 5000, 6000, and 7000 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 37. Gross cooling capacities 25 tons three phase high efficiency T/YH*300G3,4,W (stage 2)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 4000 | 75 | 135.6 | 118.7 | 146.9 | 92.7 | 156.4 | 43.8 | 127.9 | 113.4 | 138.5 | 88.3 | 147.4 | 40.5 |
| | 80 | 140.7 | 132.3 | 148.2 | 116.5 | 159.0 | 84.6 | 132.9 | 126.3 | 139.8 | 111.3 | 150.0 | 80.4 |
| | 85 | 146.9 | 142.2 | 152.0 | 132.5 | 161.5 | 111.5 | 138.9 | 135.7 | 143.6 | 126.7 | 152.5 | 106.4 |
| | 90 | 153.5 | 150.3 | 157.2 | 144.1 | 164.1 | 129.8 | 145.3 | 143.4 | 148.6 | 137.8 | 155.0 | 124.2 |
| 5000 | 75 | 141.2 | 127.5 | 151.3 | 101.4 | 165.2 | 52.4 | 133.0 | 121.6 | 142.4 | 96.4 | 155.5 | 48.5 |
| | 80 | 147.0 | 141.5 | 153.5 | 125.6 | 165.8 | 93.7 | 138.7 | 134.9 | 144.5 | 119.9 | 156.2 | 88.8 |
| | 85 | 153.7 | 151.8 | 157.9 | 142.1 | 166.4 | 121.0 | 145.2 | 144.8 | 149.0 | 135.7 | 156.8 | 115.4 |
| | 90 | 160.7 | 160.3 | 163.6 | 154.1 | 169.7 | 139.7 | 152.0 | 152.0 | 154.5 | 147.2 | 160.0 | 133.5 |
| 6000 | 75 | 145.8 | 134.8 | 154.6 | 108.6 | 167.3 | 59.5 | 137.0 | 128.2 | 145.1 | 103.0 | 157.1 | 55.0 |
| | 80 | 152.2 | 149.2 | 157.6 | 133.2 | 168.7 | 101.2 | 143.4 | 142.0 | 148.2 | 126.9 | 158.6 | 95.8 |
| | 85 | 159.4 | 159.4 | 162.7 | 150.1 | 170.2 | 128.9 | 150.4 | 150.4 | 153.3 | 143.2 | 160.1 | 122.7 |
| | 90 | 166.8 | 166.8 | 169.0 | 162.6 | 174.1 | 148.1 | 157.6 | 157.6 | 159.3 | 155.1 | 164.0 | 141.3 |
| 7000 | 75 | 149.2 | 140.5 | 156.8 | 114.2 | 168.3 | 65.0 | 140.0 | 133.4 | 146.9 | 108.1 | 157.6 | 59.9 |
| | 80 | 156.3 | 155.3 | 160.7 | 139.3 | 170.6 | 107.2 | 147.0 | 147.0 | 150.8 | 132.4 | 160.0 | 101.2 |
| | 85 | 164.0 | 164.0 | 166.5 | 156.7 | 172.9 | 135.4 | 154.6 | 154.6 | 156.5 | 149.1 | 162.3 | 128.6 |
| | 90 | 171.8 | 171.8 | 173.2 | 169.5 | 177.5 | 155.0 | 162.1 | 162.1 | 163.1 | 161.4 | 166.8 | 147.6 |
| 8000 | 75 | 151.6 | 144.7 | 158.0 | 118.3 | 169.0 | 69.0 | 141.9 | 137.0 | 147.5 | 111.6 | 158.0 | 63.4 |
| | 80 | 159.4 | 159.4 | 162.7 | 143.9 | 171.4 | 111.7 | 149.6 | 149.6 | 152.2 | 136.4 | 160.3 | 105.1 |
| | 85 | 167.6 | 167.6 | 169.1 | 161.6 | 174.5 | 140.3 | 157.6 | 157.6 | 158.7 | 153.5 | 163.5 | 132.9 |
| | 90 | 175.7 | 175.7 | 176.4 | 174.9 | 179.8 | 160.3 | 165.5 | 165.5 | 165.7 | 165.7 | 168.6 | 152.3 |
| 8750 | 75 | 152.7 | 146.8 | 158.1 | 120.4 | 171.3 | 71.0 | 142.6 | 138.7 | 147.9 | 113.2 | 159.6 | 64.9 |
| | 80 | 161.0 | 161.0 | 163.4 | 146.3 | 172.0 | 114.0 | 150.8 | 150.8 | 152.7 | 138.3 | 161.0 | 107.0 |
| | 85 | 169.5 | 169.5 | 170.4 | 164.3 | 175.1 | 142.9 | 159.2 | 159.2 | 159.6 | 155.8 | 163.6 | 135.1 |
| | 90 | 178.0 | 178.0 | 178.0 | 177.9 | 180.8 | 163.3 | 166.0 | 167.4 | 167.0 | 167.0 | 169.3 | 154.9 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 4000, 5000, 6000, and 7000 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 38. Gross cooling capacities 25 tons three phase high efficiency T/YH*300G3,4,W (stage 3)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 4000 | 75 | 188.9 | 150.3 | 205.8 | 121.4 | 226.6 | 71.4 | 179.7 | 145.2 | 195.3 | 117.2 | 214.8 | 68.3 |
| | 80 | 193.3 | 167.2 | 208.8 | 147.0 | 228.3 | 111.8 | 184.1 | 161.3 | 198.4 | 142.0 | 216.6 | 107.6 |
| | 85 | 199.5 | 180.7 | 211.8 | 165.8 | 230.0 | 140.0 | 190.3 | 174.2 | 201.4 | 160.0 | 218.4 | 135.0 |
| | 90 | 207.0 | 192.0 | 217.1 | 180.3 | 231.7 | 160.6 | 197.5 | 185.0 | 206.7 | 174.0 | 220.2 | 154.9 |
| 5000 | 75 | 199.5 | 162.2 | 218.5 | 131.4 | 234.4 | 79.3 | 189.4 | 156.2 | 206.9 | 126.4 | 221.8 | 75.4 |
| | 80 | 204.9 | 180.5 | 219.0 | 158.8 | 237.2 | 121.8 | 194.9 | 173.8 | 207.8 | 153.0 | 224.7 | 116.9 |
| | 85 | 212.0 | 195.3 | 223.1 | 179.1 | 240.0 | 151.8 | 202.0 | 188.0 | 211.9 | 172.5 | 227.6 | 146.0 |
| | 90 | 220.2 | 207.7 | 229.3 | 194.9 | 242.7 | 173.9 | 209.9 | 199.9 | 218.0 | 187.7 | 230.4 | 167.4 |
| 6000 | 75 | 208.4 | 172.8 | 225.7 | 140.2 | 247.8 | 86.1 | 197.5 | 166.0 | 213.4 | 134.4 | 234.0 | 81.4 |
| | 80 | 214.8 | 192.7 | 227.6 | 169.4 | 248.1 | 130.7 | 204.1 | 185.1 | 215.6 | 162.7 | 234.6 | 124.9 |
| | 85 | 222.8 | 208.7 | 232.7 | 191.2 | 248.3 | 162.4 | 212.0 | 200.6 | 220.8 | 183.8 | 235.1 | 155.8 |
| | 90 | 231.7 | 222.2 | 239.8 | 208.3 | 252.1 | 186.0 | 220.6 | 213.6 | 227.8 | 200.3 | 239.0 | 178.7 |
| 7000 | 75 | 215.6 | 182.2 | 231.3 | 147.8 | 251.9 | 91.6 | 204.0 | 174.6 | 218.2 | 141.2 | 237.3 | 86.1 |
| | 80 | 223.2 | 203.6 | 234.5 | 178.8 | 253.4 | 138.3 | 211.6 | 195.2 | 221.7 | 171.3 | 239.1 | 131.7 |
| | 85 | 232.0 | 220.9 | 240.7 | 202.1 | 255.0 | 171.8 | 220.4 | 211.9 | 228.0 | 193.8 | 241.0 | 164.4 |
| | 90 | 241.6 | 235.5 | 248.7 | 220.5 | 259.9 | 197.0 | 229.7 | 226.1 | 235.9 | 211.7 | 246.0 | 188.8 |
| 8000 | 75 | 221.2 | 190.4 | 235.3 | 154.2 | 254.3 | 96.0 | 208.8 | 181.9 | 221.3 | 146.7 | 238.9 | 89.6 |
| | 80 | 229.8 | 213.3 | 239.8 | 187.0 | 257.1 | 144.7 | 217.5 | 204.1 | 226.2 | 178.6 | 242.0 | 137.3 |
| | 85 | 239.6 | 231.8 | 247.1 | 211.8 | 260.0 | 180.0 | 227.1 | 222.1 | 233.5 | 202.7 | 245.2 | 171.7 |
| | 90 | 249.9 | 247.6 | 255.9 | 231.5 | 266.0 | 206.7 | 237.2 | 237.2 | 242.3 | 221.8 | 251.3 | 197.7 |
| 8750 | 75 | 224.3 | 195.7 | 237.2 | 158.2 | 255.0 | 98.4 | 211.3 | 186.6 | 222.6 | 150.1 | 239.0 | 91.4 |
| | 80 | 233.7 | 219.7 | 242.7 | 192.3 | 258.9 | 148.8 | 220.8 | 209.9 | 228.5 | 183.3 | 243.1 | 140.7 |
| | 85 | 244.1 | 239.3 | 250.8 | 218.2 | 262.7 | 185.4 | 231.1 | 228.9 | 236.6 | 208.5 | 247.3 | 176.5 |
| | 90 | 255.0 | 255.0 | 260.3 | 238.9 | 269.5 | 213.2 | 241.7 | 241.7 | 246.1 | 228.6 | 254.2 | 203.5 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 4000, 5000, 6000, and 7000 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 39. Gross cooling capacities 25 tons three phase high efficiency T/YH*300G3,4,W (full load)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85 | | | | | | 95 | | | | | | 105 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 5000 | 75 | 244.4 | 192.5 | 271.7 | 152.0 | 293.2 | 82.9 | 232.4 | 184.9 | 257.9 | 146.3 | 278.4 | 79.2 | 219.4 | 176.7 | 243.2 | 139.9 | 262.5 | 74.8 |
| | 80 | 250.0 | 215.3 | 270.3 | 187.5 | 295.4 | 139.2 | 238.0 | 206.6 | 256.8 | 180.3 | 280.5 | 133.8 | 225.0 | 197.3 | 242.2 | 172.5 | 264.5 | 127.7 |
| | 85 | 258.5 | 233.2 | 274.2 | 213.2 | 297.6 | 178.4 | 246.2 | 223.6 | 260.6 | 204.8 | 282.6 | 171.4 | 232.8 | 213.3 | 246.0 | 195.8 | 266.5 | 163.9 |
| | 90 | 268.6 | 248.1 | 281.3 | 232.8 | 299.8 | 206.6 | 255.9 | 237.7 | 267.4 | 223.5 | 284.7 | 198.6 | 242.1 | 226.7 | 252.6 | 213.6 | 268.6 | 189.9 |
| 6000 | 75 | 255.4 | 206.3 | 281.1 | 164.5 | 301.6 | 93.9 | 242.7 | 198.1 | 266.6 | 158.1 | 286.0 | 89.5 | 228.9 | 189.1 | 251.1 | 150.9 | 269.3 | 84.3 |
| | 80 | 262.0 | 230.2 | 280.9 | 201.3 | 304.7 | 151.7 | 249.2 | 220.8 | 266.6 | 193.4 | 289.1 | 145.6 | 235.5 | 210.7 | 251.4 | 184.8 | 272.3 | 138.7 |
| | 85 | 271.2 | 249.0 | 285.7 | 228.0 | 307.8 | 192.1 | 258.2 | 238.7 | 271.4 | 219.0 | 292.1 | 184.5 | 244.1 | 227.7 | 256.1 | 209.2 | 275.3 | 176.2 |
| | 90 | 282.0 | 264.7 | 293.6 | 248.6 | 311.0 | 221.4 | 268.5 | 253.6 | 279.0 | 238.6 | 295.1 | 212.7 | 253.9 | 241.8 | 263.4 | 227.9 | 278.3 | 203.3 |
| 7000 | 75 | 265.0 | 218.8 | 289.1 | 175.7 | 308.5 | 103.5 | 251.6 | 209.8 | 273.9 | 168.5 | 292.2 | 98.3 | 237.1 | 200.1 | 257.7 | 160.6 | 274.8 | 92.5 |
| | 80 | 272.6 | 243.7 | 290.1 | 213.7 | 312.6 | 162.9 | 259.1 | 233.6 | 275.1 | 205.1 | 296.2 | 156.0 | 244.6 | 222.8 | 259.1 | 195.8 | 278.8 | 148.4 |
| | 85 | 282.6 | 263.5 | 295.9 | 241.5 | 316.7 | 204.5 | 268.8 | 252.4 | 280.9 | 231.7 | 300.2 | 196.1 | 254.0 | 240.6 | 264.8 | 221.2 | 282.7 | 187.1 |
| | 90 | 293.9 | 279.9 | 304.6 | 263.0 | 320.8 | 234.9 | 279.7 | 268.1 | 289.2 | 252.2 | 304.2 | 225.4 | 264.4 | 255.6 | 272.9 | 240.8 | 286.7 | 215.3 |
| 8000 | 75 | 273.3 | 229.9 | 295.7 | 185.4 | 324.1 | 111.8 | 259.1 | 220.1 | 279.8 | 177.5 | 306.4 | 105.9 | 243.9 | 209.7 | 262.8 | 168.9 | 287.8 | 99.3 |
| | 80 | 281.8 | 255.9 | 298.0 | 224.7 | 324.2 | 172.6 | 267.6 | 245.0 | 282.2 | 215.4 | 306.7 | 165.0 | 252.3 | 233.5 | 265.5 | 205.3 | 288.3 | 156.6 |
| | 85 | 292.5 | 276.6 | 304.7 | 253.7 | 324.2 | 215.6 | 278.0 | 264.7 | 288.9 | 243.1 | 307.0 | 206.4 | 262.5 | 252.2 | 272.1 | 231.9 | 288.7 | 196.7 |
| | 90 | 304.5 | 293.8 | 314.1 | 276.0 | 329.2 | 247.0 | 289.5 | 281.2 | 298.1 | 264.5 | 311.9 | 236.8 | 273.5 | 268.0 | 281.0 | 252.4 | 293.6 | 225.9 |
| 9000 | 75 | 280.1 | 239.6 | 301.0 | 193.8 | 327.8 | 118.7 | 265.2 | 229.1 | 284.3 | 185.2 | 309.4 | 112.0 | 249.3 | 218.0 | 266.6 | 175.8 | 290.0 | 104.7 |
| | 80 | 289.6 | 266.7 | 304.4 | 234.4 | 329.1 | 181.0 | 274.7 | 255.1 | 288.0 | 224.3 | 310.9 | 172.6 | 258.7 | 242.8 | 270.5 | 213.5 | 291.7 | 163.6 |
| | 85 | 301.1 | 288.3 | 312.1 | 264.4 | 330.3 | 225.2 | 285.9 | 275.7 | 295.6 | 253.1 | 312.3 | 215.4 | 269.6 | 262.5 | 278.1 | 241.2 | 293.3 | 204.9 |
| | 90 | 313.7 | 306.3 | 322.3 | 287.7 | 336.3 | 257.8 | 297.9 | 293.0 | 305.5 | 275.5 | 318.3 | 246.8 | 281.2 | 279.0 | 287.7 | 262.6 | 299.2 | 235.1 |
| 10000 | 75 | 285.6 | 247.9 | 304.9 | 200.8 | 330.2 | 124.2 | 270.0 | 236.7 | 287.4 | 191.4 | 311.0 | 116.8 | 253.3 | 224.8 | 269.0 | 181.3 | 290.9 | 108.7 |
| | 80 | 296.1 | 276.1 | 309.5 | 242.7 | 332.6 | 188.0 | 280.4 | 263.8 | 292.3 | 231.9 | 313.7 | 178.9 | 263.6 | 250.7 | 274.1 | 220.3 | 293.7 | 169.1 |
| | 85 | 308.3 | 298.6 | 318.2 | 273.8 | 335.0 | 233.5 | 292.3 | 285.3 | 300.9 | 261.7 | 316.3 | 222.9 | 275.3 | 271.3 | 282.6 | 249.0 | 296.6 | 211.7 |
| | 90 | 321.4 | 317.4 | 329.1 | 298.0 | 342.0 | 267.1 | 305.0 | 303.3 | 311.6 | 285.0 | 323.2 | 255.4 | 287.5 | 287.5 | 293.0 | 271.4 | 303.4 | 243.0 |
| 11000 | 75 | 289.7 | 254.9 | 307.3 | 206.5 | 331.1 | 128.3 | 273.3 | 243.0 | 289.2 | 196.3 | 311.2 | 120.2 | 255.9 | 230.3 | 270.0 | 185.5 | 291.5 | 111.3 |
| | 80 | 301.1 | 284.2 | 313.2 | 249.6 | 334.7 | 193.7 | 284.7 | 271.1 | 295.2 | 238.0 | 315.1 | 183.8 | 267.2 | 257.3 | 276.3 | 225.8 | 294.4 | 173.2 |
| | 85 | 314.1 | 307.6 | 322.8 | 281.8 | 338.3 | 240.4 | 297.4 | 293.5 | 304.8 | 269.0 | 318.9 | 229.1 | 279.6 | 278.8 | 285.8 | 255.6 | 298.4 | 217.1 |
| | 90 | 327.9 | 327.1 | 334.5 | 306.9 | 346.3 | 275.1 | 310.7 | 310.7 | 316.3 | 293.2 | 326.8 | 262.7 | 292.5 | 292.5 | 297.0 | 278.8 | 306.2 | 249.5 |

**Table 39. Gross cooling capacities 25 tons three phase high efficiency T/YH*300G3,4,W (full load) (continued)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 115 | | | | | | 120 | | | | | | 125 | | | | | |
| | | Entering Wet Bulb | | | | | | | | | | | | | | | | | |
| | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 5000 | 75 | 205.4 | 167.9 | 227.4 | 132.8 | 245.5 | 69.7 | 198.0 | 163.2 | 219.2 | 129.0 | 236.7 | 66.9 | 190.4 | 158.3 | 210.7 | 125.0 | 227.6 | 64.0 |
| | 80 | 210.9 | 187.2 | 226.7 | 164.0 | 247.5 | 120.9 | 203.5 | 182.0 | 218.5 | 159.5 | 238.6 | 117.2 | 195.9 | 176.5 | 210.1 | 154.8 | 229.5 | 113.4 |
| | 85 | 218.5 | 202.3 | 230.4 | 186.2 | 249.5 | 155.7 | 211.0 | 196.6 | 222.2 | 181.1 | 240.6 | 151.3 | 203.2 | 190.7 | 213.8 | 175.8 | 231.4 | 146.8 |
| | 90 | 227.3 | 215.0 | 236.7 | 202.9 | 251.5 | 180.5 | 219.5 | 208.8 | 228.4 | 197.4 | 242.5 | 175.5 | 211.5 | 202.5 | 219.8 | 191.6 | 233.4 | 170.4 |
| 6000 | 75 | 214.2 | 179.5 | 234.6 | 143.1 | 251.7 | 78.5 | 206.5 | 174.4 | 226.0 | 138.9 | 242.5 | 75.3 | 198.5 | 169.2 | 217.1 | 134.6 | 233.0 | 72.0 |
| | 80 | 220.7 | 199.9 | 235.1 | 175.6 | 254.6 | 131.2 | 212.9 | 194.3 | 226.6 | 170.7 | 245.4 | 127.1 | 204.9 | 188.5 | 217.8 | 165.6 | 235.9 | 122.9 |
| | 85 | 229.0 | 216.0 | 239.7 | 198.8 | 257.5 | 167.2 | 221.1 | 209.8 | 231.2 | 193.3 | 248.3 | 162.5 | 213.0 | 203.6 | 222.4 | 187.7 | 238.8 | 157.6 |
| | 90 | 238.4 | 229.3 | 246.8 | 216.5 | 260.5 | 193.1 | 230.3 | 222.9 | 238.1 | 210.6 | 251.2 | 187.8 | 221.9 | 216.2 | 229.2 | 204.5 | 241.6 | 182.3 |
| 7000 | 75 | 221.7 | 189.7 | 240.4 | 152.0 | 256.4 | 85.9 | 213.6 | 184.3 | 231.5 | 147.5 | 246.8 | 82.4 | 205.2 | 178.7 | 222.2 | 142.8 | 237.0 | 78.7 |
| | 80 | 229.1 | 211.3 | 242.1 | 185.8 | 260.3 | 140.1 | 220.9 | 205.2 | 233.2 | 180.5 | 250.7 | 135.7 | 212.6 | 199.1 | 224.1 | 175.1 | 240.8 | 131.1 |
| | 85 | 238.2 | 228.2 | 247.7 | 210.1 | 264.2 | 177.4 | 229.9 | 221.7 | 238.8 | 204.3 | 254.6 | 172.3 | 221.4 | 215.1 | 229.6 | 198.2 | 244.7 | 167.0 |
| | 90 | 248.2 | 242.4 | 255.6 | 228.7 | 268.1 | 204.4 | 239.7 | 235.5 | 246.5 | 222.4 | 258.4 | 198.7 | 230.9 | 228.5 | 237.2 | 215.9 | 248.5 | 192.8 |
| 8000 | 75 | 227.7 | 198.6 | 244.9 | 159.6 | 268.2 | 92.0 | 219.2 | 192.8 | 235.5 | 154.6 | 258.0 | 88.1 | 210.5 | 186.8 | 225.9 | 149.6 | 247.5 | 84.0 |
| | 80 | 236.1 | 221.2 | 247.7 | 194.6 | 268.8 | 147.6 | 227.6 | 214.8 | 238.5 | 189.0 | 258.7 | 142.8 | 218.8 | 208.3 | 229.0 | 183.2 | 248.4 | 137.9 |
| | 85 | 245.9 | 239.0 | 254.3 | 220.0 | 269.5 | 186.2 | 237.3 | 232.2 | 245.0 | 213.8 | 259.5 | 180.8 | 228.4 | 225.2 | 235.5 | 207.4 | 249.2 | 175.1 |
| | 90 | 256.5 | 254.0 | 262.9 | 239.5 | 274.3 | 214.3 | 247.7 | 246.8 | 253.5 | 232.9 | 264.3 | 208.2 | 238.5 | 238.5 | 243.9 | 226.0 | 254.0 | 202.0 |
| 9000 | 75 | 232.4 | 206.1 | 247.9 | 165.7 | 269.7 | 96.6 | 223.5 | 200.0 | 238.2 | 160.5 | 259.1 | 92.4 | 214.4 | 193.6 | 228.2 | 155.0 | 248.3 | 87.9 |
| | 80 | 241.7 | 229.8 | 252.0 | 202.0 | 271.5 | 153.8 | 232.8 | 223.0 | 242.4 | 196.0 | 261.0 | 148.6 | 223.7 | 216.1 | 232.5 | 189.9 | 250.3 | 143.3 |
| | 85 | 252.3 | 248.5 | 259.5 | 228.5 | 273.4 | 193.7 | 243.3 | 241.3 | 249.9 | 221.9 | 263.0 | 187.8 | 234.1 | 233.9 | 240.0 | 215.2 | 252.4 | 181.8 |
| | 90 | 263.5 | 263.5 | 268.9 | 249.0 | 279.2 | 222.8 | 254.3 | 254.3 | 259.1 | 241.9 | 268.8 | 216.4 | 244.8 | 244.8 | 249.1 | 234.7 | 258.1 | 209.8 |
| 10000 | 75 | 235.6 | 212.3 | 249.6 | 170.5 | 269.8 | 99.9 | 226.4 | 205.7 | 239.5 | 164.9 | 260.5 | 95.3 | 217.0 | 199.0 | 229.2 | 159.1 | 249.2 | 90.5 |
| | 80 | 245.9 | 237.0 | 254.9 | 208.1 | 272.8 | 158.6 | 236.7 | 229.9 | 244.9 | 201.7 | 262.0 | 153.1 | 227.2 | 222.6 | 234.6 | 195.2 | 250.9 | 147.4 |
| | 85 | 257.3 | 256.6 | 263.3 | 235.7 | 275.9 | 199.7 | 247.9 | 247.9 | 253.3 | 228.7 | 265.1 | 193.5 | 238.3 | 238.3 | 243.1 | 221.6 | 254.1 | 187.1 |
| | 90 | 269.1 | 269.1 | 273.5 | 257.1 | 282.7 | 229.9 | 259.5 | 259.5 | 263.4 | 249.6 | 271.9 | 223.2 | 249.6 | 249.6 | 253.0 | 242.0 | 260.9 | 216.2 |
| 11000 | 75 | 237.5 | 217.0 | 249.9 | 174.0 | 271.0 | 101.8 | 228.0 | 210.1 | 240.5 | 167.9 | 261.3 | 96.8 | 218.1 | 203.0 | 229.8 | 161.7 | 252.3 | 91.6 |
| | 80 | 248.8 | 242.8 | 256.3 | 212.8 | 274.0 | 162.0 | 239.2 | 235.3 | 246.0 | 206.1 | 263.6 | 156.1 | 229.3 | 227.7 | 235.4 | 199.2 | 253.4 | 150.1 |
| | 85 | 260.9 | 260.9 | 265.8 | 241.4 | 277.0 | 204.4 | 251.2 | 251.2 | 255.4 | 234.1 | 265.9 | 197.9 | 241.2 | 241.2 | 244.8 | 226.6 | 254.5 | 191.1 |
| | 90 | 273.3 | 273.3 | 276.7 | 263.8 | 284.7 | 235.7 | 263.3 | 263.3 | 266.2 | 256.0 | 273.6 | 228.5 | 253.1 | 253.1 | 255.4 | 248.0 | 262.2 | 221.2 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 5000, 6000, and 7000 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

**Table 40. Gross cooling capacities 25 tons three phase dehumidification (hot gas reheat) option high efficiency T/YHD300G3,4,W (Digit 22 = B)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature 85 Entering Wet Bulb 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 95 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC | 105 61 MBh | 61 SHC | 67 MBh | 67 SHC | 73 MBh | 73 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5000 | 75 | 237.6 | 170.2 | 266.9 | 137.2 | 298.3 | 101.7 | 226.6 | 164.3 | 254.2 | 130.9 | 284.0 | 95.4 | 215.0 | 158.1 | 241.1 | 124.7 | 269.5 | 89.1 |
| | 80 | 237.8 | 197.2 | 266.6 | 164.6 | 298.3 | 130.4 | 226.8 | 191.3 | 254.2 | 158.7 | 284.5 | 124.4 | 215.2 | 184.8 | 241.2 | 152.8 | 269.5 | 117.9 |
| | 85 | 238.0 | 223.6 | 266.8 | 192.2 | 298.3 | 157.9 | 227.3 | 217.6 | 254.4 | 186.3 | 284.5 | 150.8 | 216.0 | 211.0 | 241.3 | 180.0 | 269.3 | 145.0 |
| | 90 | 244.4 | 244.4 | 267.0 | 219.3 | 298.3 | 185.7 | 235.5 | 235.5 | 254.6 | 213.1 | 284.2 | 179.6 | 226.0 | 225.9 | 241.7 | 206.9 | 269.5 | 173.2 |
| 6500 | 75 | 251.7 | 194.9 | 281.3 | 151.1 | 313.6 | 103.1 | 239.4 | 188.7 | 267.3 | 144.8 | 297.7 | 96.7 | 226.4 | 182.1 | 252.8 | 138.0 | 281.0 | 90.0 |
| | 80 | 252.2 | 230.1 | 281.5 | 185.9 | 313.9 | 142.8 | 239.8 | 223.7 | 267.7 | 179.8 | 299.0 | 134.7 | 227.0 | 216.7 | 253.1 | 173.7 | 281.5 | 129.6 |
| | 85 | 257.9 | 257.7 | 282.0 | 223.2 | 313.7 | 176.7 | 248.0 | 247.9 | 268.2 | 217.0 | 297.6 | 170.9 | 237.2 | 237.2 | 253.6 | 210.5 | 281.8 | 163.8 |
| | 90 | 272.5 | 272.4 | 282.5 | 258.1 | 314.3 | 213.5 | 262.0 | 261.9 | 268.8 | 251.7 | 298.7 | 207.5 | 250.8 | 250.7 | 254.4 | 244.6 | 282.3 | 201.7 |
| 8000 | 75 | 260.7 | 217.8 | 290.3 | 162.9 | 322.7 | 103.2 | 247.6 | 211.8 | 276.0 | 155.2 | 305.8 | 96.6 | 233.7 | 205.3 | 260.1 | 149.5 | 288.2 | 90.1 |
| | 80 | 262.3 | 259.5 | 291.1 | 207.3 | 323.0 | 153.7 | 249.7 | 247.8 | 276.3 | 201.2 | 306.2 | 146.9 | 238.4 | 236.1 | 260.8 | 195.0 | 288.7 | 139.6 |
| | 85 | 277.8 | 277.7 | 291.9 | 252.8 | 324.9 | 192.8 | 266.3 | 266.3 | 277.0 | 246.3 | 307.1 | 188.1 | 254.2 | 254.2 | 261.6 | 239.2 | 289.8 | 182.0 |
| | 90 | 293.7 | 293.6 | 293.9 | 292.8 | 324.5 | 241.9 | 281.8 | 281.8 | 280.5 | 277.0 | 307.8 | 235.5 | 269.1 | 269.1 | 269.3 | 268.3 | 290.6 | 229.1 |
| 9000 | 75 | 265.2 | 233.5 | 294.9 | 170.4 | 326.8 | 103.2 | 251.5 | 226.7 | 279.5 | 163.8 | 309.5 | 97.1 | 237.2 | 219.2 | 263.4 | 156.9 | 291.4 | 90.9 |
| | 80 | 269.5 | 264.6 | 294.7 | 223.9 | 328.3 | 159.2 | 259.7 | 259.5 | 280.4 | 215.9 | 310.2 | 152.6 | 247.7 | 247.6 | 264.4 | 209.5 | 292.4 | 145.4 |
| | 85 | 288.2 | 288.1 | 296.6 | 271.4 | 328.6 | 206.7 | 276.1 | 275.9 | 281.4 | 264.7 | 311.4 | 201.1 | 263.2 | 263.2 | 265.9 | 256.5 | 293.6 | 196.0 |
| | 90 | 302.2 | 301.5 | 303.9 | 299.6 | 329.4 | 260.3 | 292.3 | 292.2 | 292.9 | 292.7 | 311.8 | 255.6 | 278.9 | 278.9 | 279.6 | 279.5 | 294.5 | 248.5 |
| 10000 | 75 | 268.8 | 247.3 | 298.4 | 178.1 | 330.1 | 104.0 | 254.7 | 240.1 | 282.6 | 171.2 | 312.4 | 98.0 | 240.0 | 233.0 | 266.2 | 164.6 | 293.6 | 91.6 |
| | 80 | 279.8 | 279.8 | 299.5 | 236.4 | 331.3 | 165.7 | 267.6 | 267.5 | 284.2 | 228.6 | 313.0 | 159.1 | 254.0 | 254.5 | 267.3 | 223.1 | 295.4 | 151.0 |
| | 85 | 297.2 | 297.2 | 300.7 | 289.4 | 332.4 | 221.0 | 284.4 | 284.3 | 285.0 | 281.9 | 314.7 | 215.8 | 270.9 | 270.7 | 269.0 | 265.0 | 296.6 | 209.8 |
| | 90 | 315.0 | 315.0 | 315.6 | 315.6 | 333.5 | 279.6 | 301.5 | 301.5 | 302.1 | 301.9 | 316.4 | 271.6 | 287.3 | 287.2 | 287.9 | 287.6 | 297.7 | 265.0 |
| 10500 | 75 | 270.3 | 254.1 | 300.1 | 181.8 | 332.2 | 103.2 | 256.1 | 246.9 | 283.8 | 175.0 | 313.4 | 98.3 | 241.2 | 239.6 | 267.4 | 168.8 | 294.6 | 91.9 |
| | 80 | 283.5 | 283.4 | 301.2 | 243.4 | 332.8 | 168.0 | 271.0 | 270.7 | 285.1 | 236.6 | 314.6 | 149.6 | 257.8 | 257.6 | 268.5 | 229.6 | 296.6 | 153.9 |
| | 85 | 301.2 | 301.2 | 302.5 | 297.8 | 334.1 | 228.5 | 287.5 | 287.2 | 286.5 | 283.2 | 316.3 | 222.6 | 274.3 | 274.2 | 271.3 | 263.2 | 297.9 | 216.4 |
| | 90 | 319.3 | 319.3 | 320.0 | 319.8 | 335.2 | 288.2 | 305.5 | 305.3 | 306.2 | 305.9 | 317.5 | 280.7 | 291.0 | 290.9 | 291.6 | 291.5 | 299.1 | 272.8 |
| 11000 | 75 | 271.7 | 260.7 | 301.5 | 185.8 | 332.6 | 105.1 | 257.3 | 253.5 | 285.1 | 179.1 | 314.5 | 98.9 | 242.4 | 239.2 | 268.5 | 173.1 | 295.9 | 92.6 |
| | 80 | 287.0 | 286.7 | 302.6 | 250.0 | 334.2 | 170.7 | 273.9 | 273.7 | 286.4 | 243.2 | 316.9 | 162.5 | 260.6 | 260.6 | 269.7 | 235.9 | 297.6 | 156.7 |
| | 85 | 305.1 | 304.9 | 304.5 | 304.2 | 335.6 | 235.1 | 291.3 | 291.2 | 288.4 | 280.2 | 317.6 | 229.0 | 277.4 | 277.4 | 274.0 | 262.8 | 299.1 | 222.8 |
| | 90 | 323.4 | 323.3 | 324.1 | 323.8 | 336.7 | 295.8 | 309.2 | 309.1 | 309.9 | 309.7 | 318.9 | 288.2 | 294.5 | 294.5 | 295.1 | 295.0 | 300.4 | 280.4 |

**Table 40. Gross cooling capacities 25 tons three phase dehumidification (hot gas reheat) option high efficiency T/YHD300G3,4,W (Digit 22 = B) (continued)**

| Air Flow cfm[a] | Ent DB (°F) | Ambient Temperature 115 | | | | | | 120 | | | | | | 125 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Entering Wet Bulb 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC | MBh | SHC |
| 5000 | 75 | 202.6 | 151.6 | 227.5 | 118.5 | 253.9 | 82.4 | 196.1 | 148.2 | 220.0 | 114.8 | 245.8 | 79.0 | 189.5 | 144.9 | 212.3 | 111.2 | 237.3 | 75.6 |
| | 80 | 202.9 | 178.2 | 227.2 | 145.7 | 253.8 | 111.3 | 196.5 | 175.0 | 220.0 | 142.3 | 245.6 | 107.9 | 189.8 | 171.5 | 212.6 | 138.9 | 237.3 | 104.5 |
| | 85 | 204.6 | 203.6 | 227.5 | 173.3 | 253.9 | 138.4 | 199.2 | 199.2 | 220.4 | 170.0 | 245.9 | 135.1 | 193.9 | 193.9 | 213.0 | 166.6 | 237.6 | 131.8 |
| | 90 | 215.9 | 215.9 | 227.9 | 200.1 | 254.2 | 166.7 | 210.6 | 210.6 | 220.7 | 196.6 | 246.2 | 163.4 | 205.0 | 204.9 | 213.3 | 193.2 | 237.9 | 160.1 |
| 6500 | 75 | 212.7 | 175.3 | 237.9 | 130.0 | 264.1 | 83.1 | 205.6 | 171.9 | 229.7 | 127.2 | 255.2 | 79.7 | 198.4 | 168.5 | 221.5 | 123.5 | 246.0 | 76.1 |
| | 80 | 214.0 | 209.1 | 238.0 | 167.4 | 264.3 | 122.8 | 207.2 | 205.4 | 230.1 | 164.0 | 255.6 | 119.4 | 200.5 | 199.9 | 222.1 | 160.6 | 246.4 | 116.0 |
| | 85 | 225.8 | 225.7 | 238.7 | 203.5 | 265.1 | 157.2 | 219.7 | 219.6 | 230.7 | 199.9 | 256.2 | 153.7 | 213.5 | 213.5 | 222.7 | 196.3 | 247.2 | 150.4 |
| | 90 | 238.9 | 238.9 | 240.2 | 236.6 | 265.6 | 195.5 | 232.7 | 232.6 | 232.7 | 232.0 | 256.8 | 192.1 | 226.1 | 226.1 | 226.1 | 225.3 | 247.8 | 188.5 |
| 8000 | 75 | 219.2 | 198.0 | 244.4 | 141.6 | 269.9 | 83.7 | 211.7 | 194.1 | 235.6 | 139.0 | 260.8 | 80.6 | 204.1 | 190.2 | 227.1 | 135.5 | 251.1 | 77.2 |
| | 80 | 227.1 | 227.0 | 244.7 | 188.9 | 271.1 | 132.5 | 220.8 | 220.8 | 236.4 | 185.6 | 261.6 | 128.7 | 214.1 | 214.1 | 227.9 | 182.0 | 252.2 | 125.1 |
| | 85 | 241.4 | 241.3 | 245.6 | 232.1 | 271.9 | 176.3 | 234.7 | 234.6 | 237.3 | 228.3 | 262.7 | 173.5 | 227.8 | 227.7 | 228.8 | 224.1 | 253.2 | 170.8 |
| | 90 | 255.9 | 255.8 | 256.4 | 256.2 | 272.7 | 223.1 | 248.8 | 248.8 | 249.4 | 249.3 | 263.5 | 219.9 | 241.6 | 241.6 | 242.1 | 242.1 | 254.1 | 216.4 |
| 9000 | 75 | 222.3 | 211.8 | 247.1 | 150.1 | 272.7 | 84.4 | 214.6 | 208.1 | 238.5 | 146.8 | 263.2 | 81.0 | 206.8 | 204.1 | 229.7 | 143.2 | 253.2 | 77.4 |
| | 80 | 234.7 | 234.5 | 247.9 | 202.7 | 274.0 | 137.8 | 228.0 | 227.7 | 239.4 | 199.2 | 265.6 | 132.5 | 220.9 | 220.7 | 230.7 | 195.4 | 255.1 | 130.9 |
| | 85 | 249.7 | 249.5 | 249.2 | 248.6 | 275.2 | 190.4 | 242.6 | 242.5 | 241.3 | 238.4 | 265.8 | 187.3 | 235.2 | 235.1 | 233.6 | 228.6 | 256.1 | 184.1 |
| | 90 | 264.8 | 264.8 | 265.3 | 265.1 | 276.2 | 241.1 | 257.5 | 257.3 | 258.0 | 257.7 | 266.8 | 237.2 | 249.8 | 249.7 | 250.3 | 250.1 | 257.1 | 233.0 |
| 10000 | 75 | 224.8 | 224.5 | 249.4 | 158.3 | 274.8 | 84.8 | 217.2 | 214.2 | 240.6 | 155.1 | 265.0 | 81.9 | 209.8 | 204.0 | 231.7 | 152.2 | 254.7 | 80.2 |
| | 80 | 241.0 | 241.0 | 250.5 | 215.8 | 277.5 | 141.3 | 233.9 | 233.9 | 241.8 | 212.1 | 267.0 | 140.3 | 226.6 | 226.4 | 232.8 | 208.4 | 257.0 | 136.7 |
| | 85 | 256.6 | 256.6 | 254.1 | 246.2 | 277.8 | 203.4 | 249.2 | 249.2 | 247.5 | 240.9 | 268.3 | 200.1 | 241.5 | 241.4 | 241.8 | 241.5 | 258.3 | 196.6 |
| | 90 | 272.5 | 272.5 | 272.9 | 272.9 | 279.0 | 256.9 | 264.7 | 264.7 | 265.2 | 265.1 | 269.4 | 252.9 | 256.6 | 256.6 | 257.1 | 256.9 | 259.5 | 249.1 |
| 10500 | 75 | 226.2 | 222.1 | 250.4 | 162.6 | 275.7 | 85.3 | 218.8 | 211.8 | 241.5 | 159.9 | 265.6 | 83.7 | 211.7 | 204.3 | 232.6 | 157.1 | 255.4 | 82.4 |
| | 80 | 243.8 | 243.8 | 251.6 | 222.3 | 277.7 | 147.0 | 236.6 | 236.4 | 242.8 | 218.6 | 268.0 | 143.5 | 229.1 | 228.8 | 234.2 | 213.6 | 258.0 | 140.1 |
| | 85 | 259.7 | 259.7 | 258.1 | 251.8 | 279.0 | 209.7 | 252.1 | 251.9 | 252.5 | 252.2 | 269.3 | 206.4 | 244.3 | 244.1 | 244.7 | 244.3 | 259.3 | 203.0 |
| | 90 | 275.9 | 275.8 | 276.3 | 276.2 | 280.7 | 263.7 | 267.9 | 267.8 | 268.4 | 268.1 | 270.5 | 261.0 | 259.7 | 259.6 | 260.1 | 259.8 | 260.6 | 257.1 |
| 11000 | 75 | 227.7 | 219.7 | 251.2 | 167.7 | 276.4 | 87.2 | 220.8 | 212.4 | 242.4 | 164.9 | 266.3 | 86.0 | 214.6 | 210.1 | 233.3 | 161.8 | 256.1 | 84.1 |
| | 80 | 246.4 | 246.2 | 252.6 | 228.5 | 278.6 | 149.9 | 239.1 | 238.8 | 243.7 | 224.6 | 268.8 | 146.8 | 231.5 | 231.3 | 234.6 | 220.7 | 259.6 | 141.2 |
| | 85 | 262.6 | 262.4 | 263.0 | 262.6 | 280.5 | 214.9 | 254.8 | 254.6 | 255.2 | 254.9 | 270.2 | 212.8 | 246.9 | 246.7 | 247.2 | 246.9 | 260.2 | 209.1 |
| | 90 | 279.0 | 278.9 | 279.5 | 279.2 | 281.4 | 272.9 | 270.9 | 270.8 | 271.3 | 271.0 | 271.6 | 269.0 | 262.5 | 262.4 | 263.0 | 262.8 | 261.5 | 258.0 |

**Notes:**

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total Gross Capacity
3. SHC = Sensible Heat Capacity
4. *Indicates both downflow and horizontal units.

(a) For 5000, 6000, and 7000 cfm-Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

## Table 41. Evaporator fan performance - 12½ tons - TSD150G - standard refrigeration system downflow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive | | | | | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | |
| 4000 | - | - | 461 | 0.60 | 522 | 0.79 | 575 | 0.98 | 624 | 1.18 | 667 | 1.37 | 707 | 1.56 | 743 | 1.75 | 773 | 1.90 | 802 | 2.05 |
| 4500 | 410 | 0.51 | 485 | 0.74 | 545 | 0.95 | 598 | 1.17 | 645 | 1.39 | 688 | 1.60 | 728 | 1.82 | 765 | 2.04 | 800 | 2.25 | 833 | 2.47 |
| 5000 | 437 | 0.64 | 509 | 0.89 | 569 | 1.14 | 621 | 1.38 | 667 | 1.62 | 710 | 1.86 | 749 | 2.10 | 786 | 2.34 | 821 | 2.58 | 853 | 2.82 |
| 5500 | 465 | 0.79 | 535 | 1.08 | 593 | 1.35 | 644 | 1.62 | 690 | 1.88 | 732 | 2.14 | 771 | 2.41 | 807 | 2.67 | 842 | 2.94 | 874 | 3.20 |
| 6000 | 493 | 0.97 | 561 | 1.28 | 618 | 1.58 | 668 | 1.87 | 713 | 2.16 | 754 | 2.45 | 793 | 2.75 | 829 | 3.03 | 863 | 3.31 | 896[a] | 3.60 |
| | | | | | | | | | | | | | 3-hp Standard Motor and High Static Drive | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |
| 4000 | 826 | 2.17 | 856 | 2.33 | 880 | 2.47 | 902 | 2.60 | 923 | 2.72 | 944 | 2.84 | 963 | 2.96 | 982 | 3.08 | 1002 | 3.20 | 1021 | 3.32 |
| 4500 | 858 | 2.64 | 888 | 2.82 | 909 | 2.96 | 932 | 3.11 | 958 | 3.29 | 981 | 3.46 | 1000 | 3.59 | 1020 | 3.73 | 1038 | 3.87 | 1056 | 4.00 |
| 5000 | 885 | 3.06 | 916 | 3.31 | 941 | 3.51 | 963 | 3.69 | 991 | 3.89 | 1010 | 4.06 | 1029 | 4.22 | 1051 | 4.40 | 1074 | 4.60 | 1094 | 4.78 |
| 5500 | 906 | 3.46 | 936 | 3.73 | 965 | 4.00 | 993 | 4.26 | 1019 | 4.53 | 1040 | 4.73 | 1061 | 4.93 | 1087 | 5.15 | 1104 | 5.34 | 1122 | 5.52 |
| 6000 | 927 | 3.89 | 957 | 4.18 | 986 | 4.47 | 1014 | 4.76 | 1041 | 5.06 | 1066 | 5.34 | 1091 | 5.64 | - | - | - | - | - | - |
| | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.
8. For 380V/60 Hz units, the oversized motor is used as the standard motor. Refer to "Motor and Sheave/Fan Speed" tables to determine operating range.

(a) 5-hp Oversized Motor and Drive

## Table 42. Evaporator fan performance - 12½ tons - TSH150G - standard refrigeration system horizontal

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive | | | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | | 3 hp Standard Motor and High Static Drive | |
| 4000 | - | - | 494 | 0.80 | 558 | 1.02 | 613 | 1.23 | 662 | 1.44 | 707 | 1.64 | 749 | 1.84 | 787 | 2.04 | 824 | 2.24 | 851 | 2.40 |
| 4500 | - | - | 521 | 1.00 | 584 | 1.26 | 638 | 1.50 | 686 | 1.74 | 731 | 1.98 | 772 | 2.21 | 811 | 2.43 | 847 | 2.66 | 882 | 2.88 |
| 5000 | 475 | 0.92 | 549 | 1.24 | 610 | 1.53 | 663 | 1.80 | 711 | 2.08 | 756 | 2.34 | 797 | 2.61 | 835 | 2.86 | 871 | 3.12 | 905 | 3.37 |
| 5500 | 506 | 1.15 | 578 | 1.50 | 637 | 1.83 | 690 | 2.15 | 737 | 2.45 | 781 | 2.75 | 821 | 3.04 | 859 | 3.34 | 895 | 3.62 | 929 | 3.91 |
| 6000 | 538 | 1.42 | 607 | 1.81 | 666 | 2.18 | 717 | 2.53 | 764 | 2.87 | 807 | 3.20 | 846 | 3.52 | 884 | 3.85 | 920 | 4.17 | 953 | 4.48 |
| | | | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |
| 4000 | 882 | 2.63 | 909 | 2.80 | 935 | 2.99 | 961 | 3.19 | 991 | 3.42 | 1017 | 3.65 | 1043 | 3.88 | 1069 | 4.12 | 1093 | 4.35 | 1116 | 4.58 |
| 4500 | 915 | 3.10 | 941 | 3.27 | 968 | 3.53 | 994 | 3.75 | 1016 | 3.94 | 1042 | 4.18 | 1063 | 4.36 | 1090 | 4.62 | 1117 | 4.89 | 1139 | 5.13 |
| 5000 | 938 | 3.62 | 969 | 3.86 | 999 | 4.11 | 1029 | 4.36 | 1049 | 4.52 | 1074 | 4.82 | 1100 | 5.10 | 1118 | 5.28 | 1141 | 5.54 | 1162 | 5.77 |
| 5500 | 961 | 4.18 | 993 | 4.46 | 1022 | 4.73 | 1051 | 5.00 | 1080 | 5.28 | 1107 | 5.55 | - | - | - | - | - | - | - | - |
| 6000 | 986 | 4.79 | 1016 | 5.09 | 1046 | 5.40 | 1076 | 5.71 | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.
8. For 380V/60 Hz units, the oversized motor is used as the standard motor. Refer to "Motor and Sheave/Fan Speed" tables to determine operating range.

**Table 43. Evaporator fan performance - 12½ tons with gas heat - YSD150G - standard refrigeration system downflow**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | | | | | |
| 4000 | 511 | 0.75 | 559 | 0.92 | 601 | 1.08 | 639 | 1.24 | 673 | 1.40 | 706 | 1.56 | 736 | 1.71 | 763 | 1.85 | 793 | 2.00 | 816 | 2.12 |
| 4500 | 562 | 1.02 | 607 | 1.21 | 647 | 1.40 | 683 | 1.58 | 717 | 1.76 | 748 | 1.94 | 777 | 2.11 | 805 | 2.29 | 831 | 2.46 | 854 | 2.61 |
| 5000 | 614 | 1.35 | 656 | 1.56 | 694 | 1.77 | 729 | 1.98 | 761 | 2.18 | 791 | 2.38 | 820 | 2.57 | 847 | 2.77 | 873 | 2.97 | 898 | 3.17 |
| 5500 | 667 | 1.74 | 706 | 1.98 | 742 | 2.21 | 776 | 2.44 | 807 | 2.67 | 836 | 2.89 | 863 | 3.11 | 890 | 3.32 | 915 | 3.55 | 940 | 3.76 |
| 6000 | 720 | 2.21 | 757 | 2.48 | 791 | 2.73 | 823 | 2.98 | 853 | 3.23 | 881 | 3.47 | 908 | 3.72 | 934 | 3.96 | 959 | 4.20 | 982 | 4.43 |
| | | | | | 3-hp Standard Motor and High Static Drive | | | | | | 5-hp Oversized Motor and Drive | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |
| 4000 | 844 | 2.27 | 868 | 2.41 | 889 | 2.52 | 910 | 2.64 | 929 | 2.76 | 948 | 2.87 | 967 | 2.98 | 986 | 3.10 | 1003 | 3.21 | 1020 | 3.32 |
| 4500 | 883 | 2.78 | 905 | 2.93 | 926 | 3.07 | 951 | 3.24 | 973 | 3.40 | 993 | 3.54 | 1011 | 3.67 | 1028 | 3.79 | 1047 | 3.93 | 1064 | 4.06 |
| 5000 | 921 | 3.36 | 942 | 3.52 | 967 | 3.72 | 990 | 3.89 | 1009 | 4.05 | 1027 | 4.20 | 1051 | 4.39 | 1072 | 4.59 | 1091 | 4.75 | 1107 | 4.89 |
| 5500 | 962 | 3.97 | 985 | 4.19 | 1006 | 4.40 | 1027 | 4.60 | 1046 | 4.79 | 1069 | 5.00 | 1090 | 5.18 | 1108 | 5.37 | 1123 | 5.53 | 1144 | 5.72 |
| 6000 | 1005 | 4.67 | 1026 | 4.90 | 1048 | 5.14 | 1069 | 5.38 | 1089 | 5.61 | - | - | - | - | - | - | - | - | - | - |
| | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.
8. For 380V/60 Hz units, the oversized motor is used as the standard motor. Refer to "Motor and Sheave/Fan Speed" tables to determine operating range.

## Table 44. Evaporator fan performance - 12½ tons with gas heat - YSH150G - standard refrigeration system horizontal

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive | | | | 3-hp Standard Motor and Drive | | | | | | | | | | | | | | 3-hp Standard Motor and High Static Drive | |
| 4000 | 562 | 1.04 | 610 | 1.22 | 653 | 1.40 | 692 | 1.57 | 727 | 1.74 | 760 | 1.90 | 791 | 2.06 | 820 | 2.22 | 842 | 2.34 | 875 | 2.58 |
| 4500 | 619 | 1.42 | 665 | 1.63 | 705 | 1.84 | 742 | 2.03 | 776 | 2.23 | 808 | 2.42 | 838 | 2.60 | 866 | 2.78 | 893 | 2.95 | 920 | 3.14 |
| 5000 | 678 | 1.88 | 720 | 2.13 | 758 | 2.36 | 793 | 2.58 | 826 | 2.80 | 857 | 3.02 | 886 | 3.23 | 914 | 3.43 | 940 | 3.64 | 966 | 3.84 |
| 5500 | 737 | 2.45 | 776 | 2.72 | 813 | 2.98 | 846 | 3.23 | 877 | 3.48 | 907 | 3.72 | 935 | 3.96 | 963 | 4.19 | 988 | 4.42 | 1013 | 4.64 |
| 6000 | 796 | 3.12 | 834 | 3.42 | 868 | 3.71 | 900 | 3.99 | 930 | 4.26 | 959 | 4.53 | 986 | 4.79 | 1012 | 5.05 | 1037 | 5.31 | 1062 | 5.56 |
| | | | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |
| 4000 | 900 | 2.74 | 926 | 2.93 | 952 | 3.11 | 981 | 3.34 | 1008 | 3.56 | 1032 | 3.78 | 1057 | 4.01 | 1079 | 4.22 | 1102 | 4.45 | 1127 | 4.70 |
| 4500 | 939 | 3.26 | 967 | 3.53 | 992 | 3.74 | 1014 | 3.92 | 1037 | 4.13 | 1060 | 4.34 | 1085 | 4.57 | 1110 | 4.82 | 1134 | 5.07 | 1156 | 5.33 |
| 5000 | 990 | 4.03 | 1014 | 4.23 | 1035 | 4.41 | 1051 | 4.54 | 1079 | 4.89 | 1102 | 5.12 | 1121 | 5.31 | 1142 | 5.54 | - | - | - | - |
| 5500 | 1037 | 4.87 | 1060 | 5.08 | 1082 | 5.30 | 1104 | 5.52 | 1125 | 5.73 | - | - | - | - | - | - | - | - | - | - |
| 6000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.
8. For 380V/60 Hz units, the oversized motor is used as the standard motor. Refer to "Motor and Sheave/Fan Speed" tables to determine operating range.

## Table 45. Evaporator fan performance - 15 tons - TSD180G - standard refrigeration system downflow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | 3-hp Std Motor Drive | | | | | | | | | |
| 4800 | - | - | 452 | 0.89 | 490 | 1.05 | 526 | 1.21 | 558 | 1.37 | 588 | 1.54 | 619 | 1.72 | 649 | 1.91 | 678 | 2.11 | 706 | 2.32 |
| 5400 | 453 | 1.01 | 489 | 1.17 | 525 | 1.35 | 558 | 1.53 | 590 | 1.71 | 618 | 1.89 | 646 | 2.08 | 673 | 2.27 | 699 | 2.47 | 726 | 2.69 |
| 6000 | 495 | 1.35 | 528 | 1.52 | 560 | 1.71 | 592 | 1.91 | 622 | 2.11 | 651 | 2.31 | 677 | 2.51 | 702 | 2.72 | 726 | 2.93 | 750 | 3.14 |
| 6600 | 537 | 1.75 | 569 | 1.95 | 598 | 2.14 | 627 | 2.36 | 656 | 2.57 | 683 | 2.79 | 709 | 3.01 | 734 | 3.24 | 757 | 3.46 | 779 | 3.69 |
| 7200 | 580 | 2.23 | 610 | 2.45 | 637 | 2.66 | 664 | 2.88 | 690 | 3.11 | 717 | 3.35 | 742 | 3.59 | 766 | 3.83 | 788 | 4.07 | 811 | 4.32 |
| | | | | | | | | | | | | | | 5hp Oversized Motor and Std Drive | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Std Motor Drive | | | | 3HP Standard Motor and High Static Drive | | | | | | 5hp Oversized Motor and Std Drive | | | | | | | | | |
| 4800 | 734 | 2.53 | 760 | 2.74 | 785 | 2.95 | 809 | 3.17 | 832 | 3.38 | 855 | 3.60 | 876 | 3.81 | 897 | 4.03 | 918 | 4.25 | 939 | 4.48 |
| 5400 | 753 | 2.92 | 779 | 3.15 | 804 | 3.39 | 828 | 3.62 | 851 | 3.86 | 873 | 4.10 | 894 | 4.33 | 916 | 4.58 | 936 | 4.82 | 957 | 5.06 |
| 6000 | 775 | 3.37[a] | 798 | 3.60 | 822 | 3.85 | 846 | 4.11 | 870 | 4.37 | 891 | 4.63 | 914 | 4.90 | 934 | 5.15 | 955 | 5.42 | 975 | 5.69 |
| 6600 | 802 | 3.92 | 823 | 4.16 | 845 | 4.40 | 866 | 4.65 | 889 | 4.92 | 911 | 5.21 | 933 | 5.49 | 953 | 5.77 | 973 | 6.05 | 994 | 6.35 |
| 7200 | 832 | 4.57 | 852 | 4.81 | 872 | 5.06 | 893 | 5.32 | 913 | 5.59 | 933 | 5.86 | 952 | 6.13 | 973 | 6.44 | 993 | 6.74 | - | - |
| | 5hp Oversized Motor and Std Drive | | | | | | | | | | 7.5hp OS Motor and High Static Drive[b] | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 85, p. 115.
2. For High Evaporator Fan Speed (rpm), reference Table 86, p. 117.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 87, p. 117.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 3HP Standard Motor and High Static Drive
(b) 7.5HP high static oversized motor offering is field installed only.

## Table 46. Evaporator fan performance - 15 tons - TSH180G - standard refrigeration system horizontal flow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive | | | | | | | | | | 3-hp Std Motor Drive | | | | | | | | | |
| 4800 | - | - | - | - | 475 | 1.02 | 509 | 1.17 | 540 | 1.32 | 569 | 1.46 | 596 | 1.60 | 620 | 1.73 | 645 | 1.87 | 667 | 2.00 |
| 5400 | - | - | 474 | 1.17 | 509 | 1.32 | 541 | 1.49 | 571 | 1.66 | 599 | 1.82 | 625 | 1.98 | 650 | 2.14 | 673 | 2.30 | 695 | 2.45 |
| 6000 | 477 | 1.34 | 511 | 1.51 | 544 | 1.70 | 574 | 1.87 | 603 | 2.06 | 630 | 2.24 | 655 | 2.43 | 680 | 2.61 | 702 | 2.79 | 724 | 2.96 |
| 6600 | 518 | 1.74 | 549 | 1.94 | 580 | 2.13 | 609 | 2.33 | 635 | 2.52 | 661 | 2.72 | 686 | 2.93 | 710 | 3.14 | 732 | 3.33 | 754 | 3.54 |
| 7200 | 559 | 2.22 | 588 | 2.44 | 617 | 2.64 | 645 | 2.87 | 670 | 3.07 | 694 | 3.28 | 718 | 3.51 | 741 | 3.73 | 763 | 3.96 | 785 | 4.18 |
| | | | | | | | | | | | | | 5hp Oversized Mtr and Standard Drive | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Std Motor Drive | | | | | | | | 3HP Standard Motor and High Static Drive | | | | | | | | | | | |
| 4800 | 689 | 2.13 | 710 | 2.26 | 730 | 2.39 | 749 | 2.51 | 768 | 2.64 | 786 | 2.76 | 804 | 2.88 | 821 | 3.01 | 837 | 3.12 | 854 | 3.25 |
| 5400 | 717 | 2.60 | 737 | 2.75 | 758 | 2.90 | 776 | 3.04 | 795 | 3.19 | 813 | 3.33 | 830 | 3.47 | 848 | 3.62 | 864 | 3.75 | 881 | 3.90 |
| 6000 | 746 | 3.14 | 766 | 3.31 | 785 | 3.47 | 804 | 3.64 | 823 | 3.80 | 840 | 3.96 | 858 | 4.13 | 874 | 4.29 | 892 | 4.46 | 908 | 4.61 |
| 6600 | 775 | 3.73 | 795 | 3.92 | 814 | 4.11 | 833 | 4.30 | 851 | 4.49 | 868 | 4.67 | 886 | 4.86 | 902 | 5.03 | 919 | 5.22 | 935 | 5.39 |
| 7200 | 805 | 4.39 | 824 | 4.61 | 844 | 4.82 | 862 | 5.03 | 881 | 5.25 | 897 | 5.44 | 915 | 5.65 | 930 | 5.85 | 947 | 6.05 | 963 | 6.25 |
| | 5hp Oversized Motor and Std Drive | | | | | | | | | | | | | | 7.5hp OS Motor and High Static Drive[a] | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 85, p. 115.
2. For High Evaporator Fan Speed (rpm), reference Table 86, p. 117.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 87, p. 117.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 7.5HP high static oversized motor offering is field installed only.

## Table 47. Evaporator fan performance - 15 tons with gas heat - YSD180G - standard refrigeration system downflow

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | 3-hp Std Motor Drive | | | | | | | | | | | |
| 4800 | - | - | 467 | 0.95 | 504 | 1.11 | 538 | 1.27 | 571 | 1.44 | 603 | 1.62 | 633 | 1.80 | 663 | 2.01 | 692 | 2.21 | 720 | 2.42 |
| 5400 | 472 | 1.09 | 507 | 1.26 | 541 | 1.43 | 573 | 1.61 | 604 | 1.80 | 634 | 1.99 | 662 | 2.19 | 689 | 2.39 | 716 | 2.60 | 743 | 2.83 |
| 6000 | 516 | 1.46 | 549 | 1.64 | 580 | 1.83 | 610 | 2.03 | 639 | 2.23 | 667 | 2.43 | 693 | 2.64 | 719 | 2.86 | 743 | 3.08 | 768 | 3.30 |
| 6600 | 561 | 1.90 | 592 | 2.10 | 620 | 2.31 | 648 | 2.52 | 676 | 2.73 | 702 | 2.95 | 727 | 3.18 | 751 | 3.41 | 775 | 3.64 | 798 | 3.89 |
| 7200 | 606 | 2.42 | 635 | 2.64 | 662 | 2.86 | 688 | 3.10 | 713 | 3.32 | 739 | 3.56 | 763 | 3.80 | 785 | 4.04 | 808 | 4.29 | 830 | 4.55 |
| | | | | | | | | | | | 5hp Oversized Motor and Std Drive | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Std Motor Drive | | 3HP Standard Motor and High Static Drive | | | | | | 5hp Oversized Motor and Std Drive | | | | | | | | | | | |
| 4800 | 748 | 2.64 | 773 | 2.85 | 798 | 3.07 | 822 | 3.28 | 845 | 3.50 | 867 | 3.72 | 889 | 3.94 | 909 | 4.16 | 929 | 4.37 | 949 | 4.60 |
| 5400 | 769 | 3.07 | 794 | 3.30 | 820 | 3.54 | 843 | 3.78 | 866 | 4.02 | 887 | 4.25 | 909 | 4.50 | 930 | 4.74 | 950 | 4.98 | 970 | 5.23 |
| 6000 | 793 | 3.54 | 817 | 3.79 | 842 | 4.06 | 865 | 4.32 | 888 | 4.58 | 909 | 4.84 | 931 | 5.10 | 951 | 5.37 | 972 | 5.65 | 992 | 5.91 |
| 6600 | 820 | 4.12 | 843 | 4.38 | 865 | 4.63 | 886 | 4.89 | 909 | 5.18 | 931 | 5.47 | 952 | 5.76 | 973 | 6.05 | 992 | 6.33 | - | - |
| 7200 | 851 | 4.80 | 872 | 5.06 | 893 | 5.34 | 914 | 5.61 | 934 | 5.88 | 954 | 6.17 | 975 | 6.47 | - | - | - | - | - | - |
| | 5hp Oversized Motor and Std Drive | | | | | | | | 7.5hp OS Motor and High Static Drive[a] | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 85, p. 115.
2. For High Evaporator Fan Speed (rpm), reference Table 86, p. 117.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 87, p. 117.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 7.5HP high static oversized motor offering is field installed only.

## Table 48. Evaporator fan performance - 15 tons with gas heat - YSH180G - standard refrigeration system horizontal flow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | 3-hp Std Motor Drive | | | | | | | | | |
| 4800 | - | - | 453 | 0.94 | 490 | 1.09 | 521 | 1.23 | 550 | 1.37 | 577 | 1.50 | 602 | 1.63 | 626 | 1.76 | 648 | 1.89 | 669 | 2.01 |
| 5400 | 456 | 1.09 | 492 | 1.25 | 526 | 1.41 | 557 | 1.58 | 585 | 1.74 | 611 | 1.90 | 635 | 2.05 | 658 | 2.20 | 680 | 2.34 | 701 | 2.49 |
| 6000 | 500 | 1.46 | 531 | 1.63 | 563 | 1.81 | 593 | 1.99 | 620 | 2.18 | 645 | 2.36 | 669 | 2.53 | 692 | 2.70 | 713 | 2.87 | 734 | 3.04 |
| 6600 | 543 | 1.90 | 572 | 2.08 | 601 | 2.28 | 630 | 2.48 | 656 | 2.69 | 681 | 2.89 | 704 | 3.08 | 726 | 3.28 | 747 | 3.47 | 767 | 3.66 |
| 7200 | 588 | 2.43 | 614 | 2.62 | 641 | 2.84 | 667 | 3.05 | 693 | 3.27 | 717 | 3.50 | 740 | 3.72 | 761 | 3.94 | 781 | 4.14 | 801 | 4.35 |
| | 3-hp Std Motor Drive | | | | | | | | | | 5hp Oversized Mtr and Std Drive | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Std Motor Drive | | | | | | | | | | 3HP Standard Motor and High Static Drive | | | | | | | | | |
| 4800 | 690 | 2.13 | 710 | 2.26 | 729 | 2.38 | 747 | 2.50 | 765 | 2.62 | 782 | 2.74 | 799 | 2.85 | 815 | 2.96 | 831 | 3.08 | 847 | 3.19 |
| 5400 | 721 | 2.63 | 741 | 2.78 | 759 | 2.91 | 777 | 3.05 | 795 | 3.19 | 813 | 3.33 | 829 | 3.46 | 845 | 3.59 | 861 | 3.73 | 876 | 3.86 |
| 6000 | 754 | 3.20 | 773 | 3.36 | 791 | 3.52 | 809 | 3.68 | 826 | 3.84 | 843 | 3.99 | 859 | 4.14 | 875 | 4.30 | 891 | 4.45 | 906 | 4.60 |
| 6600 | 787 | 3.84 | 805 | 4.02 | 823 | 4.20 | 841 | 4.38 | 858 | 4.56 | 875 | 4.73 | 890 | 4.90 | 906 | 5.08 | 922 | 5.25 | 937 | 5.42 |
| 7200 | 821 | 4.57 | 839 | 4.77 | 856 | 4.97 | 873 | 5.16 | 891 | 5.37 | 907 | 5.56 | 923 | 5.75 | 939 | 5.95 | 953 | 6.14 | 968 | 6.32 |
| | 5hp Oversized Motor and Std Drive | | | | | | | | | | | | | | 7.5hp OS Motor and High Static Drive[a] | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 85, p. 115.
2. For High Evaporator Fan Speed (rpm), reference Table 86, p. 117.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 87, p. 117.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 7.5HP high static oversized motor offering is field installed only.

### Table 49. Evaporator fan performance - 17½ tons - TSD210G - standard refrigeration system downflow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | 5-hp Standard Motor Drive | | | | | | | | | | | |
| 5600 | - | - | 530 | 1.41 | 563 | 1.59 | 594 | 1.77 | 623 | 1.96 | 651 | 2.15 | 679 | 2.36 | 706 | 2.57 | 731 | 2.78 | 757 | 3.00 |
| 6300 | 547 | 1.70 | 580 | 1.89 | 610 | 2.10 | 638 | 2.30 | 666 | 2.51 | 692 | 2.72 | 717 | 2.93 | 742 | 3.16 | 767 | 3.40 | 790 | 3.63 |
| 7000 | 601 | 2.28 | 631 | 2.49 | 659 | 2.72 | 686 | 2.95 | 711 | 3.17 | 736 | 3.40 | 759 | 3.63 | 783 | 3.87 | 805 | 4.11 | 828 | 4.37 |
| 7700 | 655 | 2.98 | 683 | 3.22 | 709 | 3.46 | 734 | 3.71 | 758 | 3.96 | 781 | 4.21 | 803 | 4.46 | 826 | 4.72 | 847 | 4.97 | 867 | 5.23 (a) |
| 8400 | 710 | 3.82 | 735 | 4.08 | 760 | 4.34 | 784 | 4.61 | 806 | 4.88 | 828 | 5.16 | 849 | 5.43 | 870 | 5.7 | 890 | 5.98 | 910 | 6.26 |
| | 5-hp Standard Motor Drive | | | | | | | | | | | | 5-hp Standard Motor and High Static Drive | | | | 7.5-hp Oversized Motor and High Static Drive | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor Drive | | | | 5-hp Standard Motor and High Static Drive | | | | | | | | | | | | | | | |
| 5600 | 782 | 3.24 | 807 | 3.48 | 832 | 3.72 | 854 | 3.96 | 877 | 4.20 | 898 | 4.44 | 919 | 4.69 | 940 | 4.93 | 960 | 5.18 | 979 | 5.42 |
| 6300 | 814 | 3.87 | 837 | 4.12 | 859 | 4.36 | 882 | 4.63 | 903 | 4.89 | 926 | 5.17 | 946 | 5.43 | 967 | 5.71 | 986 | 5.98 | - | - |
| 7000 | 850 | 4.63 | 872 | 4.89 | 892 | 5.15 | 913 | 5.42 | 933 | 5.69 | 953 | 5.96 | 973 | 6.26 | 993 | 6.55 | - | - | - | - |
| 7700 | 888 | 5.51 | 909 | 5.78 | 928 | 6.06 | 948 | 6.36 | 967 | 6.65 | 987 | 6.94 | - | - | - | - | - | - | - | - |
| 8400 | 929 | 6.54 | 948 | 6.82 | 967 | 7.12 | 986 | 7.42 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 5-hp Standard Motor and High Static Drive.

## Table 50. Evaporator fan performance - 17½ tons - TSH210G - standard refrigeration system horizontal flow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | 5-hp Standard Motor Drive | | | | | | | | | |
| 5600 | - | - | - | - | 533 | 1.47 | 569 | 1.70 | 600 | 1.90 | 630 | 2.08 | 658 | 2.26 | 684 | 2.45 | 709 | 2.62 | 733 | 2.79 |
| 6300 | 513 | 1.57 | 542 | 1.73 | 574 | 1.91 | 606 | 2.15 | 639 | 2.41 | 667 | 2.63 | 693 | 2.84 | 719 | 3.05 | 743 | 3.25 | 766 | 3.45 |
| 7000 | 563 | 2.11 | 590 | 2.28 | 619 | 2.48 | 646 | 2.68 | 676 | 2.96 | 705 | 3.26 | 731 | 3.51 | 755 | 3.75 | 779 | 3.98 | 802 | 4.21 |
| 7700 | 613 | 2.77 | 639 | 2.97 | 663 | 3.15 | 690 | 3.38 | 714 | 3.61 | 742 | 3.93 | 769 | 4.27 | 793 | 4.55 | 815 | 4.81 | 837 | 5.07 (a) |
| 8400 | 665 | 3.55 | 689 | 3.78 | 710 | 3.97 | 734 | 4.20 | 758 | 4.45 | 780 | 4.70 | 806 | 5.05 | 831 | 5.42 | 854 | 5.75 | 875 | 6.04 |
| | 5-hp Standard Motor Drive | | | | | | | | | | | | | | (a) | | | | (b) | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor Drive | | | | | | | | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | |
| 5600 | 755 | 2.97 | 777 | 3.13 | 798 | 3.30 | 819 | 3.47 | 838 | 3.63 | 858 | 3.79 | 877 | 3.96 | 895 | 4.11 | 912 | 4.27 | 929 | 4.42 |
| 6300 | 789 | 3.66 | 811 | 3.85 | 831 | 4.04 | 851 | 4.24 | 871 | 4.43 | 890 | 4.62 | 908 | 4.80 | 927 | 5.00 | 944 | 5.17 | 961 | 5.36 |
| 7000 | 823 | 4.44 | 845 | 4.67 | 865 | 4.88 | 885 | 5.10 | 904 | 5.33 | 923 | 5.54 | 941 | 5.75 | 959 | 5.97 | 976 | 6.18 | 992 | 6.38 |
| 7700 | 859 | 5.33 | 880 | 5.58 | 900 | 5.84 | 919 | 6.08 | 938 | 6.32 | 957 | 6.57 | 975 | 6.81 | 992 | 7.06 | - | - | - | - |
| 8400 | 895 | 6.32 | 915 | 6.61 | 936 | 6.90 | 955 | 7.17 | 973 | 7.45 | 991 | 7.71 | - | - | - | - | - | - | - | - |
| | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 5-hp Standard Motor and High Static Drive Accessory
(b) 7.5-hp OS Motor and High Static Drive.

## Table 51. Evaporator fan performance - 17½ tons with gas heat - YSD210G - standard refrigeration system downflow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | 5-hp Standard Motor Drive | | | | | | | | | | | | | |
| 5600 | - | - | 547 | 1.50 | 579 | 1.69 | 609 | 1.87 | 639 | 2.07 | 667 | 2.27 | 694 | 2.48 | 721 | 2.70 | 748 | 2.93 | 775 | 3.17 |
| 6300 | 569 | 1.83 | 600 | 2.02 | 629 | 2.23 | 657 | 2.44 | 684 | 2.65 | 710 | 2.87 | 735 | 3.09 | 760 | 3.33 | 784 | 3.57 | 809 | 3.82 |
| 7000 | 625 | 2.45 | 653 | 2.67 | 680 | 2.9 | 707 | 3.13 | 731 | 3.36 | 756 | 3.60 | 779 | 3.83 | 803 | 4.08 | 825 | 4.33 | 847 | 4.60 |
| 7700 | 682 | 3.22 | 708 | 3.45 | 733 | 3.70 | 757 | 3.96 | 781 | 4.21 | 804 | 4.46 | 826 | 4.72 | 847 | 4.98 | 869 | 5.25 | 889 | 5.52 (a) |
| 8400 | 740 | 4.12 | 764 | 4.38 | 787 | 4.64 | 809 | 4.92 | 832 | 5.21 | 853 | 5.48 | 874 | 5.76 | 894 | 6.04 | 914 | 6.31 | 934 | 6.60 |
| | | | | | | | | | 5-hp and High Static Drive | | | | | | (b) | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor Drive | | | | 5-hp and High Static Drive | | | | | | | | | | | | | | | |
| 5600 | 802 | 3.42 | 826 | 3.67 | 851 | 3.92 | 874 | 4.17 | 898 | 4.44 | 920 | 4.69 | 941 | 4.94 | 961 | 5.20 | 982 | 5.46 | 1001 | 5.71 |
| 6300 | 832 | 4.06 | 856 | 4.33 | 880 | 4.61 | 903 | 4.89 | 926 | 5.18 | 947 | 5.45 | 969 | 5.74 | 990 | 6.03 | - | - | - | - |
| 7000 | 869 | 4.86 | 891 | 5.13 | 912 | 5.41 | 934 | 5.71 | 955 | 5.99 | 976 | 6.30 | - | - | - | - | - | - | - | - |
| 7700 | 909 | 5.79 | 929 | 6.08 | 950 | 6.38 | 970 | 6.68 | 990 | 6.99 | - | - | - | - | - | - | - | - | - | - |
| 8400 | 953 | 6.90 | 972 | 7.20 | 991 | 7.50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 5-hp and High Static Drive
(b) 7.5-hp Oversized Motor and High Static Drive.

## Table 52. Evaporator fan performance - 17½ tons with gas heat - YSH210G - standard refrigeration system horizontal flow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | 5-hp Std Motor Drive | | | | | | | | | | | |
| 5600 | - | - | 516 | 1.37 | 555 | 1.61 | 587 | 1.81 | 617 | 2.00 | 646 | 2.19 | 673 | 2.37 | 698 | 2.54 | 723 | 2.72 | 746 | 2.89 |
| 6300 | 533 | 1.67 | 565 | 1.85 | 596 | 2.07 | 631 | 2.35 | 659 | 2.57 | 685 | 2.78 | 711 | 2.99 | 736 | 3.19 | 760 | 3.40 | 782 | 3.60 |
| 7000 | 586 | 2.26 | 614 | 2.45 | 642 | 2.65 | 672 | 2.93 | 703 | 3.24 | 728 | 3.48 | 751 | 3.71 | 776 | 3.95 | 798 | 4.18 | 821 | 4.41 |
| 7700 | 641 | 2.98 | 663 | 3.16 | 690 | 3.39 | 715 | 3.62 | 744 | 3.95 | 772 | 4.30 | 795 | 4.57 | 816 | 4.82 | 838 | 5.08 | 860 | 5.34 (a) |
| 8400 | 695 | 3.83 | 715 | 4.01 | 740 | 4.26 | 763 | 4.50 | 786 | 4.78 | 813 | 5.15 | 839 | 5.54 | 861 | 5.84 | 880 | 6.12 | 900 | 6.39 |
| | 5-hp Std Motor Drive | | | | | | | | | | | | 7.5-hp Oversized Motor and High Static Drive | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor Drive | | | | | | 5-hp Motor High Static Drive | | | | | | | | | | | | | |
| 5600 | 768 | 3.06 | 789 | 3.23 | 810 | 3.39 | 830 | 3.55 | 849 | 3.72 | 868 | 3.88 | 885 | 4.03 | 904 | 4.19 | 921 | 4.35 | 938 | 4.50 |
| 6300 | 804 | 3.79 | 825 | 3.99 | 846 | 4.18 | 865 | 4.37 | 884 | 4.56 | 902 | 4.74 | 921 | 4.93 | 938 | 5.11 | 956 | 5.30 | 972 | 5.47 |
| 7000 | 842 | 4.63 | 863 | 4.86 | 883 | 5.08 | 902 | 5.3 | 921 | 5.52 | 939 | 5.73 | 956 | 5.93 | 974 | 6.15 | 991 | 6.35 | - | - |
| 7700 | 880 | 5.59 | 900 | 5.84 | 920 | 6.09 | 939 | 6.34 | 958 | 6.58 | 975 | 6.82 | 993 | 7.06 | - | - | - | - | - | - |
| 8400 | 920 | 6.67 | 940 | 6.95 | 959 | 7.24 | 977 | 7.51 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 5-hp Motor High Static Drive.

### Table 53. Evaporator fan performance - 20 tons - TSD240G - standard refrigeration system downflow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | 5-hp Motor and Standard Drive | | | | | | | | | | | | | | | |
| 6400 | 555 | 1.77 | 587 | 1.97 | 617 | 2.18 | 645 | 2.39 | 672 | 2.60 | 698 | 2.81 | 723 | 3.03 | 748 | 3.25 | 772 | 3.49 | 796 | 3.73 |
| 7200 | 617 | 2.46 | 646 | 2.69 | 673 | 2.92 | 699 | 3.15 | 724 | 3.39 | 748 | 3.62 | 772 | 3.86 | 794 | 4.10 | 817 | 4.35 | 839 | 4.60 |
| 8000 | 679 | 3.32 | 705 | 3.57 | 731 | 3.82 | 755 | 4.08 | 779 | 4.34 | 801 | 4.60 | 823 | 4.86 | 844 | 5.12 | 865 | 5.38 | 885 | 5.65 (a) |
| 8800 | 742 | 4.36 | 766 | 4.64 | 790 | 4.91 | 812 | 5.19 | 834 | 5.47 | 855 | 5.76 (a) | 876 | 6.05 | 896 | 6.34 | 915 | 6.62 | 935 | 6.91 |
| 9600 | 805 | 5.61 | 827 | 5.91 | 849 | 6.21 | 870 | 6.50 | 891 | 6.81 | 911 | 7.12 | 930 | 7.44 | 949 | 7.75 | 968 | 8.06 | 986 | 8.37 |
| | | | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor Drive | | 5-hp Motor and High Static Drive | | | | | | | | | | | | 7.5-hp Oversized Motor and High Static Drive | | | | | |
| 6400 | 819 | 3.97 | 841 | 4.21 | 863 | 4.47 | 886 | 4.73 | 908 | 5.01 | 929 | 5.27 | 950 | 5.56 | 971 | 5.84 | 990 | 6.10 | - | - |
| 7200 | 861 | 4.86 | 882 | 5.14 | 902 | 5.40 | 923 | 5.68 | 943 | 5.96 | 963 | 6.24 | 982 | 6.51 | - | - | - | - | - | - |
| 8000 | 905 | 5.93 | 926 | 6.21 | 945 | 6.50 | 964 | 6.80 | 983 | 7.09 | - | - | - | - | - | - | - | - | - | - |
| 8800 | 953 | 7.20 | 972 | 7.50 | 991 | 7.80 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9600 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 5-hp Motor and High Static Drive.

## Table 54. Evaporator fan performance - 20 tons - TSH240G - standard refrigeration system horizontal flow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | 5-hp Standard Motor Drive | | | | | | | | | | | | | |
| 6400 | 520 | 1.64 | 549 | 1.80 | 580 | 1.99 | 612 | 2.21 | 644 | 2.49 | 672 | 2.71 | 698 | 2.93 | 724 | 3.15 | 748 | 3.35 | 771 | 3.56 |
| 7200 | 577 | 2.29 | 604 | 2.47 | 631 | 2.66 | 658 | 2.87 | 686 | 3.14 | 716 | 3.45 | 742 | 3.72 | 765 | 3.96 | 789 | 4.21 | 811 | 4.44 |
| 8000 | 635 | 3.09 | 660 | 3.30 | 683 | 3.48 | 709 | 3.72 | 733 | 3.95 | 758 | 4.24 | 785 | 4.59 | 810 | 4.93 | 832 | 5.20 | 853 | 5.47 (a) |
| 8800 | 694 | 4.05 | 717 | 4.30 | 738 | 4.50 | 760 | 4.73 | 783 | 4.99 | 805 | 5.25 | 827 | 5.55 | 852 | 5.93 | 876 | 6.31 | 897 | 6.65 |
| 9600 | 753 | 5.21 | 775 | 5.48 | 795 | 5.73 | 813 | 5.94 | 834 | 6.21 | 856 | 6.49 | 876 | 6.78 | 895 | 7.08 | 917 | 7.47 | 940 | 7.90 |
| | | | | | | | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Std Motor Drive | | | | 5-hp Motor and High Static Drive | | | | | | | | | | | | | | | |
| 6400 | 794 | 3.76 | 815 | 3.96 | 836 | 4.16 | 856 | 4.35 | 876 | 4.55 | 894 | 4.74 | 913 | 4.94 | 931 | 5.12 | 949 | 5.31 | 965 | 5.49 |
| 7200 | 834 | 4.68 | 855 | 4.91 | 875 | 5.15 | 895 | 5.37 | 914 | 5.61 | 933 | 5.82 | 951 | 6.05 | 968 | 6.26 | 985 | 6.48 | - | - |
| 8000 | 874 | 5.74 | 895 | 6.01 | 915 | 6.27 | 934 | 6.53 | 953 | 6.79 | 972 | 7.05 | 989 | 7.30 | - | - | - | - | - | - |
| 8800 | 917 | 6.96 | 936 | 7.25 | 956 | 7.55 | 975 | 7.84 | 993 | 8.13 | - | - | - | - | - | - | - | - | - | - |
| 9600 | 962 | 8.32 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 5-hp Motor and High Static Drive.

## Table 55. Evaporator fan performance - 20 tons with gas heat - YSD240G - standard refrigeration system downflow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | (a) | | 5-hp Standard Motor Drive | | | | | | | | | | | | | | | | | |
| 6400 | 577 | 1.91 | 607 | 2.11 | 636 | 2.32 | 664 | 2.53 | 691 | 2.75 | 716 | 2.96 | 742 | 3.19 | 766 | 3.43 | 790 | 3.67 | 814 | 3.92 |
| 7200 | 642 | 2.66 | 669 | 2.88 | 695 | 3.12 | 721 | 3.36 | 746 | 3.59 | 769 | 3.83 | 792 | 4.07 | 815 | 4.32 | 837 | 4.58 | 859 | 4.84(b) |
| 8000 | 707 | 3.59 | 732 | 3.83 | 756 | 4.09 | 780 | 4.35 | 803 | 4.62 | 824 | 4.88 | 846 | 5.14 | 867 | 5.41 | 888 | 5.69 | 908 | 5.96 |
| 8800 | 772 | 4.72 | 796 | 4.99 | 818 | 5.26 | 840 | 5.55 | 861 | 5.84 | 882 | 6.13 | 902 | 6.42 | 922 | 6.71 | 941 | 7.00 | 960 | 7.30 |
| 9600 | 839 | 6.06 | 860 | 6.36 | 881 | 6.66 | 901 | 6.96 | 921 | 7.28 | 940 | 7.60 | 959 | 7.92 | 978 | 8.23 | - | - | - | - |
| | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |
| 6400 | 838 | 4.18 | 861 | 4.44 | 884 | 4.71 | 907 | 5.00 | 930 | 5.29 | 952 | 5.58 | 972 | 5.85 | 993 | 6.14 | - | - | - | - |
| 7200 | 880 | 5.11 | 902 | 5.39 | 923 | 5.68 | 944 | 5.96 | 964 | 6.25 | 985 | 6.57 | - | - | - | - | - | - | - | - |
| 8000 | 928 | 6.25 | 947 | 6.54 | 967 | 6.84 | 986 | 7.14 | - | - | - | - | - | - | - | - | - | - | - | - |
| 8800 | 979 | 7.60 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9600 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 5-hp Standard Motor and Low Static Drive Accessory
(b) 5-hp Motor and High Static Drive.

## Table 56. Evaporator fan performance - 20 tons with gas heat - YSH240G - standard refrigeration system horizontal flow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | 5-hp Standard Motor Drive | | | | | | | | | | | | | |
| 6400 | 540 | 1.75 | 572 | 1.93 | 602 | 2.14 | 637 | 2.43 | 665 | 2.66 | 691 | 2.87 | 717 | 3.08 | 742 | 3.30 | 765 | 3.50 | 788 | 3.70 |
| 7200 | 602 | 2.45 | 628 | 2.63 | 656 | 2.85 | 684 | 3.11 | 715 | 3.44 | 740 | 3.71 | 763 | 3.94 | 787 | 4.18 | 810 | 4.42 | 831 | 4.66[a] |
| 8000 | 664 | 3.33 | 685 | 3.5 | 711 | 3.74 | 735 | 3.98 | 762 | 4.29 | 790 | 4.65 | 814 | 4.98 | 835 | 5.24 | 855 | 5.50 (a) | 877 | 5.77 |
| 8800 | 726 | 4.39 | 745 | 4.57 | 768 | 4.81 | 791 | 5.08 | 812 | 5.34 | 836 | 5.69 | 862 | 6.09 | 886 | 6.48 | 905 | 6.78 | 925 | 7.07 |
| 9600 | 789 | 5.66 | 806 | 5.86 | 825 | 6.09 | 847 | 6.38 | 867 | 6.66 | 887 | 6.94 | 909 | 7.33 | 933 | 7.76 | 956 | 8.20 | 976 | 8.58 |
| | | | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor Drive | | 5-hp Standard Motor and High Static Drive | | | | | | | | | | | | | | | | | |
| 6400 | 809 | 3.91 | 831 | 4.11 | 851 | 4.31 | 870 | 4.50 | 890 | 4.69 | 908 | 4.88 | 926 | 5.07 | 943 | 5.25 | 960 | 5.44 | 977 | 5.63 |
| 7200 | 853 | 4.90 | 873 | 5.12 | 893 | 5.35 | 912 | 5.58 | 931 | 5.80 | 949 | 6.03 | 967 | 6.25 | 984 | 6.47 | - | - | - | - |
| 8000 | 897 | 6.04 | 917 | 6.30 | 937 | 6.57 | 956 | 6.83 | 974 | 7.09 | 992 | 7.34 | - | - | - | - | - | - | - | - |
| 8800 | 943 | 7.35 | 962 | 7.64 | 982 | 7.95 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9600 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Oversized Motor and High Static Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 5-hp Standard Motor and High Static Drive.

## Table 57. Evaporator fan performance - 25 tons - TSD300G - standard refrigeration system downflow

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 7.5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | 7.5-hp Standard Motor and Drive Accessory | | | | | | | | | | | |
| 7000 | 601 | 2.28 | 631 | 2.49 | 659 | 2.72 | 686 | 2.95 | 711 | 3.17 | 736 | 3.40 | 759 | 3.63 | 783 | 3.87 | 805 | 4.11 | 828 | 4.37 |
| 7500 | 640 | 2.77 | 668 | 3.00 | 695 | 3.24 | 720 | 3.48 | 745 | 3.73 | 768 | 3.97 | 791 | 4.21 | 813 | 4.46 | 835 | 4.71 | 856 | 4.97 |
| 8000 | 679 | 3.32 | 705 | 3.57 | 731 | 3.82 | 755 | 4.08 | 779 | 4.34 | 801 | 4.60 | 823 | 4.86 | 844 | 5.12 | 865 | 5.38 | 885 | 5.65 |
| 8500 | 718 | 3.95 | 743 | 4.22 | 767 | 4.48 | 791 | 4.75 | 813 | 5.03 | 835 | 5.31 | 856 | 5.58 | 876 | 5.86 | 896 | 6.13 | 916 | 6.42 |
| 9000 | 757 | 4.65 | 781 | 4.93 | 804 | 5.22 | 827 | 5.5 | 848 | 5.79 | 869 | 6.08 | 889 | 6.38 | 909 | 6.67 | 928 | 6.96 | 947 | 7.25 |
| 9500 | 797 | 5.44 | 819 | 5.74 | 841 | 6.03 | 863 | 6.33 | 884 | 6.63 | 904 | 6.94 | 923 | 7.25 | 943 | 7.56 | 961 | 7.87 | 979 | 8.18 |
| 10000 | 836 | 6.31 | 858 | 6.62 | 879 | 6.94 | 900 | 7.25 | 920 | 7.56 | 939 | 7.88 | 958 | 8.21 | 977 | 8.54 | - | - | - | - |
| 10500 | 876 | 7.27 | 897 | 7.60 | 917 | 7.93 | 936 | 8.25 | 956 | 8.58 | - | - | - | - | - | - | - | - | - | - |
| 11000 | 916 | 8.32 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 7.5-hp Standard Motor and Drive Accessory | | | | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | |
| 7000 | 850 | 4.63 | 872 | 4.89 | 892 | 5.15 | 913 | 5.42 | 933 | 5.69 | 953 | 5.96 | 973 | 6.26 | 993 | 6.55 | - | - | - | - |
| 7500 | 877 | 5.24 | 898 | 5.51 | 917 | 5.79 | 938 | 6.08 | 958 | 6.36 | 976 | 6.64 | - | - | - | - | - | - | - | - |
| 8000 | 905 | 5.93 | 926 | 6.21 | 945 | 6.50 | 964 | 6.80 | 983 | 7.09 | - | - | - | - | - | - | - | - | - | - |
| 8500 | 935 | 6.70 | 954 | 6.99 | 973 | 7.28 | 992 | 7.59 | - | - | - | - | - | - | - | - | - | - | - | - |
| 9000 | 966 | 7.55 | 984 | 7.85 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 11000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

## Table 58. Evaporator fan performance - 25 tons - TSH300G - standard refrigeration system horizontal flow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 7.5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | 7.5-hp Standard Motor and Drive Accessory | | | | | | | | | |
| 7000 | - | - | 590 | 2.28 | 619 | 2.48 | 646 | 2.68 | 676 | 2.96 | 705 | 3.26 | 731 | 3.51 | 755 | 3.75 | 779 | 3.98 | 802 | 4.21 |
| 7500 | 599 | 2.57 | 625 | 2.76 | 650 | 2.95 | 677 | 3.17 | 703 | 3.41 | 731 | 3.73 | 759 | 4.05 | 782 | 4.31 | 804 | 4.56 | 827 | 4.81 |
| 8000 | 635 | 3.09 | 660 | 3.30 | 683 | 3.48 | 709 | 3.72 | 733 | 3.95 | 758 | 4.24 | 785 | 4.59 | 810 | 4.93 | 832 | 5.20 | 853 | 5.47 |
| 8500 | 672 | 3.67 | 696 | 3.90 | 717 | 4.10 | 741 | 4.33 | 764 | 4.58 | 786 | 4.83 | 811 | 5.17 | 836 | 5.54 | 860 | 5.89 | 880 | 6.19 |
| 9000 | 709 | 4.32 | 732 | 4.58 | 752 | 4.79 | 773 | 5.01 | 796 | 5.28 | 817 | 5.54 | 838 | 5.82 | 862 | 6.19 | 886 | 6.59 | 908 | 6.97 |
| 9500 | 746 | 5.05 | 767 | 5.33 | 788 | 5.56 | 806 | 5.78 | 828 | 6.04 | 850 | 6.33 | 869 | 6.60 | 889 | 6.92 | 912 | 7.32 | 935 | 7.74 |
| 10000 | 783 | 5.86 | 803 | 6.15 | 823 | 6.41 | 841 | 6.64 | 860 | 6.89 | 881 | 7.19 | 900 | 7.48 | 920 | 7.78 | 939 | 8.13 | 961 | 8.55 |
| 10500 | 820 | 6.75 | 839 | 7.06 | 859 | 7.34 | 876 | 7.59 | 893 | 7.83 | 913 | 8.13 | 933 | 8.45 | - | - | - | - | - | - |
| 11000 | 857 | 7.73 | 876 | 8.06 | 894 | 8.36 | 912 | 8.63 | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 7.5-hp Standard Motor and Drive Accessory | | | | | | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | |
| 7000 | 823 | 4.44 | 845 | 4.67 | 865 | 4.88 | 885 | 5.10 | 904 | 5.33 | 923 | 5.54 | 941 | 5.75 | 959 | 5.97 | 976 | 6.18 | 992 | 6.38 |
| 7500 | 849 | 5.06 | 870 | 5.31 | 890 | 5.55 | 910 | 5.79 | 928 | 6.03 | 947 | 6.27 | 965 | 6.50 | 983 | 6.73 | - | - | - | - |
| 8000 | 874 | 5.74 | 895 | 6.01 | 915 | 6.27 | 934 | 6.53 | 953 | 6.79 | 972 | 7.05 | 989 | 7.30 | - | - | - | - | - | - |
| 8500 | 901 | 6.48 | 921 | 6.76 | 940 | 7.05 | 959 | 7.33 | 978 | 7.60 | - | - | - | - | - | - | - | - | - | - |
| 9000 | 928 | 7.28 | 947 | 7.58 | 966 | 7.89 | 985 | 8.19 | - | - | - | - | - | - | - | - | - | - | - | - |
| 9500 | 956 | 8.15 | 975 | 8.49 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 11000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
8. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

## Table 59. Evaporator fan performance - 25 tons with gas heat - YSD300G - standard refrigeration system downflow

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 7.5-hp Standard Motor and Low Static Drive Accessory | | | | | | 7.5-hp Standard Motor and Drive Accessory | | | | | | | | | | | | | |
| 7000 | 625 | 2.45 | 653 | 2.67 | 680 | 2.90 | 707 | 3.13 | 731 | 3.36 | 756 | 3.60 | 779 | 3.83 | 803 | 4.08 | 825 | 4.33 | 847 | 4.60 |
| 7500 | 666 | 2.98 | 692 | 3.21 | 718 | 3.46 | 743 | 3.71 | 767 | 3.95 | 790 | 4.20 | 812 | 4.45 | 834 | 4.71 | 855 | 4.97 | 877 | 5.24 |
| 8000 | 707 | 3.59 | 732 | 3.83 | 756 | 4.09 | 780 | 4.35 | 803 | 4.62 | 824 | 4.88 | 846 | 5.14 | 867 | 5.41 | 888 | 5.69 | 908 | 5.96 |
| 8500 | 748 | 4.27 | 772 | 4.53 | 794 | 4.79 | 817 | 5.07 | 839 | 5.36 | 860 | 5.64 | 881 | 5.92 | 901 | 6.20 | 921 | 6.48 | 940 | 6.77 |
| 9000 | 789 | 5.03 | 812 | 5.31 | 833 | 5.58 | 855 | 5.88 | 876 | 6.18 | 896 | 6.48 | 916 | 6.77 | 936 | 7.07 | 955 | 7.37 | 973 | 7.67 |
| 9500 | 830 | 5.88 | 852 | 6.18 | 873 | 6.47 | 893 | 6.77 | 913 | 7.08 | 933 | 7.40 | 952 | 7.72 | 970 | 8.02 | 989 | 8.34 | - | - |
| 10000 | 872 | 6.83 | 892 | 7.14 | 912 | 7.45 | 932 | 7.75 | 951 | 8.08 | 970 | 8.41 | - | - | - | - | - | - | - | - |
| 10500 | 913 | 7.87 | 933 | 8.20 | 952 | 8.52 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 11000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | (a) | | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | | | |
| 7000 | 869 | 4.86 | 891 | 5.13 | 912 | 5.41 | 934 | 5.71 | 955 | 5.99 | 976 | 6.30 | - | - | - | - | - | - | - | - |
| 7500 | 898 | 5.52 | 918 | 5.80 | 939 | 6.10 | 958 | 6.38 | 979 | 6.67 | - | - | - | - | - | - | - | - | - | - |
| 8000 | 928 | 6.25 | 947 | 6.54 | 967 | 6.84 | 986 | 7.14 | - | - | - | - | - | - | - | - | - | - | - | - |
| 8500 | 959 | 7.07 | 979 | 7.37 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9000 | 991 | 7.97 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 11000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 7.5-hp Standard Motor and Drive Accessory.

## Table 60. Evaporator fan performance - 25 tons with gas heat - YSH300G - standard refrigeration system horizontal flow

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 7.5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | 7.5-hp Standard Motor and Drive Accessory | | | | | | | | | | | |
| 7000 | 586 | 2.26 | 614 | 2.45 | 642 | 2.65 | 672 | 2.93 | 703 | 3.24 | 728 | 3.48 | 751 | 3.71 | 776 | 3.95 | 798 | 4.18 | 821 | 4.41 |
| 7500 | 625 | 2.76 | 649 | 2.94 | 676 | 3.17 | 702 | 3.41 | 732 | 3.74 | 759 | 4.06 | 782 | 4.31 | 804 | 4.55 | 827 | 4.81 | 848 | 5.05 |
| 8000 | 664 | 3.33 | 685 | 3.50 | 711 | 3.74 | 735 | 3.98 | 762 | 4.29 | 790 | 4.65 | 814 | 4.98 | 835 | 5.24 | 855 | 5.50 | 877 | 5.77 |
| 8500 | 703 | 3.97 | 722 | 4.14 | 747 | 4.39 | 770 | 4.64 | 792 | 4.91 | 819 | 5.28 | 845 | 5.68 | 867 | 6.00 | 887 | 6.28 | 906 | 6.55 |
| 9000 | 742 | 4.68 | 760 | 4.87 | 782 | 5.11 | 805 | 5.38 | 826 | 5.65 | 849 | 5.98 | 874 | 6.38 | 898 | 6.79 | 919 | 7.13 | 937 | 7.43 |
| 9500 | 781 | 5.49 | 799 | 5.69 | 817 | 5.91 | 840 | 6.21 | 860 | 6.48 | 880 | 6.77 | 903 | 7.16 | 927 | 7.60 | 950 | 8.03 | 969 | 8.37 |
| 10000 | 820 | 6.37 | 837 | 6.59 | 854 | 6.81 | 875 | 7.10 | 896 | 7.41 | 915 | 7.70 | 934 | 8.04 | 957 | 8.46 | - | - | - | - |
| 10500 | 860 | 7.36 | 876 | 7.58 | 891 | 7.80 | 910 | 8.09 | 931 | 8.42 | - | - | - | - | - | - | - | - | - | - |
| 11000 | 899 | 8.43 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 7.5-hp Standard Motor and Drive Accessory | | | | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | |
| 7000 | 842 | 4.63 | 863 | 4.86 | 883 | 5.08 | 902 | 5.30 | 921 | 5.52 | 939 | 5.73 | 956 | 5.93 | 974 | 6.15 | 991 | 6.35 | - | - |
| 7500 | 870 | 5.31 | 890 | 5.55 | 909 | 5.79 | 929 | 6.03 | 947 | 6.27 | 965 | 6.50 | 983 | 6.73 | - | - | - | - | - | - |
| 8000 | 897 | 6.04 | 917 | 6.30 | 937 | 6.57 | 956 | 6.83 | 974 | 7.09 | 992 | 7.34 | - | - | - | - | - | - | - | - |
| 8500 | 926 | 6.84 | 946 | 7.13 | 965 | 7.41 | 983 | 7.68 | - | - | - | - | - | - | - | - | - | - | - | - |
| 9000 | 955 | 7.72 | 974 | 8.01 | 993 | 8.33 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10500 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 11000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
8. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

## Table 61. Evaporator fan performance—12½ tons—TH*150G

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | | | |
| 2500[a] | - | - | - | - | 370 | 0.32 | 417 | 0.43 | 458 | 0.54 | 496 | 0.66 | 531 | 0.79 | 564 | 0.91 | 593 | 1.03 | 623 | 1.16 |
| 3000[a] | - | - | - | - | 386 | 0.42 | 430 | 0.54 | 472 | 0.67 | 508 | 0.80 | 543 | 0.94 | 576 | 1.08 | 606 | 1.22 | 635 | 1.35 |
| 3500[a] | - | - | 360 | 0.43 | 404 | 0.55 | 447 | 0.68 | 486 | 0.81 | 522 | 0.96 | 556 | 1.11 | 588 | 1.26 | 619 | 1.40 | 647 | 1.55 |
| 4000 | - | - | 387 | 0.59 | 426 | 0.71 | 465 | 0.85 | 502 | 0.99 | 537 | 1.14 | 570 | 1.29 | 602 | 1.44 | 631 | 1.59 | 660 | 1.74 |
| 4500 | 377 | 0.66 | 417 | 0.79 | 452 | 0.92 | 486 | 1.06 | 521 | 1.20 | 555 | 1.36 | 586 | 1.50 | 617 | 1.65 | 645 | 1.80 | 673 | 1.95 |
| 5000 | 409 | 0.88 | 448 | 1.03 | 481 | 1.17 | 512 | 1.30 | 542 | 1.44 | 573 | 1.59 | 604 | 1.74 | 633 | 1.89 | 662 | 2.04 | 688 | 2.18 |
| 5500 | 441 | 1.14 | 479 | 1.30 | 510 | 1.44 | 539 | 1.58 | 567 | 1.71 | 594 | 1.85 | 624 | 2.01 | 652 | 2.16 | 679 | 2.31 | 705 | 2.46 |
| 6000 | 474 | 1.42 | 510 | 1.59 | 540 | 1.74 | 568 | 1.88 | 594 | 2.01 | 620 | 2.15 | 645 | 2.29 | 671 | 2.45 | 698 | 2.62 | 724 | 2.81 |
| | | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[c] | | | | | | | |
| 2500[a] | 650 | 1.28 | 676 | 1.40 | 701 | 1.52 | 726 | 1.64 | 748 | 1.76 | 771 | 1.87 | 793 | 1.98 | 814 | 2.09 | 835 | 2.21 | 855 | 2.32 |
| 3000[a] | 662 | 1.48 | 688 | 1.61 | 713 | 1.74 | 737 | 1.86 | 760 | 1.98 | 783 | 2.11 | 806 | 2.23 | 827 | 2.36 | 847 | 2.48 | 867 | 2.61 |
| 3500[a] | 674 | 1.69 | 701 | 1.82 | 726 | 1.96 | 750 | 2.09 | 772 | 2.22 | 795 | 2.35 | 818 | 2.49 | 839 | 2.64 | 859 | 2.78 | 879 | 2.96 |
| 4000 | 687 | 1.89 | 713 | 2.04 | 738 | 2.18 | 762 | 2.32 | 785 | 2.47 | 808 | 2.62 | 829 | 2.79 | 851 | 2.97 | 871 | 3.17 | 891 | 3.40 |
| 4500 | 700 | 2.10 | 726 | 2.26 | 750 | 2.41 | 775 | 2.58 | 798 | 2.75 | 821 | 2.95 | 842 | 3.15 | 864 | 3.41 | 885 | 3.71 | 904 | 4.06 |
| 5000 | 714 | 2.34 | 740 | 2.50 | 765 | 2.68 | 788 | 2.87 | 811 | 3.09 | 834 | 3.36 | 855 | 3.66 | 875 | 4.02 | 897 | 4.49 | 917 | 5.04 |
| 5500 | 730 | 2.63 | 755 | 2.81 | 778 | 3.02 | 801 | 3.26 | 824 | 3.56 | 846 | 3.93 | 868 | 4.40 | 889 | 4.96 | 909 | 5.65 | - | - |
| 6000 | 748 | 3.02 | 772 | 3.26 | 795 | 3.54 | 818 | 3.89 | 839 | 4.32 | 860 | 4.85 | 881 | 5.51 | - | - | - | - | - | - |
| | | | | | | | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Fan Sheave BK110X1 3/16 and 1VP50X7/8 Required.
(c) Fan Sheave BK110X1 3/16 and 1VP56X7/8 Required.

## Table 62. Evaporator fan performance—12½ tons—THD150G—dehumidification (hot gas reheat) option

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | |
| 2500[a] | — | — | — | — | 369 | 0.32 | 416 | 0.42 | 458 | 0.52 | 496 | 0.63 | 530 | 0.74 | 561 | 0.85 | 591 | 0.97 | 618 | 1.09 |
| 3000[a] | — | — | — | — | 383 | 0.41 | 429 | 0.52 | 470 | 0.64 | 508 | 0.76 | 543 | 0.88 | 575 | 1.01 | 606 | 1.13 | 634 | 1.26 |
| 3500[a] | — | — | 358 | 0.42 | 403 | 0.53 | 444 | 0.64 | 484 | 0.77 | 520 | 0.90 | 554 | 1.04 | 587 | 1.18 | 618 | 1.32 | 647 | 1.47 |
| 4000 | — | — | 386 | 0.57 | 424 | 0.67 | 464 | 0.80 | 500 | 0.93 | 535 | 1.07 | 569 | 1.21 | 600 | 1.36 | 629 | 1.52 | 658 | 1.69 |
| 4500 | 375 | 0.62 | 415 | 0.75 | 450 | 0.86 | 484 | 0.99 | 519 | 1.13 | 552 | 1.28 | 583 | 1.42 | 615 | 1.58 | 644 | 1.75 | 671 | 1.92 |
| 5000 | 407 | 0.82 | 446 | 0.97 | 479 | 1.09 | 510 | 1.22 | 540 | 1.37 | 572 | 1.53 | 602 | 1.69 | 630 | 1.84 | 658 | 2.01 | 686 | 2.20 |
| 5500 | 440 | 1.06 | 477 | 1.22 | 508 | 1.37 | 537 | 1.50 | 565 | 1.65 | 592 | 1.81 | 621 | 1.99 | 650 | 2.16 | 676 | 2.34 | 701 | 2.51 |
| 6000 | 471 | 1.34 | 508 | 1.52 | 538 | 1.69 | 566 | 1.84 | 592 | 1.99 | 617 | 2.15 | 643 | 2.32 | 669 | 2.51 | 695 | 2.71 | 721 | 2.90 |
| | | | | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[c] | | | | | | | | | |
| 2500[a] | 645 | 1.22 | 670 | 1.35 | 694 | 1.48 | 718 | 1.61 | 740 | 1.75 | 762 | 1.88 | 783 | 2.02 | 803 | 2.17 | 823 | 2.31 | 843 | 2.46 |
| 3000[a] | 660 | 1.40 | 686 | 1.54 | 710 | 1.69 | 733 | 1.83 | 755 | 1.98 | 777 | 2.13 | 798 | 2.28 | 819 | 2.44 | 839 | 2.60 | 858 | 2.76 |
| 3500[a] | 674 | 1.61 | 700 | 1.76 | 725 | 1.91 | 749 | 2.07 | 771 | 2.23 | 793 | 2.39 | 814 | 2.56 | 834 | 2.73 | 854 | 2.90 | 873 | 3.07 |
| 4000 | 686 | 1.85 | 712 | 2.02 | 737 | 2.18 | 762 | 2.35 | 785 | 2.51 | 808 | 2.68 | 830 | 2.86 | 850 | 3.04 | 870 | 3.22 | 889 | 3.41 |
| 4500 | 698 | 2.10 | 724 | 2.28 | 749 | 2.47 | 773 | 2.65 | 797 | 2.84 | 820 | 3.02 | 842 | 3.21 | 863 | 3.39 | 884 | 3.58 | 904 | 3.77 |
| 5000 | 712 | 2.38 | 737 | 2.57 | 762 | 2.76 | 785 | 2.97 | 809 | 3.17 | 831 | 3.38 | 853 | 3.58 | 875 | 3.79 | 895 | 3.99 | 916 | 4.20 |
| 5500 | 727 | 2.70 | 753 | 2.90 | 776 | 3.10 | 799 | 3.31 | 822 | 3.52 | 844 | 3.74 | 865 | 3.96 | 886 | 4.19 | 907 | 4.42 | 927 | 4.64 |
| 6000 | 744 | 3.09 | 767 | 3.28 | 791 | 3.49 | 815 | 3.71 | 837 | 3.92 | 858 | 4.15 | 879 | 4.37 | 899 | 4.60 | 919 | 4.84 | 939 | 5.08 |
| | | | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Fan Sheave BK110X1 3/16 and 1VP50X7/8 Required.

(c) Fan Sheave BK110X1 3/16 and 1VP56X7/8 Required.

## Table 63. Evaporator fan performance—12½ tons—YH*150G

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | | | |
| 2500[a] | 263 | 0.15 | 322 | 0.23 | 375 | 0.33 | 421 | 0.44 | 463 | 0.56 | 501 | 0.68 | 536 | 0.80 | 568 | 0.92 | 599 | 1.04 | 627 | 1.16 |
| 3000[a] | 292 | 0.23 | 344 | 0.33 | 393 | 0.43 | 436 | 0.55 | 477 | 0.69 | 515 | 0.82 | 549 | 0.96 | 582 | 1.10 | 612 | 1.23 | 640 | 1.36 |
| 3500[a] | 324 | 0.35 | 369 | 0.45 | 413 | 0.57 | 455 | 0.71 | 494 | 0.84 | 529 | 0.99 | 563 | 1.14 | 595 | 1.29 | 626 | 1.43 | 655 | 1.57 |
| 4000 | 358 | 0.51 | 398 | 0.62 | 437 | 0.75 | 475 | 0.89 | 512 | 1.03 | 547 | 1.18 | 579 | 1.33 | 609 | 1.48 | 639 | 1.63 | 668 | 1.78 |
| 4500 | 392 | 0.71 | 429 | 0.84 | 464 | 0.97 | 499 | 1.11 | 532 | 1.25 | 566 | 1.41 | 597 | 1.55 | 627 | 1.70 | 655 | 1.85 | 682 | 2.00 |
| 5000 | 427 | 0.95 | 462 | 1.09 | 493 | 1.22 | 525 | 1.36 | 556 | 1.51 | 587 | 1.66 | 617 | 1.80 | 645 | 1.95 | 673 | 2.10 | 700 | 2.25 |
| 5500 | 462 | 1.23 | 496 | 1.38 | 525 | 1.51 | 553 | 1.64 | 582 | 1.79 | 610 | 1.93 | 638 | 2.08 | 666 | 2.23 | 692 | 2.38 | 718 | 2.54 |
| 6000 | 497 | 1.53 | 530 | 1.69 | 558 | 1.83 | 584 | 1.96 | 610 | 2.09 | 636 | 2.24 | 662 | 2.39 | 688 | 2.56 | 713 | 2.73 | 738 | 2.92 |
| | | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[c] | | | | | | | |
| 2500[a] | 655 | 1.28 | 681 | 1.40 | 706 | 1.51 | 730 | 1.63 | 754 | 1.74 | 776 | 1.85 | 798 | 1.96 | 820 | 2.07 | 839 | 2.17 | 860 | 2.28 |
| 3000[a] | 668 | 1.49 | 694 | 1.62 | 719 | 1.74 | 743 | 1.87 | 766 | 1.98 | 790 | 2.11 | 811 | 2.22 | 833 | 2.35 | 852 | 2.46 | 873 | 2.59 |
| 3500[a] | 681 | 1.71 | 708 | 1.85 | 732 | 1.97 | 756 | 2.10 | 780 | 2.24 | 803 | 2.37 | 824 | 2.50 | 846 | 2.65 | 866 | 2.79 | 887 | 2.96 |
| 4000 | 695 | 1.93 | 721 | 2.07 | 746 | 2.22 | 770 | 2.36 | 794 | 2.50 | 816 | 2.66 | 838 | 2.82 | 859 | 3.00 | 879 | 3.20 | 899 | 3.44 |
| 4500 | 708 | 2.15 | 735 | 2.31 | 760 | 2.47 | 784 | 2.63 | 807 | 2.81 | 830 | 3.01 | 852 | 3.24 | 873 | 3.50 | 893 | 3.79 | 913 | 4.18 |
| 5000 | 725 | 2.41 | 750 | 2.57 | 773 | 2.75 | 798 | 2.97 | 821 | 3.20 | 843 | 3.47 | 865 | 3.81 | 887 | 4.22 | 907 | 4.71 | 926 | 5.27 |
| 5500 | 744 | 2.73 | 767 | 2.92 | 790 | 3.14 | 813 | 3.41 | 836 | 3.75 | 857 | 4.16 | 878 | 4.65 | 900 | 5.31 | 920 | 6.07 | 940 | 7.01 |
| 6000 | 761 | 3.14 | 786 | 3.42 | 809 | 3.74 | 831 | 4.15 | 852 | 4.64 | 873 | 5.25 | 894 | 6.07 | 913 | 6.97 | 934 | 8.19 | 954 | 9.61 |
| | | | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
8. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Fan Sheave BK110X1 3/16 and 1VP50X7/8 Required.
(c) Fan Sheave BK110X1 3/16 and 1VP56X7/8 Required.

## Table 64. Evaporator fan performance—12½ tons—YHD150G—dehumidification (hot gas reheat) option

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | |
| 2500[a] | — | — | — | — | 374 | 0.33 | 420 | 0.43 | 462 | 0.54 | 500 | 0.64 | 534 | 0.75 | 565 | 0.87 | 594 | 0.99 | 621 | 1.11 |
| 3000[a] | — | — | — | — | 391 | 0.43 | 436 | 0.54 | 476 | 0.65 | 513 | 0.78 | 548 | 0.90 | 580 | 1.03 | 610 | 1.15 | 638 | 1.29 |
| 3500[a] | — | — | 368 | 0.44 | 412 | 0.55 | 453 | 0.67 | 492 | 0.79 | 528 | 0.93 | 561 | 1.07 | 593 | 1.21 | 624 | 1.36 | 653 | 1.50 |
| 4000 | 356 | 0.49 | 397 | 0.60 | 435 | 0.71 | 474 | 0.84 | 509 | 0.96 | 545 | 1.11 | 577 | 1.25 | 608 | 1.41 | 638 | 1.57 | 666 | 1.74 |
| 4500 | 390 | 0.67 | 428 | 0.79 | 462 | 0.90 | 496 | 1.04 | 531 | 1.18 | 563 | 1.33 | 594 | 1.48 | 625 | 1.64 | 653 | 1.81 | 681 | 1.98 |
| 5000 | 425 | 0.89 | 460 | 1.02 | 492 | 1.15 | 522 | 1.28 | 554 | 1.43 | 585 | 1.60 | 614 | 1.76 | 642 | 1.91 | 671 | 2.09 | 698 | 2.27 |
| 5500 | 460 | 1.15 | 493 | 1.30 | 523 | 1.44 | 552 | 1.58 | 579 | 1.73 | 607 | 1.90 | 636 | 2.08 | 664 | 2.26 | 689 | 2.43 | 714 | 2.61 |
| 6000 | 495 | 1.45 | 527 | 1.63 | 555 | 1.78 | 582 | 1.93 | 608 | 2.09 | 633 | 2.25 | 659 | 2.44 | 685 | 2.64 | 711 | 2.83 | 736 | 3.02 |
| | 3-hp Standard Motor and Drive | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[c] | | | | | | | | | |
| 2500[a] | 648 | 1.23 | 673 | 1.36 | 697 | 1.49 | 720 | 1.62 | 742 | 1.76 | 764 | 1.90 | 785 | 2.04 | 806 | 2.18 | 825 | 2.33 | 845 | 2.47 |
| 3000[a] | 664 | 1.42 | 689 | 1.56 | 713 | 1.71 | 737 | 1.86 | 759 | 2.00 | 781 | 2.15 | 802 | 2.31 | 822 | 2.46 | 842 | 2.62 | 861 | 2.78 |
| 3500[a] | 680 | 1.64 | 706 | 1.79 | 730 | 1.94 | 754 | 2.10 | 776 | 2.27 | 797 | 2.43 | 818 | 2.60 | 839 | 2.77 | 858 | 2.94 | 878 | 3.11 |
| 4000 | 693 | 1.90 | 719 | 2.06 | 744 | 2.23 | 768 | 2.39 | 792 | 2.56 | 814 | 2.73 | 835 | 2.91 | 855 | 3.09 | 875 | 3.27 | 894 | 3.46 |
| 4500 | 707 | 2.16 | 733 | 2.35 | 758 | 2.53 | 782 | 2.72 | 805 | 2.90 | 827 | 3.09 | 849 | 3.27 | 870 | 3.46 | 891 | 3.65 | 911 | 3.84 |
| 5000 | 723 | 2.46 | 748 | 2.65 | 772 | 2.85 | 795 | 3.05 | 818 | 3.26 | 841 | 3.47 | 862 | 3.67 | 884 | 3.88 | 904 | 4.08 | 924 | 4.28 |
| 5500 | 741 | 2.81 | 765 | 3.01 | 788 | 3.21 | 811 | 3.42 | 833 | 3.63 | 855 | 3.85 | 876 | 4.08 | 897 | 4.31 | 917 | 4.53 | 937 | 4.76 |
| 6000 | 758 | 3.21 | 782 | 3.41 | 806 | 3.62 | 829 | 3.84 | 850 | 4.06 | 871 | 4.28 | 892 | 4.51 | 912 | 4.75 | 932 | 4.99 | 951 | 5.24 |
| | | | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
8. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Fan Sheave BK110X1 3/16 and 1VP50X7/8 Required.
(c) Fan Sheave BK110X1 3/16 and 1VP56X7/8 Required.

## Table 65. Evaporator fan performance—15 tons—TH*180G

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | |
| 3000[a] | - | - | - | - | 369 | 0.38 | 411 | 0.47 | 448 | 0.57 | 483 | 0.68 | 514 | 0.78 | 543 | 0.89 | 570 | 1.00 | 596 | 1.11 |
| 3600[a] | - | - | - | - | 391 | 0.50 | 429 | 0.61 | 465 | 0.72 | 499 | 0.84 | 530 | 0.96 | 560 | 1.08 | 587 | 1.21 | 614 | 1.33 |
| 4200[a] | - | - | 378 | 0.55 | 416 | 0.66 | 451 | 0.78 | 485 | 0.90 | 516 | 1.03 | 547 | 1.16 | 575 | 1.30 | 603 | 1.44 | 629 | 1.58 |
| 4800 | 370 | 0.62 | 408 | 0.74 | 443 | 0.87 | 476 | 0.99 | 507 | 1.12 | 537 | 1.26 | 565 | 1.40 | 593 | 1.55 | 619 | 1.71 | 645 | 1.86 |
| 5400 | 405 | 0.84 | 439 | 0.97 | 472 | 1.11 | 502 | 1.25 | 532 | 1.39 | 560 | 1.54 | 587 | 1.69 | 613 | 1.85 | 638 | 2.01 | 662 | 2.18 |
| 6000 | 440 | 1.11 | 472 | 1.25 | 502 | 1.40 | 531 | 1.56 | 558 | 1.72 | 584 | 1.87 | 610 | 2.03 | 635 | 2.20 | 659 | 2.37 | 682 | 2.54 |
| 6600 | 476 | 1.43 | 505 | 1.58 | 533 | 1.74 | 560 | 1.92 | 586 | 2.09 | 611 | 2.26 | 635 | 2.44 | 659 | 2.61 | 682 | 2.79 | 704 | 2.97 |
| 7200 | 512 | 1.81 | 539 | 1.98 | 565 | 2.15 | 590 | 2.33 | 615 | 2.52 | 639 | 2.71 | 661 | 2.90 | 683 | 3.08 | 706 | 3.28 | 727 | 3.47 |
| | | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | 5-hp Oversized Motor and Drive | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | | | | 3HP Standard Motor and High Static Drive Accessory[c] | | | | | | | |
| 3000[a] | 620 | 1.23 | 643 | 1.35 | 664 | 1.47 | 684 | 1.59 | 703 | 1.72 | 722 | 1.86 | 740 | 1.99 | 757 | 2.13 | 775 | 2.27 | 791 | 2.41 |
| 3600[a] | 638 | 1.46 | 662 | 1.59 | 684 | 1.73 | 705 | 1.86 | 726 | 2.00 | 746 | 2.14 | 765 | 2.28 | 784 | 2.42 | 801 | 2.57 | 817 | 2.72 |
| 4200[a] | 654 | 1.73 | 678 | 1.87 | 701 | 2.02 | 723 | 2.17 | 744 | 2.32 | 764 | 2.47 | 784 | 2.62 | 802 | 2.78 | 821 | 2.94 | 839 | 3.10 |
| 4800 | 670 | 2.02 | 693 | 2.18 | 716 | 2.34 | 738 | 2.51 | 760 | 2.67 | 780 | 2.84 | 800 | 3.01 | 820 | 3.18 | 838 | 3.35 | 856 | 3.52 |
| 5400 | 686 | 2.35 | 709 | 2.52 | 732 | 2.70 | 753 | 2.88 | 775 | 3.06 | 795 | 3.24 | 815 | 3.42 | 835 | 3.61 | 854 | 3.80 | 872 | 3.98 |
| 6000 | 705 | 2.73 | 727 | 2.91 | 749 | 3.10 | 770 | 3.29 | 790 | 3.48 | 810 | 3.68 | 830 | 3.88 | 850 | 4.08 | 869 | 4.28 | 887 | 4.48 |
| 6600 | 725 | 3.16 | 747 | 3.35 | 767 | 3.55 | 788 | 3.75 | 808 | 3.96 | 827 | 4.17 | 846 | 4.37 | 865 | 4.59 | 884 | 4.80 | 902 | 5.02 |
| 7200 | 748 | 3.66 | 768 | 3.86 | 788 | 4.07 | 808 | 4.28 | 827 | 4.49 | 846 | 4.71 | 864 | 4.93 | 883 | 5.15 | 900 | 5.38 | 918 | 5.61 |
| | | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Fan Sheave BK110X1 3/16 and 1VP50X7/8 Required.

(c) Fan Sheave BK110X1 3/16 and 1VP56X7/8 Required.

## Table 66. Evaporator fan performance—15 tons—THD180G—dehumidification (hot gas reheat) option

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | |
| 3000[a] | — | — | — | — | — | — | 387 | 0.49 | 424 | 0.61 | 458 | 0.72 | 489 | 0.84 | 516 | 0.96 | 541 | 1.08 | 565 | 1.20 |
| 3600[a] | — | — | — | — | 367 | 0.51 | 407 | 0.63 | 441 | 0.76 | 472 | 0.89 | 502 | 1.02 | 532 | 1.16 | 559 | 1.30 | 584 | 1.44 |
| 4200[a] | — | — | 354 | 0.54 | 391 | 0.67 | 426 | 0.80 | 460 | 0.94 | 492 | 1.08 | 520 | 1.23 | 546 | 1.38 | 572 | 1.54 | 598 | 1.70 |
| 4800 | — | — | 383 | 0.73 | 418 | 0.86 | 449 | 1.01 | 480 | 1.15 | 510 | 1.31 | 540 | 1.48 | 567 | 1.65 | 591 | 1.81 | 614 | 1.98 |
| 5400 | 371 | 0.82 | 412 | 0.97 | 446 | 1.11 | 476 | 1.26 | 504 | 1.43 | 531 | 1.59 | 558 | 1.76 | 585 | 1.94 | 611 | 2.13 | 635 | 2.32 |
| 6000 | 403 | 1.08 | 441 | 1.25 | 475 | 1.41 | 504 | 1.57 | 530 | 1.74 | 555 | 1.93 | 580 | 2.11 | 604 | 2.29 | 629 | 2.48 | 653 | 2.69 |
| 6600 | 435 | 1.39 | 472 | 1.59 | 504 | 1.78 | 532 | 1.94 | 558 | 2.12 | 582 | 2.31 | 605 | 2.51 | 628 | 2.71 | 650 | 2.91 | 672 | 3.11 |
| 7200 | 467 | 1.75 | 502 | 1.98 | 533 | 2.19 | 561 | 2.38 | 587 | 2.56 | 610 | 2.76 | 632 | 2.97 | 653 | 3.19 | 674 | 3.41 | 694 | 3.62 |
| | | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | 5-hp Oversized Motor and Drive | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Drive | | | | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[c] | |
| 3000[a] | 587 | 1.32 | 609 | 1.44 | 629 | 1.57 | 649 | 1.70 | 668 | 1.83 | 687 | 1.97 | 705 | 2.11 | 723 | 2.25 | 740 | 2.39 | 758 | 2.54 |
| 3600[a] | 608 | 1.58 | 629 | 1.72 | 650 | 1.87 | 670 | 2.01 | 689 | 2.16 | 708 | 2.30 | 725 | 2.45 | 743 | 2.61 | 760 | 2.76 | 776 | 2.92 |
| 4200[a] | 623 | 1.86 | 647 | 2.03 | 669 | 2.19 | 690 | 2.36 | 709 | 2.52 | 728 | 2.68 | 746 | 2.85 | 764 | 3.01 | 781 | 3.18 | 797 | 3.35 |
| 4800 | 636 | 2.16 | 659 | 2.34 | 682 | 2.52 | 704 | 2.71 | 726 | 2.90 | 746 | 3.09 | 765 | 3.28 | 783 | 3.46 | 801 | 3.65 | 817 | 3.83 |
| 5400 | 656 | 2.51 | 677 | 2.70 | 698 | 2.89 | 717 | 3.09 | 738 | 3.29 | 758 | 3.50 | 778 | 3.71 | 798 | 3.92 | 817 | 4.13 | 835 | 4.34 |
| 6000 | 676 | 2.90 | 698 | 3.11 | 718 | 3.32 | 737 | 3.53 | 756 | 3.74 | 774 | 3.95 | 792 | 4.17 | 810 | 4.40 | 829 | 4.63 | 847 | 4.86 |
| 6600 | 694 | 3.33 | 716 | 3.56 | 737 | 3.79 | 758 | 4.02 | 777 | 4.25 | 795 | 4.48 | 812 | 4.71 | 829 | 4.94 | 846 | 5.18 | 862 | 5.42 |
| 7200 | 715 | 3.84 | 735 | 4.06 | 755 | 4.30 | 775 | 4.55 | 795 | 4.80 | 814 | 5.05 | 833 | 5.31 | 849.90 | 5.56 | — | — | — | — |
| | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Fan Sheave BK110X1 3/16 and 1VP50X7/8 Required.
(c) Fan Sheave BK110X1 3/16 and 1VP56X7/8 Required.

## Table 67. Evaporator fan performance—15 tons—YH*180G

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | | | |
| 3000[a] | - | - | - | - | 376 | 0.39 | 417 | 0.49 | 454 | 0.59 | 488 | 0.69 | 519 | 0.80 | 547 | 0.91 | 574 | 1.02 | 600 | 1.13 |
| 3600[a] | - | - | 359 | 0.42 | 400 | 0.52 | 438 | 0.63 | 473 | 0.75 | 506 | 0.87 | 537 | 0.99 | 566 | 1.11 | 594 | 1.24 | 619 | 1.36 |
| 4200[a] | - | - | 390 | 0.59 | 427 | 0.70 | 462 | 0.81 | 495 | 0.94 | 526 | 1.07 | 555 | 1.21 | 584 | 1.34 | 611 | 1.48 | 637 | 1.63 |
| 4800 | 386 | 0.66 | 422 | 0.79 | 456 | 0.92 | 489 | 1.04 | 519 | 1.18 | 548 | 1.32 | 577 | 1.46 | 604 | 1.61 | 630 | 1.77 | 655 | 1.92 |
| 5400 | 422 | 0.90 | 456 | 1.04 | 487 | 1.18 | 517 | 1.32 | 546 | 1.47 | 574 | 1.62 | 600 | 1.77 | 626 | 1.93 | 651 | 2.09 | 675 | 2.26 |
| 6000 | 460 | 1.19 | 491 | 1.34 | 520 | 1.50 | 548 | 1.66 | 574 | 1.81 | 601 | 1.97 | 626 | 2.14 | 650 | 2.30 | 673 | 2.48 | 696 | 2.66 |
| 6600 | 498 | 1.54 | 526 | 1.70 | 554 | 1.87 | 580 | 2.05 | 605 | 2.22 | 629 | 2.39 | 653 | 2.57 | 676 | 2.75 | 699 | 2.93 | 720 | 3.11 |
| 7200 | 536 | 1.96 | 562 | 2.13 | 588 | 2.31 | 613 | 2.50 | 636 | 2.69 | 659 | 2.88 | 681 | 3.07 | 703 | 3.26 | 725 | 3.45 | 746 | 3.65 |
| | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | | 5-hp Oversized Motor and Drive | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | | | | 3HP Standard Motor and High Static Drive Accessory[c] | | | | | | | |
| 3000[a] | 624 | 1.25 | 646 | 1.36 | 667 | 1.49 | 687 | 1.62 | 706 | 1.74 | 725 | 1.88 | 743 | 2.01 | 760 | 2.15 | 777 | 2.29 | 794 | 2.43 |
| 3600[a] | 643 | 1.49 | 667 | 1.62 | 689 | 1.76 | 710 | 1.89 | 731 | 2.03 | 750 | 2.17 | 769 | 2.31 | 788 | 2.45 | 804 | 2.60 | 821 | 2.76 |
| 4200[a] | 662 | 1.77 | 685 | 1.92 | 708 | 2.07 | 729 | 2.21 | 750 | 2.37 | 770 | 2.52 | 789 | 2.67 | 808 | 2.83 | 826 | 2.99 | 844 | 3.14 |
| 4800 | 679 | 2.08 | 703 | 2.24 | 725 | 2.41 | 747 | 2.57 | 768 | 2.74 | 789 | 2.91 | 808 | 3.08 | 827 | 3.25 | 845 | 3.42 | 863 | 3.59 |
| 5400 | 698 | 2.44 | 721 | 2.61 | 743 | 2.79 | 764 | 2.97 | 785 | 3.15 | 806 | 3.33 | 825 | 3.52 | 845 | 3.70 | 863 | 3.89 | 881 | 4.08 |
| 6000 | 719 | 2.84 | 741 | 3.03 | 762 | 3.22 | 783 | 3.41 | 803 | 3.61 | 823 | 3.80 | 842 | 4.00 | 862 | 4.20 | 880 | 4.40 | 898 | 4.61 |
| 6600 | 742 | 3.30 | 763 | 3.50 | 783 | 3.70 | 803 | 3.91 | 823 | 4.11 | 842 | 4.32 | 861 | 4.54 | 879 | 4.75 | 897 | 4.97 | 915 | 5.19 |
| 7200 | 766 | 3.84 | 786 | 4.05 | 806 | 4.26 | 825 | 4.47 | 844 | 4.68 | 863 | 4.91 | 881 | 5.13 | 899 | 5.36 | 916 | 5.58 | - | - |
| | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Fan Sheave BK110X1 3/16 and 1VP50X7/8 Required.
(c) Fan Sheave BK110X1 3/16 and 1VP56X7/8 Required.

## Table 68. Evaporator fan performance—15 tons—YHD180G—dehumidification (hot gas reheat) option

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | 3-hp Standard Motor and Drive | | | | | | | | | |
| 3000[a] | — | — | — | — | 355 | 0.40 | 393 | 0.51 | 429 | 0.63 | 463 | 0.74 | 493 | 0.86 | 520 | 0.98 | 545 | 1.10 | 568 | 1.22 |
| 3600[a] | — | — | — | — | 377 | 0.53 | 415 | 0.66 | 448 | 0.79 | 478 | 0.91 | 509 | 1.05 | 538 | 1.19 | 565 | 1.33 | 590 | 1.47 |
| 4200[a] | — | — | 366 | 0.58 | 402 | 0.71 | 436 | 0.84 | 470 | 0.98 | 501 | 1.13 | 528 | 1.28 | 554 | 1.43 | 580 | 1.59 | 606 | 1.75 |
| 4800 | 358 | 0.66 | 397 | 0.78 | 430 | 0.92 | 461 | 1.07 | 492 | 1.21 | 522 | 1.38 | 551 | 1.54 | 576 | 1.71 | 600 | 1.88 | 623 | 2.05 |
| 5400 | 393 | 0.90 | 430 | 1.04 | 461 | 1.19 | 490 | 1.35 | 517 | 1.51 | 545 | 1.67 | 572 | 1.85 | 598 | 2.04 | 623 | 2.23 | 646 | 2.41 |
| 6000 | 428 | 1.19 | 463 | 1.35 | 493 | 1.51 | 520 | 1.68 | 546 | 1.86 | 571 | 2.04 | 595 | 2.22 | 619 | 2.41 | 644 | 2.61 | 667 | 2.82 |
| 6600 | 463 | 1.54 | 496 | 1.73 | 525 | 1.90 | 552 | 2.07 | 576 | 2.26 | 599 | 2.46 | 622 | 2.66 | 644 | 2.86 | 666 | 3.06 | 688 | 3.27 |
| 7200 | 499 | 1.96 | 531 | 2.18 | 559 | 2.36 | 584 | 2.55 | 607 | 2.74 | 630 | 2.95 | 651 | 3.17 | 672 | 3.38 | 692 | 3.60 | 713 | 3.82 |
| | | | | | | | | | | | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | 5-hp Oversized Motor and Drive | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 3-hp Standard Motor and Drive | | | | 3-hp Standard Motor and High Static Drive Accessory[b] | | | | | | | | | | | | | | 3HP Standard Motor and High Static Drive Accessory[c] | |
| 3000[a] | 591 | 1.34 | 612 | 1.46 | 632 | 1.59 | 652 | 1.72 | 671 | 1.86 | 690 | 1.99 | 708 | 2.13 | 725 | 2.27 | 743 | 2.42 | 761 | 2.56 |
| 3600[a] | 613 | 1.61 | 634 | 1.76 | 655 | 1.90 | 674 | 2.04 | 693 | 2.19 | 712 | 2.34 | 729 | 2.49 | 746 | 2.64 | 763 | 2.79 | 780 | 2.95 |
| 4200[a] | 631 | 1.91 | 654 | 2.08 | 676 | 2.24 | 696 | 2.40 | 715 | 2.57 | 734 | 2.73 | 752 | 2.90 | 769 | 3.07 | 786 | 3.23 | 802 | 3.41 |
| 4800 | 645 | 2.23 | 668 | 2.41 | 691 | 2.60 | 713 | 2.79 | 734 | 2.98 | 754 | 3.16 | 772 | 3.35 | 790 | 3.54 | 807 | 3.72 | 824 | 3.91 |
| 5400 | 667 | 2.60 | 687 | 2.79 | 708 | 2.99 | 728 | 3.19 | 748 | 3.40 | 768 | 3.60 | 788 | 3.81 | 807 | 4.03 | 826 | 4.24 | 844 | 4.45 |
| 6000 | 690 | 3.03 | 711 | 3.24 | 730 | 3.45 | 749 | 3.66 | 767 | 3.87 | 785 | 4.09 | 803 | 4.31 | 822 | 4.54 | 840 | 4.77 | 858 | 5.00 |
| 6600 | 711 | 3.50 | 732 | 3.73 | 753 | 3.96 | 772 | 4.20 | 790 | 4.42 | 808 | 4.66 | 825 | 4.88 | 841 | 5.12 | 858 | 5.36 | 874 | 5.60 |
| 7200 | 733 | 4.04 | 753 | 4.28 | 773 | 4.52 | 793 | 4.77 | 812 | 5.02 | 831 | 5.28 | 848.25 | 5.53 | — | — | — | — | — | — |
| | | | | | 5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Fan Sheave BK110X1 3/16 and 1VP50X7/8 Required.

(c) Fan Sheave BK110X1 3/16 and 1VP56X7/8 Required.

### Table 69. Evaporator fan performance— 17½ tons — TH*210G

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 3500[a] | — | — | — | — | — | — | — | — | — | — | 470 | 0.86 | 501 | 1.00 | 531 | 1.13 | 558 | 1.27 | 582 | 1.41 |
| 4200[a] | — | — | — | — | — | — | — | — | 462 | 0.94 | 494 | 1.09 | 521 | 1.24 | 547 | 1.39 | 573 | 1.54 | 599 | 1.71 |
| 4900[a] | — | — | — | — | — | — | 455 | 1.06 | 485 | 1.20 | 515 | 1.36 | 544 | 1.53 | 572 | 1.70 | 596 | 1.88 | 619 | 2.05 |
| 5600 | — | — | — | — | 458 | 1.21 | 487 | 1.37 | 514 | 1.54 | 541 | 1.71 | 567 | 1.88 | 593 | 2.07 | 619 | 2.26 | 643 | 2.46 |
| 6300 | — | — | 459 | 1.43 | 492 | 1.60 | 520 | 1.76 | 546 | 1.94 | 570 | 2.13 | 594 | 2.32 | 618 | 2.51 | 641 | 2.70 | 664 | 2.91 |
| 7000 | 460 | 1.65 | 495 | 1.86 | 526 | 2.07 | 554 | 2.24 | 580 | 2.42 | 603 | 2.63 | 625 | 2.83 | 646 | 3.05 | 668 | 3.25 | 689 | 3.47 |
| 7700 | 498 | 2.13 | 531 | 2.38 | 562 | 2.62 | 589 | 2.82 | 614 | 3.02 | 637 | 3.22 | 658 | 3.44 | 678 | 3.66 | 698 | 3.90 | 717 | 4.13 |
| 8400 | 537 | 2.71 | 568 | 2.99 | 597 | 3.26 | 624 | 3.50 | 648 | 3.71 | 670 | 3.93 | 692 | 4.15 | 711 | 4.38 | 730 | 4.63 | 748 | 4.88 |
| | 5-hp Standard Motor and Drive | | | | | | | | | | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Drive | | | | | | | | | | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | |
| 3500[a] | 605 | 1.54 | 627 | 1.68 | 648 | 1.82 | 667 | 1.96 | 686 | 2.11 | 705 | 2.25 | 723 | 2.40 | 740 | 2.55 | 757 | 2.70 | 773 | 2.86 |
| 4200[a] | 624 | 1.87 | 648 | 2.04 | 670 | 2.20 | 691 | 2.36 | 710 | 2.53 | 729 | 2.69 | 747 | 2.86 | 765 | 3.03 | 782 | 3.19 | 798 | 3.36 |
| 4900[a] | 641 | 2.22 | 663 | 2.41 | 686 | 2.59 | 708 | 2.79 | 729 | 2.98 | 750 | 3.17 | 769 | 3.36 | 788 | 3.55 | 805 | 3.74 | 822 | 3.93 |
| 5600 | 665 | 2.65 | 686 | 2.85 | 706 | 3.05 | 725 | 3.25 | 745 | 3.45 | 764 | 3.66 | 784 | 3.88 | 803 | 4.09 | 822 | 4.31 | 841 | 4.54 |
| 6300 | 687 | 3.13 | 709 | 3.35 | 730 | 3.57 | 750 | 3.79 | 768 | 4.01 | 786 | 4.23 | 804 | 4.46 | 821 | 4.69 | 838 | 4.92 | 856 | 5.15 |
| 7000 | 710 | 3.68 | 731 | 3.91 | 752 | 4.15 | 772 | 4.40 | 792 | 4.64 | 811 | 4.89 | 828 | 5.14 | 845 | 5.38 | 861 | 5.62 | 878 | 5.87 |
| 7700 | 737 | 4.36 | 756 | 4.59 | 775 | 4.83 | 794 | 5.07 | 813 | 5.33 | 832 | 5.60 | 850 | 5.87 | 868 | 6.14 | 886 | 6.41 | 902 | 6.68 |
| 8400 | 767 | 5.14 | 784 | 5.38 | 802 | 5.63 | 820 | 5.89 | 837 | 6.15 | 854 | 6.41 | 872 | 6.68 | 889 | 6.97 | 907 | 7.26 | 924 | 7.55 |
| | | | | | | | 7.5-hp Oversized Motor and Drive | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

## Table 70. Evaporator fan performance — 17½ tons — THD210G — dehumidification (hot gas reheat) option

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | | | | | | | | | | | 5HP Standard Motor and Low Static Drive Accessory | | | | 5HP Standard Motor and Drive | | | | | |
| 3500[a] | — | — | — | — | — | — | — | — | — | — | 470 | 0.86 | 501 | 1.00 | 531 | 1.13 | 558 | 1.27 | 582 | 1.41 |
| 4200[a] | — | — | — | — | — | — | — | — | 462 | 0.94 | 494 | 1.09 | 521 | 1.24 | 547 | 1.39 | 573 | 1.54 | 599 | 1.71 |
| 4900[a] | — | — | — | — | — | — | 455 | 1.06 | 485 | 1.20 | 515 | 1.36 | 544 | 1.53 | 572 | 1.70 | 596 | 1.88 | 619 | 2.05 |
| 5600 | — | — | — | — | 458 | 1.21 | 487 | 1.37 | 514 | 1.54 | 541 | 1.71 | 567 | 1.88 | 593 | 2.07 | 619 | 2.26 | 643 | 2.46 |
| 6300 | — | — | 459 | 1.43 | 492 | 1.60 | 520 | 1.76 | 546 | 1.94 | 570 | 2.13 | 594 | 2.32 | 618 | 2.51 | 641 | 2.70 | 664 | 2.91 |
| 7000 | 460 | 1.65 | 495 | 1.86 | 526 | 2.07 | 554 | 2.24 | 580 | 2.42 | 603 | 2.63 | 625 | 2.83 | 646 | 3.05 | 668 | 3.25 | 689 | 3.47 |
| 7700 | 498 | 2.13 | 531 | 2.38 | 562 | 2.62 | 589 | 2.82 | 614 | 3.02 | 637 | 3.22 | 658 | 3.44 | 678 | 3.66 | 698 | 3.90 | 717 | 4.13 |
| 8400 | 537 | 2.71 | 568 | 2.99 | 597 | 3.26 | 624 | 3.50 | 648 | 3.71 | 670 | 3.93 | 692 | 4.15 | 711 | 4.38 | 730 | 4.63 | 748 | 4.88 |
| | | | | | | | | | | | | | 5HP Standard Motor and High Static Drive Accessory | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5HP Standard Motor and Drive | | | | | | | | | | 5HP Standard Motor and High Static Drive Accessory | | | | | | | | | |
| 3500[a] | 605 | 1.54 | 627 | 1.68 | 648 | 1.82 | 667 | 1.96 | 686 | 2.11 | 705 | 2.25 | 723 | 2.40 | 740 | 2.55 | 757 | 2.70 | 773 | 2.86 |
| 4200[a] | 624 | 1.87 | 648 | 2.04 | 670 | 2.20 | 691 | 2.36 | 710 | 2.53 | 729 | 2.69 | 747 | 2.86 | 765 | 3.03 | 782 | 3.19 | 798 | 3.36 |
| 4900[a] | 641 | 2.22 | 663 | 2.41 | 686 | 2.59 | 708 | 2.79 | 729 | 2.98 | 750 | 3.17 | 769 | 3.36 | 788 | 3.55 | 805 | 3.74 | 822 | 3.93 |
| 5600 | 665 | 2.65 | 686 | 2.85 | 706 | 3.05 | 725 | 3.25 | 745 | 3.45 | 764 | 3.66 | 784 | 3.88 | 803 | 4.09 | 822 | 4.31 | 841 | 4.54 |
| 6300 | 687 | 3.13 | 709 | 3.35 | 730 | 3.57 | 750 | 3.79 | 768 | 4.01 | 786 | 4.23 | 804 | 4.46 | 821 | 4.69 | 838 | 4.92 | 856 | 5.15 |
| 7000 | 710 | 3.68 | 731 | 3.91 | 752 | 4.15 | 772 | 4.40 | 792 | 4.64 | 811 | 4.89 | 828 | 5.14 | 845 | 5.38 | 861 | 5.62 | 878 | 5.87 |
| 7700 | 737 | 4.36 | 756 | 4.59 | 775 | 4.83 | 794 | 5.07 | 813 | 5.33 | 832 | 5.60 | 850 | 5.87 | 868 | 6.14 | 886 | 6.41 | 902 | 6.68 |
| 8400 | 767 | 5.14 | 784 | 5.38 | 802 | 5.63 | 820 | 5.89 | 837 | 6.15 | 854 | 6.41 | 872 | 6.68 | 889 | 6.97 | 907 | 7.26 | 924 | 7.55 |
| | | | | | | | 7.5HP Oversized Motor and Drive | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

## Table 71. Evaporator fan performance—17½ tons—YH*210G

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | | | 5-hp Standard Motor and Drive | | | | | | | |
| 3500[a] | — | — | — | — | — | — | — | — | — | — | 476 | 0.89 | 508 | 1.02 | 537 | 1.16 | 563 | 1.30 | 587 | 1.43 |
| 4200[a] | — | — | — | — | — | — | — | — | 472 | 0.99 | 502 | 1.14 | 529 | 1.28 | 555 | 1.43 | 581 | 1.59 | 607 | 1.76 |
| 4900[a] | — | — | — | — | — | — | 468 | 1.12 | 497 | 1.27 | 527 | 1.43 | 556 | 1.60 | 582 | 1.78 | 605 | 1.95 | 628 | 2.12 |
| 5600 | — | — | — | — | 474 | 1.29 | 501 | 1.46 | 528 | 1.63 | 555 | 1.80 | 581 | 1.98 | 607 | 2.17 | 632 | 2.37 | 655 | 2.56 |
| 6300 | — | — | 482 | 1.55 | 512 | 1.71 | 538 | 1.88 | 563 | 2.07 | 587 | 2.26 | 610 | 2.45 | 634 | 2.64 | 657 | 2.84 | 680 | 3.06 |
| 7000 | 490 | 1.84 | 522 | 2.04 | 550 | 2.22 | 576 | 2.39 | 599 | 2.59 | 621 | 2.80 | 643 | 3.01 | 665 | 3.22 | 686 | 3.43 | 707 | 3.65 |
| 7700 | 532 | 2.39 | 562 | 2.62 | 589 | 2.83 | 614 | 3.02 | 637 | 3.22 | 658 | 3.44 | 679 | 3.67 | 698 | 3.90 | 718 | 4.13 | 737 | 4.36 |
| 8400 | 574 | 3.03 | 603 | 3.30 | 629 | 3.55 | 653 | 3.76 | 675 | 3.97 | 696 | 4.20 | 715 | 4.43 | 734 | 4.68 | 752 | 4.93 | 770 | 5.18 |
| | | | | | | | | | | | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Drive | | | | | | | | | | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | |
| 3500[a] | 610 | 1.57 | 631 | 1.71 | 652 | 1.85 | 672 | 1.99 | 690 | 2.14 | 709 | 2.28 | 726 | 2.43 | 744 | 2.58 | 760 | 2.73 | 777 | 2.89 |
| 4200[a] | 632 | 1.92 | 655 | 2.09 | 677 | 2.25 | 697 | 2.41 | 716 | 2.58 | 735 | 2.74 | 753 | 2.91 | 770 | 3.08 | 787 | 3.24 | 803 | 3.42 |
| 4900[a] | 650 | 2.30 | 673 | 2.48 | 695 | 2.67 | 717 | 2.86 | 738 | 3.06 | 758 | 3.25 | 777 | 3.44 | 795 | 3.63 | 812 | 3.82 | 829 | 4.01 |
| 5600 | 677 | 2.76 | 697 | 2.96 | 717 | 3.15 | 736 | 3.36 | 755 | 3.56 | 775 | 3.78 | 795 | 3.99 | 814 | 4.21 | 832 | 4.43 | 850 | 4.65 |
| 6300 | 702 | 3.28 | 724 | 3.50 | 744 | 3.72 | 762 | 3.94 | 781 | 4.17 | 798 | 4.39 | 816 | 4.61 | 833 | 4.84 | 850 | 5.08 | 868 | 5.32 |
| 7000 | 727 | 3.88 | 748 | 4.11 | 769 | 4.36 | 789 | 4.60 | 808 | 4.85 | 826 | 5.10 | 843 | 5.34 | 859 | 5.59 | 875 | 5.83 | 891 | 6.08 |
| 7700 | 756 | 4.59 | 775 | 4.83 | 794 | 5.08 | 813 | 5.34 | 832 | 5.60 | 851 | 5.87 | 869 | 6.15 | 886 | 6.41 | 903 | 6.69 | 918 | 6.96 |
| 8400 | 788 | 5.44 | 806 | 5.69 | 824 | 5.95 | 841 | 6.21 | 858 | 6.46 | 876 | 6.74 | 893 | 7.03 | 910 | 7.32 | 927 | 7.61 | 944 | 7.91 |
| | | | | | 7.5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
8. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

## Table 72. Evaporator fan performance — 17½ tons — YHD210G — dehumidification (hot gas reheat) option

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | | | | | 5HP Standard Motor and Low Static Drive Accessory | | | | 5HP Standard Motor and Drive | | | | | | | | | | | |
| 5600 | — | — | — | — | 474 | 1.29 | 501 | 1.46 | 528 | 1.63 | 555 | 1.80 | 581 | 1.98 | 607 | 2.17 | 632 | 2.37 | 655 | 2.56 |
| 6300 | — | — | 482 | 1.55[a] | 512 | 1.71 | 538 | 1.88 | 563 | 2.07 | 587 | 2.26 | 610 | 2.45 | 634 | 2.64 | 657 | 2.84 | 680 | 3.06 |
| 7000 | 490 | 1.84[a] | 522 | 2.04 | 550 | 2.22 | 576 | 2.39 | 599 | 2.59 | 621 | 2.80 | 643 | 3.01 | 665 | 3.22 | 686 | 3.43 | 707 | 3.65 |
| 7700 | 532 | 2.39 | 562 | 2.62 | 589 | 2.83 | 614 | 3.02 | 637 | 3.22 | 658 | 3.44 | 679 | 3.67 | 698 | 3.90 | 718 | 4.13 | 737 | 4.36 |
| 8400 | 574 | 3.03 | 603 | 3.30 | 629 | 3.55 | 653 | 3.76 | 675 | 3.97 | 696 | 4.20 | 715 | 4.43 | 734 | 4.68 | 752 | 4.93 | 770 | 5.18 |
| | | | | | | | | | | | 5HP Standard Motor and High Static Drive Accessory | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | | | 5HP Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | | | |
| 5600 | 677 | 2.76[b] | 697 | 2.96 | 717 | 3.15 | 736 | 3.36 | 755 | 3.56 | 775 | 3.78 | 795 | 3.99 | 814 | 4.21 | 832 | 4.43 | 850 | 4.65 |
| 6300 | 702 | 3.28 | 724 | 3.50 | 744 | 3.72 | 762 | 3.94 | 781 | 4.17 | 798 | 4.39 | 816 | 4.61 | 833 | 4.84 | 850 | 5.08 | 868 | 5.32 |
| 7000 | 727 | 3.88 | 748 | 4.11 | 769 | 4.36 | 789 | 4.60 | 808 | 4.85 | 826 | 5.10 | 843 | 5.34 | 859 | 5.59 | 875 | 5.83 | 891 | 6.08 |
| 7700 | 756 | 4.59 | 775 | 4.83 | 794 | 5.08 | 813 | 5.34 | 832 | 5.60 | 851 | 5.87 | 869 | 6.15 | 886 | 6.41 | 903 | 6.69 | 918 | 6.96 |
| 8400 | 788 | 5.44 | 806 | 5.69 | 824 | 5.95 | 841 | 6.21 | 858 | 6.46 | 876 | 6.74 | 893 | 7.03 | 910 | 7.32 | 927 | 7.61 | 944 | 7.91 |
| | | | | | 7.5HP Oversized Motor and Drive | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
8. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) 5HP Standard Motor and Low Static Drive Accessory
(b) 5HP Standard Motor and Drive

## Table 73. Evaporator fan performance—20 tons—TH*240G

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | | | 5-hp Standard Motor and Drive | | | | | | | |
| 4000[a] | — | — | — | — | — | — | — | — | 456 | 0.88 | 486 | 1.02 | 514 | 1.16 | 541 | 1.31 | 569 | 1.46 | 595 | 1.62 |
| 4800[a] | — | — | — | — | — | — | 451 | 1.02 | 481 | 1.16 | 512 | 1.32 | 541 | 1.49 | 568 | 1.66 | 592 | 1.82 | 615 | 1.99 |
| 5600[a] | — | — | — | — | 458 | 1.21 | 487 | 1.37 | 514 | 1.54 | 541 | 1.71 | 567 | 1.88 | 593 | 2.07 | 619 | 2.26 | 643 | 2.46 |
| 6400 | — | — | 464 | 1.49 | 497 | 1.66 | 525 | 1.82 | 551 | 2.00 | 575 | 2.20 | 598 | 2.39 | 622 | 2.58 | 645 | 2.78 | 667 | 2.98 |
| 7200 | 470 | 1.77 | 505 | 2.00 | 536 | 2.21 | 564 | 2.40 | 589 | 2.58 | 612 | 2.78 | 634 | 3.00 | 655 | 3.21 | 676 | 3.43 | 697 | 3.65 |
| 8000 | 514 | 2.37 | 547 | 2.63 | 577 | 2.87 | 603 | 3.10 | 628 | 3.30 | 651 | 3.51 | 672 | 3.73 | 692 | 3.96 | 711 | 4.20 | 730 | 4.44 |
| 8800 | 560 | 3.10 | 590 | 3.38 | 618 | 3.65 | 644 | 3.92 | 667 | 4.16 | 690 | 4.39 | 711 | 4.61 | 731 | 4.84 | 749 | 5.09 | 767 | 5.35 |
| 9600 | 606 | 3.97 | 633 | 4.27 | 660 | 4.59 | 685 | 4.88 | 708 | 5.15 | 729 | 5.42 | 750 | 5.66 | 769 | 5.91 | 788 | 6.16 | 805 | 6.42 |
| | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | 7.5-hp Oversized Motor and Field Supplied Motor Sheave[b] | | | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Drive | | | | | | | | | | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | |
| 4000[a] | 620 | 1.78 | 643 | 1.93 | 664 | 2.09 | 685 | 2.25 | 704 | 2.40 | 722 | 2.56 | 740 | 2.72 | 758 | 2.88 | 775 | 3.05 | 791 | 3.21 |
| 4800[a] | 638 | 2.17 | 661 | 2.35 | 684 | 2.54 | 706 | 2.72 | 727 | 2.91 | 747 | 3.10 | 767 | 3.29 | 785 | 3.48 | 802 | 3.66 | 819 | 3.85 |
| 5600[a] | 665 | 2.65 | 686 | 2.85 | 706 | 3.05 | 725 | 3.25 | 745 | 3.45 | 764 | 3.66 | 784 | 3.88 | 803 | 4.09 | 822 | 4.31 | 841 | 4.54 |
| 6400 | 690 | 3.20 | 712 | 3.43 | 733 | 3.65 | 753 | 3.88 | 772 | 4.10 | 790 | 4.32 | 807 | 4.55 | 824 | 4.78 | 841 | 5.01 | 858 | 5.25 |
| 7200 | 717 | 3.86 | 737 | 4.09 | 758 | 4.33 | 778 | 4.58 | 798 | 4.83 | 817 | 5.08 | 835 | 5.34 | 852 | 5.59 | 868 | 5.84 | 885 | 6.10 |
| 8000 | 749 | 4.68 | 768 | 4.92 | 786 | 5.16 | 804 | 5.41 | 823 | 5.66 | 841 | 5.93 | 859 | 6.20 | 877 | 6.48 | 895 | 6.76 | 912 | 7.04 |
| 8800 | 784 | 5.61 | 802 | 5.89[b] | 819 | 6.15 | 836 | 6.41 | 853 | 6.67 | 869 | 6.95 | 886 | 7.21 | 902 | 7.49 | 919 | 7.78 | 936 | 8.09 |
| 9600 | 822 | 6.69 | 839 | 6.98 | 854 | 7.26 | 870 | 7.55 | 886 | 7.85 | 901 | 8.13 | 917 | 8.42 | — | — | — | — | — | — |
| | 7.5-hp Oversized Motor and Drive | | | | | | 7.5-hp Oversized Motor and Field Supplied Motor Sheave[c] | | | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Field Supplied Fan Sheave BK190 Required. Field Supplied Belt may be necessary.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Refer to Table 85, p. 115 to determine additional static pressure drop due to other options/accessories.
8. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
9. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) 7.5-hp Oversized Motor and Field Supplied Motor Sheave[c]

(c) Field supplied motor sheave 1VP50 x 1 1/8 required.

## Table 74. Evaporator fan performance—20 tons—THD240G—dehumidification (hot gas reheat) option

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | | | 5-hp Standard Motor and Drive | | | | | | | |
| 4000[a] | — | — | — | — | — | — | — | — | 454 | 0.88 | 485 | 1.01 | 513 | 1.16 | 540 | 1.30 | 568 | 1.46 | 594 | 1.61 |
| 4800[a] | — | — | — | — | — | — | 449 | 1.01 | 480 | 1.15 | 510 | 1.31 | 540 | 1.48 | 567 | 1.65 | 591 | 1.81 | 614 | 1.98 |
| 5600[a] | — | — | — | — | 456 | 1.20 | 485 | 1.36 | 512 | 1.53 | 539 | 1.70 | 565 | 1.87 | 591 | 2.05 | 617 | 2.24 | 641 | 2.44 |
| 6400 | — | — | 461 | 1.47 | 494 | 1.65 | 523 | 1.81 | 549 | 1.99 | 573 | 2.18 | 596 | 2.37 | 619 | 2.56 | 642 | 2.76 | 665 | 2.96 |
| 7200 | 467 | 1.75 | 502 | 1.98 | 533 | 2.19 | 561 | 2.38 | 587 | 2.56 | 610 | 2.76 | 632 | 2.97 | 653 | 3.19 | 674 | 3.41 | 694 | 3.62 |
| 8000 | 511 | 2.35 | 544 | 2.60 | 573 | 2.85 | 601 | 3.08 | 625 | 3.28 | 648 | 3.48 | 670 | 3.70 | 690 | 3.93 | 709 | 4.16 | 728 | 4.41 |
| 8800 | 556 | 3.06 | 586 | 3.34 | 614 | 3.62 | 640 | 3.89 | 664 | 4.13 | 687 | 4.36 | 708 | 4.58 | 728 | 4.80 | 746 | 5.05 | 764 | 5.31 |
| 9600 | 601 | 3.91 | 629 | 4.22 | 656 | 4.53 | 680 | 4.82 | 704 | 5.12 | 726 | 5.38 | 746 | 5.62 | 766 | 5.87 | 784 | 6.10 | 802 | 6.37 |
| | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | 7.5-hp Oversized Motor and Field Supplied Motor Sheave[b] | | | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Drive | | | | | | | | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | |
| 4000[a] | 619 | 1.77 | 642 | 1.93 | 663 | 2.08 | 683 | 2.24 | 703 | 2.39 | 721 | 2.55 | 739 | 2.71 | 757 | 2.87 | 774 | 3.04 | 790 | 3.20 |
| 4800[a] | 636 | 2.16 | 659 | 2.34 | 682 | 2.52 | 704 | 2.71 | 726 | 2.90 | 746 | 3.09 | 765 | 3.28 | 783 | 3.46 | 801 | 3.65 | 817 | 3.83 |
| 5600[a] | 663 | 2.64 | 684 | 2.83 | 704 | 3.03 | 724 | 3.23 | 743 | 3.43 | 763 | 3.64 | 782 | 3.86 | 802 | 4.08 | 821 | 4.29 | 839 | 4.51 |
| 6400 | 688 | 3.18 | 710 | 3.40 | 731 | 3.63 | 751 | 3.85 | 770 | 4.08 | 788 | 4.30 | 805 | 4.52 | 822 | 4.75 | 839 | 4.98 | 856 | 5.22 |
| 7200 | 715 | 3.84 | 735 | 4.06 | 755 | 4.30 | 775 | 4.55 | 795 | 4.80 | 814 | 5.05 | 833 | 5.31 | 850 | 5.56 | 866 | 5.81 | 882 | 6.06 |
| 8000 | 747 | 4.65 | 765 | 4.89 | 784 | 5.12 | 802 | 5.37 | 820 | 5.62 | 838 | 5.89 | 856 | 6.16 | 874 | 6.44 | 892 | 6.71 | 909 | 7.00 |
| 8800 | 782 | 5.57 | 799 | 5.84[c] | 816 | 6.10 | 833 | 6.36 | 850 | 6.63 | 866 | 6.89 | 883 | 7.16 | 899 | 7.44 | 916 | 7.73 | 933 | 8.03 |
| 9600 | 819 | 6.64 | 835 | 6.92 | 851 | 7.21 | 867 | 7.49 | 883 | 7.79 | 898 | 8.08 | 914 | 8.36 | — | — | — | — | — | — |
| | 7.5-hp Oversized Motor and Field Supplied Motor Sheave[b] | | | | | | | | 7.5-hp Oversized Motor and Drive | | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Field supplied motor sheave 1VP50 x 1 1/8 required.

(c) 7.5-hp Oversized Motor and Field Supplied Motor Sheave[b]

### Table 75. Evaporator fan performance—20 tons—YH*240G

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | | | 5-hp Standard Motor and Drive | | | | | | | |
| 4000[a] | — | — | — | — | — | — | — | — | 465 | 0.92 | 494 | 1.06 | 522 | 1.20 | 549 | 1.35 | 576 | 1.51 | 602 | 1.66 |
| 4800[a] | — | — | — | — | — | — | 463 | 1.07 | 493 | 1.22 | 524 | 1.39 | 552 | 1.56 | 578 | 1.72 | 601 | 1.89 | 624 | 2.06 |
| 5600[a] | — | — | — | — | 474 | 1.29 | 501 | 1.46 | 528 | 1.63 | 555 | 1.80 | 581 | 1.98 | 607 | 2.17 | 632 | 2.37 | 655 | 2.56 |
| 6400 | 454 | 1.43 | 487 | 1.61 | 517 | 1.77 | 544 | 1.95 | 568 | 2.14 | 591 | 2.33 | 615 | 2.52 | 638 | 2.72 | 661 | 2.92 | 684 | 3.14 |
| 7200 | 502 | 1.98 | 533 | 2.19 | 561 | 2.38 | 587 | 2.56 | 610 | 2.76 | 632 | 2.97 | 653 | 3.19 | 674 | 3.41 | 695 | 3.63 | 715 | 3.84 |
| 8000 | 550 | 2.64 | 579 | 2.89 | 606 | 3.12 | 631 | 3.32 | 653 | 3.53 | 674 | 3.75 | 694 | 3.98 | 713 | 4.22 | 732 | 4.47 | 751 | 4.70 |
| 8800 | 599 | 3.46 | 627 | 3.75 | 652 | 4.00 | 675 | 4.23 | 697 | 4.45 | 718 | 4.69 | 737 | 4.93 | 755 | 5.18 | 773 | 5.44 | 790 | 5.71 |
| 9600 | 648 | 4.44 | 674 | 4.74 | 698 | 5.04 | 721 | 5.33 | 742 | 5.56 | 761 | 5.80 | 780 | 6.05 | 798 | 6.30 | 815 | 6.58 | 832 | 6.86 |
| | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | 7.5-hp Oversized Motor and Field Supplied Motor Sheave[b] | | | | | | | | 7.5-hp Oversized Motor and Drive | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor Drive | | | | | | | | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | |
| 4000[a] | 627 | 1.82 | 649 | 1.98 | 670 | 2.13 | 690 | 2.29 | 709 | 2.45 | 728 | 2.61 | 745 | 2.77 | 763 | 2.93 | 779 | 3.09 | 796 | 3.26 |
| 4800[a] | 647 | 2.24 | 670 | 2.42 | 693 | 2.61 | 714 | 2.80 | 735 | 2.99 | 755 | 3.18 | 774 | 3.36 | 792 | 3.55 | 809 | 3.74 | 825 | 3.92 |
| 5600[a] | 677 | 2.76 | 697 | 2.96 | 717 | 3.15 | 736 | 3.36 | 755 | 3.56 | 775 | 3.78 | 795 | 3.99 | 814 | 4.21 | 832 | 4.43 | 850 | 4.65 |
| 6400 | 706 | 3.36 | 727 | 3.58 | 748 | 3.81 | 766 | 4.03 | 784 | 4.26 | 802 | 4.48 | 819 | 4.71 | 836 | 4.94 | 853 | 5.18 | 870 | 5.42 |
| 7200 | 735 | 4.07 | 756 | 4.31 | 776 | 4.56 | 795 | 4.80 | 815 | 5.06 | 833 | 5.31 | 850 | 5.57 | 867 | 5.81 | 883 | 6.06 | 899 | 6.32 |
| 8000 | 770 | 4.94 | 788 | 5.18 | 806 | 5.44 | 825 | 5.69 | 843 | 5.96 | 861 | 6.23 | 879 | 6.51 | 896 | 6.79 | 913 | 7.07 | 930 | 7.36 |
| 8800 | 807 | 5.97 | 825 | 6.23 | 841 | 6.50 | 858 | 6.77 | 875 | 7.03 | 891 | 7.30 | 908 | 7.58 | 925 | 7.89 | 941 | 8.19 | 958 | 8.49 |
| 9600 | 848 | 7.14 | 864 | 7.43 | 879 | 7.73 | 895 | 8.01 | 911 | 8.30 | 926 | 8.59 | — | — | — | — | — | — | — | — |
| | 7.5-hp Oversized Motor and Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Field supplied motor sheave 1VP50 x 1 1/8 required.

## Table 76. Evaporator fan performance—20 tons—YHD240G—dehumidification (hot gas reheat) option

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | | | 5-hp Standard Motor and Drive | | | | | | | |
| 4000[a] | — | — | — | — | — | — | — | — | 464 | 0.91 | 493 | 1.05 | 521 | 1.20 | 548 | 1.34 | 575 | 1.50 | 601 | 1.66 |
| 4800[a] | — | — | — | — | — | — | 461 | 1.07 | 492 | 1.21 | 522 | 1.38 | 551 | 1.54 | 576 | 1.71 | 600 | 1.88 | 623 | 2.05 |
| 5600[a] | — | — | — | — | 472 | 1.28 | 500 | 1.45 | 527 | 1.62 | 553 | 1.79 | 579 | 1.96 | 605 | 2.15 | 630 | 2.35 | 654 | 2.55 |
| 6400 | 451 | 1.42 | 485 | 1.60 | 515 | 1.76 | 541 | 1.93 | 566 | 2.12 | 589 | 2.32 | 613 | 2.51 | 636 | 2.70 | 658 | 2.90 | 681 | 3.12 |
| 7200 | 499 | 1.96 | 531 | 2.18 | 559 | 2.36 | 584 | 2.55 | 607 | 2.74 | 630 | 2.95 | 651 | 3.17 | 672 | 3.38 | 692 | 3.60 | 713 | 3.82 |
| 8000 | 548 | 2.64 | 577 | 2.88 | 603 | 3.10 | 627 | 3.29 | 650 | 3.50 | 672 | 3.72 | 691 | 3.95 | 711 | 4.19 | 730 | 4.43 | 748 | 4.67 |
| 8800 | 596 | 3.45 | 623 | 3.71 | 649 | 3.97 | 672 | 4.21 | 694 | 4.43 | 715 | 4.66 | 734 | 4.89 | 752 | 5.13 | 770 | 5.39 | 787 | 5.66[b] |
| 9600 | 645 | 4.41 | 670 | 4.70 | 694 | 4.98 | 717 | 5.26 | 738 | 5.52 | 758 | 5.76 | 777 | 6.00 | 795 | 6.25 | 812 | 6.52 | 829 | 6.80 |
| | | | | | | | 5-hp Standard Motor and High Static Drive Accessory | | | | 7.5-hp Oversized Motor and Field Supplied Motor Sheave[c] | | | | 7.5-hp Oversized Motor and Drive | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | | 1.6 | | 1.7 | | 1.8 | | 1.9 | | 2.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 5-hp Standard Motor Drive | | | | | | | | 5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | |
| 4000[a] | 626 | 1.81 | 648 | 1.97 | 669 | 2.12 | 689 | 2.28 | 708 | 2.44 | 726 | 2.60 | 744 | 2.76 | 762 | 2.92 | 778 | 3.08 | 795 | 3.25 |
| 4800[a] | 645 | 2.23 | 668 | 2.41 | 691 | 2.60 | 713 | 2.79 | 734 | 2.98 | 754 | 3.16 | 772 | 3.35 | 790 | 3.54 | 807 | 3.72 | 824 | 3.91 |
| 5600[a] | 675 | 2.74 | 695 | 2.94 | 715 | 3.14 | 734 | 3.34 | 753 | 3.54 | 773 | 3.76 | 793 | 3.97 | 812 | 4.19 | 831 | 4.41 | 849 | 4.63 |
| 6400 | 704 | 3.34 | 725 | 3.56 | 746 | 3.79 | 764 | 4.01 | 783 | 4.23 | 800 | 4.46 | 817 | 4.69 | 834 | 4.91 | 851 | 5.15 | 868 | 5.39 |
| 7200 | 733 | 4.04 | 753 | 4.28 | 773 | 4.52 | 793 | 4.77 | 812 | 5.02 | 831 | 5.28 | 848 | 5.53 | 865 | 5.78 | 881 | 6.03 | 896 | 6.29 |
| 8000 | 767 | 4.91 | 785 | 5.15 | 804 | 5.40 | 822 | 5.65 | 840 | 5.92 | 858 | 6.19 | 876 | 6.46 | 894 | 6.75 | 911 | 7.03 | 927 | 7.31 |
| 8800 | 805 | 5.93[d] | 822 | 6.19 | 839 | 6.45 | 855 | 6.72 | 872 | 6.99 | 888 | 7.25 | 905 | 7.54 | 922 | 7.83 | 938 | 8.13 | 955 | 8.43 |
| 9600 | 845 | 7.09 | 861 | 7.38 | 876 | 7.67 | 892 | 7.96 | 907 | 8.24 | 923 | 8.52 | — | — | — | — | — | — | — | — |
| | 7.5-hp Oversized Motor and Field Supplied Motor Sheave[c] | | | | | | | | 7.5-hp Oversized Motor and Drive | | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) 5-hp Standard Motor and High Static Drive Accessory
(c) Field supplied motor sheave 1VP50 x 1 1/8 required.
(d) 7.5-hp Oversized Motor and Field Supplied Motor Sheave[c]

## Table 77. Evaporator fan performance—25 tons—TH*300G

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7.5-hp Standard Motor and Drive | | | | | | | | | | | | | | | | | | | | |
| 5000[a] | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 575 | 1.75 | 599 | 1.93 | 622 | 2.10 |
| 6500[a] | — | — | — | — | — | — | — | — | — | — | 579 | 2.26 | 603 | 2.46 | 626 | 2.65 | 648 | 2.85 | 671 | 3.06 |
| 7000[a] | — | — | — | — | — | — | — | — | 580 | 2.42 | 603 | 2.63 | 625 | 2.83 | 646 | 3.05 | 668 | 3.25 | 689 | 3.47 |
| 7500[a] | — | — | — | — | — | — | 579 | 2.65 | 604 | 2.84 | 627 | 3.04 | 648 | 3.26 | 669 | 3.48 | 689 | 3.71 | 709 | 3.93 |
| 8000 | — | — | — | — | 577 | 2.87 | 603 | 3.10 | 628 | 3.30 | 651 | 3.51 | 672 | 3.73 | 692 | 3.96 | 711 | 4.20 | 730 | 4.44 |
| 8500 | — | — | 574 | 3.09 | 602 | 3.34 | 628 | 3.60 | 653 | 3.83 | 675 | 4.04 | 696 | 4.25 | 716 | 4.49 | 735 | 4.74 | 753 | 5.00 |
| 9000 | 572 | 3.31 | 600 | 3.58 | 628 | 3.87 | 654 | 4.15 | 678 | 4.40 | 700 | 4.63 | 720 | 4.86 | 740 | 5.08 | 759 | 5.34 | 777 | 5.60 |
| 9500 | 600 | 3.85 | 628 | 4.17 | 655 | 4.47 | 680 | 4.75 | 703 | 5.02 | 724 | 5.27 | 745 | 5.52 | 764 | 5.76 | 783 | 6.00 | 801 | 6.28 |
| 10000 | 627 | 4.42 | 656 | 4.78 | 681 | 5.09 | 705 | 5.41 | 728 | 5.71 | 749 | 5.99 | 770 | 6.26 | 789 | 6.50 | 807 | 6.76 | 825 | 7.02 |
| 10500 | 657 | 5.13 | 683 | 5.45 | 708 | 5.80 | 731 | 6.13 | 753 | 6.44 | 775 | 6.76 | 794 | 7.04 | 813 | 7.31 | 831 | 7.57 | 849 | 7.84 |
| 11000 | 685 | 5.81 | 711 | 6.21 | 735 | 6.58 | 758 | 6.93 | 778 | 7.23 | 800 | 7.58 | 819 | 7.88 | 838 | 8.19 | 856 | 8.45 | — | — |
| 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7.5-hp Standard Motor and Drive | | | | | | | | | | |
| 5000[a] | 644 | 2.28 | 666 | 2.46 | 688 | 2.65 | 710 | 2.85 | 731 | 3.04 |
| 6500[a] | 693 | 3.28 | 715 | 3.50 | 736 | 3.73 | 757 | 3.96 | 775 | 4.19 |
| 7000[a] | 710 | 3.68 | 731 | 3.91 | 752 | 4.15 | 772 | 4.40 | 792 | 4.64 |
| 7500[a] | 729 | 4.16 | 748 | 4.38 | 768 | 4.62 | 787 | 4.87 | 807 | 5.13 |
| 8000 | 749 | 4.68 | 768 | 4.92 | 786 | 5.16 | 804 | 5.41 | 823 | 5.66 |
| 8500 | 771 | 5.25 | 789 | 5.51 | 806 | 5.76 | 824 | 6.02 | 841 | 6.28 |
| 9000 | 794 | 5.87 | 811 | 6.14 | 827 | 6.41 | 844 | 6.69 | 861 | 6.95 |
| 9500 | 817 | 6.55 | 834 | 6.83 | 850 | 7.12 | 866 | 7.41 | 882 | 7.69 |
| 10000 | 841 | 7.29 | 857 | 7.59 | 873 | 7.87 | 888 | 8.18 | 904 | 8.48 |
| 10500 | 865 | 8.11 | 881 | 8.41 | — | — | — | — | — | — |
| 11000 | — | — | — | — | — | — | — | — | — | — |
| 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

## Table 78. Evaporator fan performance—25 tons—THD300G—dehumidification (hot gas reheat) option

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 7.5-hp Standard Motor and Low Static Drive | | | | | | | | | | | | | | | | | | | |
| 5000[a] | - | - | - | - | - | - | - | - | - | - | - | - | 602 | 1.57 | 633 | 1.73 | 661 | 1.89 | 688 | 2.05 |
| 6500[a] | - | - | - | - | - | - | 587 | 2.00 | 614 | 2.18 | 640 | 2.35 | 665 | 2.53 | 690 | 2.70 | 714 | 2.89 | 739 | 3.08 |
| 7000[a] | - | - | - | - | 588 | 2.19 | 616 | 2.39 | 641 | 2.57 | 666 | 2.75 | 690 | 2.94 | 713 | 3.13 | 736 | 3.32 | 759 | 3.52 |
| 7500[a] | - | - | 593 | 2.42 | 620 | 2.63 | 645 | 2.82 | 670 | 3.02 | 693 | 3.21 | 716 | 3.41 | 738 | 3.61 | 760 | 3.82 | 782 | 4.02 |
| 8000 | 597 | 2.66 | 625 | 2.89 | 650 | 3.09 | 674 | 3.29 | 698 | 3.51 | 722 | 3.73 | 743 | 3.93 | 765 | 4.15 | 785 | 4.36 | 806 | 4.57 |
| 8500 | 632 | 3.18 | 658 | 3.41 | 683 | 3.64 | 706 | 3.86 | 728 | 4.07 | 750 | 4.29 | 771 | 4.51 | 792 | 4.74 | 812 | 4.97 | 832 | 5.20 |
| 9000 | 666 | 3.74 | 692 | 4.00 | 714 | 4.22 | 737 | 4.46 | 757 | 4.67 | 779 | 4.92 | 799 | 5.15 | 819 | 5.39 | 839 | 5.64 | 858 | 5.88 |
| 9500 | 701 | 4.38 | 726 | 4.67 | 746 | 4.87 | 769 | 5.15 | 788 | 5.36 | 808 | 5.61 | 828 | 5.86 | 847 | 6.10 | 866 | 6.36 | 885 | 6.62 |
| 10000 | 737 | 5.11 | 760 | 5.39 | 778 | 5.60 | 800 | 5.89 | 819 | 6.11 | 838 | 6.37 | 858 | 6.64 | 876 | 6.89 | 895 | 7.17 | 913 | 7.45 |
| 10500 | 766 | 5.76 | 792 | 6.15 | 813 | 6.44 | 832 | 6.70 | 851 | 6.96 | 869 | 7.21 | 888 | 7.50 | 905 | 7.75 | 923 | 8.05 | 941 | 8.33 |
| 11000 | 806 | 6.73 | 824 | 6.98 | 844 | 7.27 | 864 | 7.56 | 883 | 7.88 | 900 | 8.14 | 918 | 8.44 | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and Drive | | | | | | | | | | | | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 7.5-hp Standard Motor and Low Static Drive | | | | 7.5-hp Standard Motor and Drive | | | | | |
| 5000[a] | 712 | 2.20 | 736 | 2.36 | 758 | 2.52 | 779 | 2.67 | 799 | 2.82 |
| 6500[a] | 763 | 3.28 | 787 | 3.48 | 810 | 3.69 | 833 | 3.90 | 855 | 4.11 |
| 7000[a] | 782 | 3.73 | 805 | 3.94 | 827 | 4.15 | 849 | 4.37 | 871 | 4.59 |
| 7500[a] | 803 | 4.23 | 825 | 4.44 | 846 | 4.66 | 867 | 4.89 | 888 | 5.12 |
| 8000 | 826 | 4.79 | 846 | 5.01 | 867 | 5.24 | 886 | 5.47 | 906 | 5.71 |
| 8500 | 851 | 5.42 | 870 | 5.65 | 889 | 5.88 | 908 | 6.12 | 927 | 6.37 |
| 9000 | 876 | 6.11 | 895 | 6.36 | 913 | 6.61 | 931 | 6.85 | 949 | 7.09 |
| 9500 | 903 | 6.88 | 921 | 7.13 | 938 | 7.38 | 955 | 7.63 | 973 | 7.89 |
| 10000 | 930 | 7.70 | 947 | 7.97 | 964 | 8.22 | 981 | 8.50 | - | - |
| 10500 | 958 | 8.60 | - | - | - | - | - | - | - | - |
| 11000 | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

## Table 79. Evaporator fan performance—25 tons—YH*300G

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7.5-hp Standard Motor and Drive | | | | | | | | | | | | | | | | | | | | |
| 5000[a] | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 586 | 1.83 | 609 | 2.00 | 632 | 2.18 |
| 6500[a] | — | — | — | — | — | — | — | — | — | — | 596 | 2.41 | 619 | 2.60 | 642 | 2.80 | 664 | 3.00 | 687 | 3.22 |
| 7000[a] | — | — | — | — | — | — | — | — | 599 | 2.59 | 621 | 2.80 | 643 | 3.01 | 665 | 3.22 | 686 | 3.43 | 707 | 3.65 |
| 7500[a] | — | — | — | — | — | — | 603 | 2.83 | 626 | 3.03 | 648 | 3.25 | 668 | 3.47 | 688 | 3.70 | 708 | 3.92 | 728 | 4.15 |
| 8000 | — | — | — | — | 606 | 3.12 | 631 | 3.32 | 653 | 3.53 | 674 | 3.75 | 694 | 3.98 | 713 | 4.22 | 732 | 4.47 | 751 | 4.70 |
| 8500 | 582 | 3.16 | 609 | 3.41 | 635 | 3.66 | 658 | 3.87 | 680 | 4.09 | 701 | 4.31 | 721 | 4.55 | 739 | 4.80 | 757 | 5.05 | 775 | 5.31 |
| 9000 | 611 | 3.68 | 639 | 3.99 | 664 | 4.25 | 687 | 4.49 | 708 | 4.73 | 728 | 4.95 | 748 | 5.18 | 766 | 5.44 | 783 | 5.71 | 800 | 5.98 |
| 9500 | 644 | 4.36 | 668 | 4.60 | 692 | 4.89 | 715 | 5.16 | 736 | 5.41 | 756 | 5.66 | 775 | 5.89 | 793 | 6.15 | 810 | 6.43 | 826 | 6.71 |
| 10000 | 676 | 5.05 | 698 | 5.31 | 722 | 5.62 | 744 | 5.93 | 764 | 6.19 | 784 | 6.44 | 802 | 6.68 | 820 | 6.95 | 837 | 7.22 | 853 | 7.51 |
| 10500 | 703 | 5.70 | 728 | 6.07 | 752 | 6.43 | 772 | 6.72 | 792 | 7.00 | 811 | 7.27 | 829 | 7.54 | 847 | 7.81 | 864 | 8.08 | 880 | 8.38 |
| 11000 | 739 | 6.65 | 759 | 6.93 | 780 | 7.27 | 801 | 7.58 | 821 | 7.92 | 840 | 8.23 | 857 | 8.48 | — | — | — | — | — | — |
| | | | | | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| 7.5-hp Standard Motor and Drive | | | | | | | | | | |
| 5000[a] | 653 | 2.36 | 675 | 2.54 | 697 | 2.74 | 719 | 2.93 | 740 | 3.13 |
| 6500[a] | 709 | 3.44 | 731 | 3.67 | 751 | 3.90 | 770 | 4.13 | 788 | 4.35 |
| 7000[a] | 727 | 3.88 | 748 | 4.11 | 769 | 4.36 | 789 | 4.60 | 808 | 4.85 |
| 7500[a] | 748 | 4.37 | 767 | 4.61 | 787 | 4.86 | 806 | 5.12 | 825 | 5.38 |
| 8000 | 770 | 4.94 | 788 | 5.18 | 806 | 5.44 | 825 | 5.69 | 843 | 5.96 |
| 8500 | 793 | 5.57 | 811 | 5.83 | 828 | 6.08 | 845 | 6.34 | 862 | 6.61 |
| 9000 | 817 | 6.25 | 834 | 6.52 | 851 | 6.79 | 867 | 7.06 | 884 | 7.34 |
| 9500 | 843 | 6.99 | 858 | 7.27 | 875 | 7.57 | 890 | 7.84 | 906 | 8.13 |
| 10000 | 869 | 7.79 | 884 | 8.10 | 899 | 8.39 | — | — | — | — |
| 10500 | — | — | — | — | — | — | — | — | — | — |
| 11000 | — | — | — | — | — | — | — | — | — | — |
| 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | |

**Notes:**

1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

## Table 80. Evaporator fan performance—25 tons—YHD300G—dehumidification (hot gas reheat) option

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | | 0.2 | | 0.3 | | 0.4 | | 0.5 | | 0.6 | | 0.7 | | 0.8 | | 0.9 | | 1.0 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | 7.5-hp Standard Motor and Low Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 5000[a] | - | - | - | - | - | - | - | - | - | - | 584 | 1.48 | 613 | 1.63 | 642 | 1.78 | 670 | 1.94 | 696 | 2.10 |
| 6500[a] | - | - | - | - | - | - | 606 | 2.13 | 633 | 2.30 | 658 | 2.47 | 683 | 2.65 | 708 | 2.84 | 732 | 3.03 | 756 | 3.22 |
| 7000[a] | - | - | 585 | 2.17 | 612 | 2.36 | 637 | 2.54 | 662 | 2.72 | 686 | 2.91 | 710 | 3.10 | 733 | 3.30 | 756 | 3.49 | 779 | 3.70 |
| 7500[a] | 593 | 2.44 | 618 | 2.60 | 645 | 2.82 | 668 | 3.01 | 692 | 3.20 | 716 | 3.41 | 737 | 3.60 | 760 | 3.81 | 781 | 4.01 | 803 | 4.23 |
| 8000 | 626 | 2.88 | 654 | 3.12 | 677 | 3.32 | 700 | 3.53 | 723 | 3.75 | 745 | 3.95 | 767 | 4.17 | 788 | 4.38 | 808 | 4.60 | 829 | 4.82 |
| 8500 | 665 | 3.48 | 688 | 3.68 | 711 | 3.90 | 733 | 4.13 | 755 | 4.35 | 776 | 4.57 | 797 | 4.80 | 816 | 5.02 | 836 | 5.25 | 855 | 5.47 |
| 9000 | 702 | 4.11 | 723 | 4.31 | 745 | 4.54 | 766 | 4.78 | 787 | 5.02 | 807 | 5.26 | 827 | 5.49 | 846 | 5.73 | 865 | 5.97 | 884 | 6.21 |
| 9500 | 734 | 4.72 | 758 | 5.01 | 780 | 5.27 | 799 | 5.49 | 820 | 5.77 | 838 | 5.99 | 858 | 6.27 | 876 | 6.50 | 895 | 6.76 | 913 | 7.02 |
| 10000 | 771 | 5.49 | 796 | 5.83 | 815 | 6.09 | 835 | 6.34 | 852 | 6.55 | 871 | 6.82 | 889 | 7.10 | 907 | 7.35 | 925 | 7.63 | 942 | 7.89 |
| 10500 | 814 | 6.50 | 831 | 6.68 | 848 | 6.90 | 869 | 7.23 | 886 | 7.46 | 903 | 7.73 | 921 | 8.00 | 939 | 8.30 | 956 | 8.57 | - | - |
| 11000 | 848 | 7.34 | 866 | 7.61 | 885 | 7.92 | 903 | 8.19 | 920 | 8.46 | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and Drive | | | | | | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.1 | | 1.2 | | 1.3 | | 1.4 | | 1.5 | |
| cfm | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp | rpm | bhp |
| | | | 7.5-hp Standard Motor and Drive | | | | | | | |
| 5000[a] | 722 | 2.27[b] | 746 | 2.43 | 770 | 2.60 | 791 | 2.76 | 812 | 2.92 |
| 6500[a] | 779 | 3.41 | 801 | 3.61 | 823 | 3.81 | 845 | 4.01 | 866 | 4.22 |
| 7000[a] | 801 | 3.90 | 822 | 4.10 | 844 | 4.31 | 865 | 4.53 | 885 | 4.75 |
| 7500[a] | 824 | 4.44 | 845 | 4.66 | 866 | 4.88 | 886 | 5.10 | 905 | 5.32 |
| 8000 | 849 | 5.05 | 869 | 5.27 | 889 | 5.51 | 908 | 5.73 | 927 | 5.97 |
| 8500 | 875 | 5.72 | 895 | 5.96 | 913 | 6.19 | 932 | 6.43 | 951 | 6.68 |
| 9000 | 902 | 6.45 | 921 | 6.71 | 938 | 6.94 | 956 | 7.19 | 975 | 7.46 |
| 9500 | 930 | 7.26 | 948 | 7.52 | 965 | 7.77 | 983 | 8.04 | - | - |
| 10000 | 959 | 8.15 | 976 | 8.41 | - | - | - | - | - | - |
| 10500 | - | - | - | - | - | - | - | - | - | - |
| 11000 | - | - | - | - | - | - | - | - | - | - |
| | 7.5-hp Standard Motor and High Static Drive Accessory | | | | | | | | | |

**Notes:**
1. For Standard Evaporator Fan Speed (rpm), reference Table 82, p. 114.
2. For High Evaporator Fan Speed (rpm), reference Table 83, p. 114.
3. For Oversized Evaporator Fan Speed (rpm), reference Table 84, p. 115.
4. Fan motor heat (MBh) = 3.15 x Fan bhp.
5. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
6. For all non-standard sheave combinations, please refer to accessory installer's guides ACC-SVN34*-EN and ACC-SVN72*-EN.
7. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) 7.5-hp Standard Motor and Low Static Drive Accessory.

**Table 81. Standard motor and drive/fan speed (rpm)**

| Tons | Unit Model Number | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1 Turn Open | Closed |
|---|---|---|---|---|---|---|---|---|
| 12½ | T/YS*150G3,4,W,K | 642 | 683 | 725 | 766 | 808 | 849 | N/A |
| | T/YH*150G3,4,W | 452 | 485 | 518 | 551 | 584 | 619 | N/A |
| 15 | T/YS*180G3,4,W,K | 559 | 600 | 642 | 683 | 725 | 766 | N/A |
| | T/YH*180G3,4,W | 452 | 485 | 518 | 551 | 584 | 619 | N/A |
| 17½ | T/YS*210G3,4,W,K | 605 | 650 | 695 | 740 | 785 | 829 | N/A |
| | T/YH*210G3,4,W | 506 | 544 | 582 | 620 | 658 | 694 | N/A |
| 20 | T/YS*240G3,4,W,K | 605 | 650 | 695 | 740 | 785 | 829 | N/A |
| | T/YH*240G3,4,W | 506 | 544 | 582 | 620 | 658 | 694 | N/A |
| 25 | T/YS*300G3,4,W,K | 694 | 731 | 768 | 805 | 842 | 881 | N/A |
| | T/YH*300G3,4,W | 581 | 619 | 657 | 695 | 733 | 769 | N/A |
| | T/YH*300G3,4,W with Reheat | 694 | 739 | 784 | 829 | 874 | 919 | N/A |

**Note:** Factory set at 3 turns open.

**Table 82. Standard motor and low static fan drive**

| Tons | Unit Model Number | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1Turn Open | Closed |
|---|---|---|---|---|---|---|---|---|
| 12½ | T/YS*150G3,4,W,K | 452 | 485 | 518 | 551 | 584 | 619 | N/A |
| | T/YH*150G3,4,W | 351 | 377 | 403 | 429 | 455 | 480 | N/A |
| 15 | T/YS*180G3,4,W,K | 452 | 485 | 518 | 551 | 584 | 619 | N/A |
| | T/YH*180G3,4,W | 351 | 377 | 403 | 429 | 455 | 480 | N/A |
| 17½ | T/YS*210G3,4,W,K | 506 | 544 | 582 | 620 | 658 | 694 | N/A |
| | T/YH*210G3,4,W | 450 | 480 | 510 | 540 | 570 | 600 | N/A |
| 20 | T/YS*240G3,4,W,K | 506 | 544 | 582 | 620 | 658 | 694 | N/A |
| | T/YH*240G3,4,W | 450 | 480 | 510 | 540 | 570 | 600 | N/A |
| 25 | T/YS*300G3,4,W,K | 581 | 619 | 657 | 695 | 733 | 769 | N/A |
| | T/YH*300G3,4,W with Reheat | 581 | 619 | 657 | 695 | 733 | 769 | N/A |

**Table 83. Standard motor and high static drive accessory sheave/fan speed (rpm)**

| Tons | Unit Model Number | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1 Turn Open | Closed |
|---|---|---|---|---|---|---|---|---|
| 12½ | T/YS*150G3,4,W,K | 766 | 808 | 849 | 891 | 891 | 974 | N/A |
| | T/YH*150G3,4,W | 619 | 652 | 685 | 718 | 751 | 786 | N/A |
| 15 | T/YS*180G3,4,W,K | 719 | 753 | 786 | 820 | 853 | 887 | N/A |
| | T/YH*180G3,4,W | 619 | 652 | 685 | 718 | 751 | 786 | N/A |
| 17½ | T/YS*210G3,4,W,K | 829 | 874 | 919 | 964 | 1009 | 1053 | N/A |
| | T/YH*210G3,4,W | 694 | 731 | 768 | 805 | 842 | 881 | N/A |
| 20 | T/YS*240G3,4,W,K | 829 | 874 | 919 | 964 | 1009 | 1053 | N/A |
| | T/YH*240G3,4,W | 694 | 731 | 768 | 805 | 842 | 881 | N/A |
| 25 | T/YS*300G3,4,W,K | 806 | 844 | 882 | 920 | 958 | 994 | N/A |
| | T/YH*300G3,4,W | 694 | 739 | 784 | 829 | 874 | 919 | N/A |
| | T/YH*300G3,4,W with Reheat | 806 | 844 | 882 | 920 | 958 | 994 | N/A |

**Table 84. Oversized motor and drive/fan speed (rpm)**

| Tons | Unit Model Number | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1 Turn Open | Closed |
|---|---|---|---|---|---|---|---|---|
| 12½ | T/YS*150G3,4,W,K | 863 | 919 | 974 | 1030 | 1085 | 1141 | N/A |
| | T/YH*150G3,4,W | 695 | 747 | 799 | 851 | 903 | 953 | N/A |
| 15 | T/YS*180G3,4,W,K | 695 | 747 | 799 | 851 | 903 | 953 | N/A |
| | T/YH*180G3,4,W | 695 | 747 | 799 | 851 | 903 | 953 | N/A |
| 17½ | T/YS*210G3,4,W,K | 806 | 844 | 882 | 920 | 958 | 994 | N/A |
| | T/YH*210G3,4,W | 806 | 844 | 882 | 920 | 958 | 994 | N/A |
| 20 | T/YS*240G3,4,W,K | 806 | 844 | 882 | 920 | 958 | 994 | N/A |
| | T/YH*240G3,4,W | 806 | 844 | 882 | 920 | 958 | 994 | N/A |

**Table 85. Static pressure drop through accessories (inches water column)**

| Tons | Unit Model Number | cfm[a] | Std Filters[b] | Through Reheat Coil | 2-in MERV 8 Filter[c] | 2-in MERV 13 Filter[c] | Std Economizer with OA/RA Dampers[d] | | Low Leak Economizer with OA/RA Dampers[d] | | Electric Heater Accessory (kW)[e] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 100% OA | 100% RA | 100% OA | 100% RA | 14–27 | 36 | 54 | 72 |
| 12½ | T/YSH150G | 4000 | 0.05 | — | 0.08 | 0.12 | 0.19 | 0.02 | 0.27 | 0.06 | 0.03 | 0.03 | 0.04 | — |
| | | 5000 | 0.07 | — | 0.11 | 0.15 | 0.26 | 0.03 | 0.42 | 0.10 | 0.04 | 0.05 | 0.06 | — |
| | | 6000 | 0.10 | — | 0.15 | 0.19 | 0.33 | 0.04 | 0.61 | 0.14 | 0.06 | 0.07 | 0.09 | — |
| | T/YSD150G | 4000 | 0.05 | — | 0.08 | 0.12 | 0.19 | 0.02 | 0.27 | 0.18 | 0.03 | 0.03 | 0.04 | — |
| | | 5000 | 0.07 | — | 0.11 | 0.15 | 0.26 | 0.03 | 0.41 | 0.29 | 0.04 | 0.05 | 0.06 | — |
| | | 6000 | 0.10 | — | 0.15 | 0.19 | 0.33 | 0.04 | 0.58 | 0.44 | 0.06 | 0.07 | 0.09 | — |
| | T/YHH150G | 4000 | 0.02 | — | 0.04 | 0.07 | 0.19 | 0.02 | 0.25 | 0.04 | 0.03 | 0.03 | 0.04 | — |
| | | 5000 | 0.03 | — | 0.05 | 0.10 | 0.26 | 0.03 | 0.39 | 0.07 | 0.04 | 0.05 | 0.06 | — |
| | | 6000 | 0.05 | — | 0.07 | 0.13 | 0.33 | 0.04 | 0.57 | 0.10 | 0.06 | 0.07 | 0.09 | — |
| | T/YHD150G | 2500 | 0.01 | 0.00 | 0.01 | 0.03 | 0.07 | 0.01 | 0.07 | 0.04 | * | * | * | — |
| | | 4000 | 0.02 | 0.01 | 0.04 | 0.08 | 0.19 | 0.02 | 0.16 | 0.10 | 0.03 | 0.03 | 0.04 | — |
| | | 5000 | 0.03 | 0.02 | 0.05 | 0.11 | 0.26 | 0.03 | 0.24 | 0.16 | 0.04 | 0.05 | 0.06 | — |
| | | 6000 | 0.05 | 0.03 | 0.07 | 0.13 | 0.33 | 0.04 | 0.33 | 0.24 | 0.06 | 0.07 | 0.09 | — |
| 15 | T/YSH180G | 4800 | 0.03 | — | 0.06 | 0.09 | 0.14 | 0.03 | 0.36 | 0.06 | 0.04 | 0.04 | 0.05 | — |
| | | 6000 | 0.05 | — | 0.09 | 0.13 | 0.20 | 0.04 | 0.57 | 0.10 | 0.06 | 0.07 | 0.08 | — |
| | | 7200 | 0.07 | — | 0.11 | 0.16 | 0.27 | 0.05 | 0.81 | 0.14 | 0.09 | 0.10 | 0.12 | — |
| | T/YSD180G | 4800 | 0.04 | — | 0.07 | 0.11 | 0.14 | 0.03 | 0.22 | 0.15 | 0.04 | 0.04 | 0.05 | — |
| | | 6000 | 0.06 | — | 0.10 | 0.14 | 0.20 | 0.04 | 0.33 | 0.24 | 0.06 | 0.07 | 0.08 | — |
| | | 7200 | 0.09 | — | 0.13 | 0.18 | 0.27 | 0.05 | 0.45 | 0.35 | 0.09 | 0.10 | 0.12 | — |
| | T/YHH180G | 4800 | 0.03 | — | 0.04 | 0.06 | 0.14 | 0.03 | 0.36 | 0.06 | 0.04 | 0.04 | 0.05 | — |
| | | 6000 | 0.05 | — | 0.06 | 0.1 | 0.20 | 0.04 | 0.57 | 0.10 | 0.06 | 0.07 | 0.08 | — |
| | | 7200 | 0.07 | — | 0.08 | 0.13 | 0.27 | 0.05 | 0.81 | 0.14 | 0.09 | 0.10 | 0.12 | — |
| | T/YHD180G | 3000 | 0.02 | 0.01 | 0.02 | 0.03 | 0.07 | 0.03 | 0.10 | 0.06 | * | * | * | — |
| | | 4800 | 0.04 | 0.01 | 0.05 | 0.08 | 0.14 | 0.03 | 0.22 | 0.15 | 0.04 | 0.04 | 0.05 | — |
| | | 6000 | 0.06 | 0.02 | 0.06 | 0.11 | 0.2 | 0.04 | 0.33 | 0.24 | 0.06 | 0.07 | 0.08 | — |
| | | 7200 | 0.09 | 0.03 | 0.08 | 0.14 | 0.27 | 0.05 | 0.45 | 0.35 | 0.09 | 0.1 | 0.12 | — |

**Table 85. Static pressure drop through accessories (inches water column) (continued)**

| Tons | Unit Model Number | cfm[a] | Std Filters[b] | Through Reheat Coil | 2-in MERV 8 Filter[c] | 2-in MERV 13 Filter[c] | Std Economizer with OA/RA Dampers[d] | | Low Leak Economizer with OA/RA Dampers[d] | | Electric Heater Accessory (kW)[e] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 100% OA | 100% RA | 100% OA | 100% RA | 14–27 | 36 | 54 | 72 |
| 17½ | T/YSH210G | 5600 | 0.05 | — | 0.08 | 0.11 | 0.18 | 0.04 | 0.49 | 0.08 | — | 0.05 | 0.06 | 0.07 |
| | | 7000 | 0.07 | — | 0.11 | 0.15 | 0.26 | 0.04 | 0.77 | 0.13 | — | 0.08 | 0.09 | 0.11 |
| | | 8400 | 0.10 | — | 0.14 | 0.18 | 0.35 | 0.06 | 1.11 | 0.19 | — | 0.12 | 0.13 | 0.16 |
| | T/YSD210G | 5600 | 0.06 | — | 0.08 | 0.13 | 0.18 | 0.04 | 0.29 | 0.21 | — | 0.05 | 0.06 | 0.07 |
| | | 7000 | 0.09 | — | 0.11 | 0.17 | 0.26 | 0.04 | 0.43 | 0.33 | — | 0.08 | 0.09 | 0.11 |
| | | 8400 | 0.12 | — | 0.14 | 0.21 | 0.35 | 0.06 | 0.59 | 0.48 | — | 0.12 | 0.13 | 0.16 |
| | T/YHH210G | 5600 | 0.03 | — | 0.05 | 0.09 | 0.18 | 0.04 | 0.49 | 0.08 | — | 0.05 | 0.06 | 0.07 |
| | | 7000 | 0.05 | — | 0.08 | 0.12 | 0.26 | 0.04 | 0.77 | 0.13 | — | 0.08 | 0.09 | 0.11 |
| | | 8400 | 0.07 | — | 0.10 | 0.15 | 0.35 | 0.06 | 1.11 | 0.19 | — | 0.12 | 0.13 | 0.16 |
| | T/YHD210G | 3500 | 0.01 | 0.04 | 0.02 | 0.04 | 0.09 | 0.03 | 0.13 | 0.08 | — | * | * | * |
| | | 5600 | 0.04 | 0.10 | 0.05 | 0.10 | 0.18 | 0.04 | 0.29 | 0.21 | — | 0.05 | 0.06 | 0.07 |
| | | 7000 | 0.06 | 0.13 | 0.08 | 0.13 | 0.26 | 0.04 | 0.43 | 0.33 | — | 0.08 | 0.09 | 0.11 |
| | | 8400 | 0.08 | 0.16 | 0.10 | 0.16 | 0.35 | 0.06 | 0.59 | 0.48 | — | 0.12 | 0.13 | 0.16 |
| 20 | T/YSH240G | 6400 | 0.06 | — | 0.10 | 0.14 | 0.22 | 0.04 | 0.64 | 0.11 | — | 0.06 | 0.08 | 0.09 |
| | | 8000 | 0.09 | — | 0.13 | 0.18 | 0.32 | 0.05 | 1.0 | 0.17 | — | 0.10 | 0.12 | 0.14 |
| | | 9600 | 0.13 | — | 0.17 | 0.21 | 0.44 | 0.07 | 1.44 | 0.24 | — | 0.14 | 0.17 | 0.20 |
| | T/YSD240G | 6400 | 0.07 | — | 0.11 | 0.15 | 0.22 | 0.04 | 0.37 | 0.27 | — | 0.06 | 0.08 | 0.09 |
| | | 8000 | 0.11 | — | 0.15 | 0.20 | 0.32 | 0.05 | 0.54 | 0.43 | — | 0.10 | 0.12 | 0.14 |
| | | 9600 | 0.16 | — | 0.20 | 0.25 | 0.44 | 0.07 | 0.75 | 0.62 | — | 0.14 | 0.17 | 0.20 |
| | T/YHH240G | 6400 | 0.04 | — | 0.07 | 0.11 | 0.22 | 0.04 | 0.64 | 0.11 | — | 0.06 | 0.08 | 0.09 |
| | | 8000 | 0.06 | — | 0.09 | 0.14 | 0.32 | 0.05 | 1.0 | 0.17 | — | 0.10 | 0.12 | 0.14 |
| | | 9600 | 0.09 | — | 0.12 | 0.18 | 0.44 | 0.07 | 1.44 | 0.24 | — | 0.14 | 0.17 | 0.20 |
| | T/YHD240G | 4000 | 0.02 | 0.02 | 0.03 | 0.06 | 0.11 | 0.03 | 0.16 | 0.10 | — | * | * | * |
| | | 6400 | 0.05 | 0.05 | 0.08 | 0.12 | 0.22 | 0.04 | 0.37 | 0.27 | — | 0.06 | 0.08 | 0.09 |
| | | 8000 | 0.08 | 0.07 | 0.10 | 0.15 | 0.32 | 0.05 | 0.54 | 0.43 | — | 0.10 | 0.12 | 0.14 |
| | | 9600 | 0.11 | 0.11 | 0.14 | 0.19 | 0.44 | 0.07 | 0.75 | 0.62 | — | 0.14 | 0.17 | 0.20 |
| 25 | T/YSH300G | 7000 | 0.07 | — | 0.11 | 0.15 | 0.26 | 0.04 | 0.77 | 0.13 | — | 0.08 | 0.10 | 0.11 |
| | | 9000 | 0.11 | — | 0.15 | 0.20 | 0.4 | 0.07 | 1.27 | 0.21 | — | 0.13 | 0.15 | 0.18 |
| | | 11000 | 0.17 | — | 0.22 | 0.26 | 0.6 | 0.1 | 1.89 | 0.32 | — | 0.18 | 0.22 | 0.26 |
| | T/YSD300G | 7000 | 0.09 | — | 0.13 | 0.17 | 0.26 | 0.04 | 0.43 | 0.33 | — | 0.08 | 0.10 | 0.11 |
| | | 9000 | 0.14 | — | 0.18 | 0.23 | 0.4 | 0.07 | 0.67 | 0.55 | — | 0.13 | 0.15 | 0.18 |
| | | 11000 | 0.21 | — | 0.25 | 0.32 | 0.57 | 0.1 | 0.95 | 0.82 | — | 0.18 | 0.22 | 0.26 |
| | T/YHH300G | 7000 | 0.05 | — | 0.08 | 0.12 | 0.26 | 0.04 | 0.77 | 0.13 | — | 0.08 | 0.10 | 0.11 |
| | | 9000 | 0.08 | — | 0.10 | 0.16 | 0.4 | 0.07 | 1.27 | 0.21 | — | 0.13 | 0.15 | 0.18 |
| | | 11000 | 0.12 | — | 0.15 | 0.20 | 0.6 | 0.1 | 1.89 | 0.32 | — | 0.18 | 0.22 | 0.26 |
| | T/YHD300G | 5000 | 0.03 | 0.02 | 0.04 | 0.08 | 0.15 | 0.03 | 0.24 | 0.16 | — | * | * | * |
| | | 7000 | 0.06 | 0.04 | 0.09 | 0.13 | 0.26 | 0.04 | 0.43 | 0.33 | — | 0.08 | 0.1 | 0.11 |
| | | 9000 | 0.10 | 0.06 | 0.12 | 0.18 | 0.4 | 0.07 | 0.67 | 0.55 | — | 0.13 | 0.15 | 0.18 |
| | | 11000 | 0.10 | 0.08 | 0.17 | 0.22 | 0.57 | 0.10 | 0.95 | 0.82 | — | 0.18 | 0.22 | 0.26 |

(a) Unit applications below 320 cfm/ton are only applicable to Constant Volume THD models without electric heat and YHD models equipped with modulating gas heat. See below for restrictions:
- Electric heaters on applications below 320 cfm/ton.
- Frostat and Crankcase heaters are required on applications below 320 cfm/ton.
- Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 320 cfm/ton during low speed airflow operation, but "full" airflow must be set to 320 cfm/ton or higher.

(b) Tested with: 2-in filters 12½–25 tons.

(c) Difference in pressure drop should be considered when utilizing optional 2-in pleated filters.

(d) OA = Outside Air and RA = Return Air.

(e) Nominal kW ratings at 240, 480, 600 volts.

### Table 86. Gas fired heating capacities

| Tons | Unit Model Number | Heating Input MBh[a] | Heating Output MBh[a] | Air Temp. Rise, °F |
|---|---|---|---|---|
| 12½ | YS/H*150G-L1 | 150/100 | 120/80 | 10–40 |
| | YS/H*150G-H1 | 250/175 | 200/140 | 25–55 |
| | YS/H*150G-V1 | 350/140 | 280/112 | 35–65 |
| 15 | YS/H*180G-L1 | 250/175 | 200/140 | 25–55 |
| | YS/H*180G-H1 | 350/250 | 280/200 | 35–65 |
| | YS/H*180G-V1 | 350/140 | 280/112 | 35–65 |
| 17½ | YS/H*210G-L1 | 250/175 | 200/140 | 25–55 |
| | YS/H*210G-H1 | 350/250 | 280/200 | 35–65 |
| | YS/H*210G-V1 | 350/140 | 280/112 | 35–65 |
| 20 | YS/H*240G-L1 | 250/175 | 200/140 | 15–45 |
| | YS/H*240G-H1 | 400/300 | 320/240 | 25–55 |
| | YS/H*240G-V1 | 350/140 | 280/112 | 35–65 |
| 25 | YS/H*300G-L1 | 250/175 | 200/140 | 15–45 |
| | YS/H*300G-H1 | 400/300 | 320/240 | 25–55 |
| | YS/H*300G-V1 | 350/140 | 280/112 | 35–65 |

(a) For two stage heaters (input or output), second stage is total heating capacity. Second stage/first stage.

### Table 87. Auxiliary electric heat capacity

| Tons | Unit Model Number | Total[a] | | No. of Stages | Stage1 | | Stage 2 | |
|---|---|---|---|---|---|---|---|---|
| | | kW | MBh | | kW | MBh | kW | MBh |
| | | Input[b] | Output | | Input | Output | Input | Output |
| 12½–15 | TS/H*150G3,4,W TS/H*180G3,4,W | 18.00 | 61.47 | 1 | 18.00 | 61.47 | — | — |
| | | 27.00[c] | 92.15 | 2 | 9.00 | 30.72 | 18.00 | 61.43 |
| | | 36.00 | 122.94 | 2 | 18.00 | 61.47 | 18.00 | 61.47 |
| | | 54.00 | 184.41 | 2 | 36.00 | 122.94 | 18.00 | 61.47 |
| 17½–25 | TS/H*210G3,4,W TS/H*240G3,4,W TS/H*300G3,4,W | 36.00 | 122.94 | 2 | 18.00 | 61.47 | 18.00 | 61.47 |
| | | 54.00 | 184.41 | 2 | 36.00 | 122.94 | 18.00 | 61.47 |
| | | 72.00 | 245.88 | 2 | 36.00 | 122.94 | 36.00 | 122.94 |

(a) Heaters are rated at 240V, 380V, 480V, and 600V. For other than rated voltage, CAP = (voltage/rated voltage)$^2$ x rated cap.
(b) For all input/output categories, does not include fan power or heat.
(c) 27 kW heater can be used with TSD180F4, TSD210F4, TSD240F4, and TSD300F4 only. Cannot be used with oversized motor.
* Indicates both downflow and horizontal units.

**Table 88. Electric heater voltage correction factors (applicable to auxiliary heat capacity)**

| Nominal Voltage | Distribution Voltage | Capacity Multiplier |
|---|---|---|
| 240 | 208 | 0.75 |
| | 230 | 0.92 |
| | 240 | 1.00 |
| 480 | 440 | 0.84 |
| | 460 | 0.94 |
| | 480 | 1.00 |
| 600 | 540 | 0.81 |
| | 575 | 0.92 |
| | 600 | 1.00 |

**Table 89. Air temperature rise across electric heaters (°F)**

| kW | Stages | 12½ Tons 5000 cfm Three Phase TS*150G TH*150G | 15 Tons 6000 cfm Three Phase TS*180G TH*180G | 17½ Tons 7000 cfm Three Phase TS*210G TH*210G | 20 Tons 8000 cfm Three Phase TS*240G TH*240G | 25 Ton 9000 cfm Three Phase TS*300G TH*300G |
|---|---|---|---|---|---|---|
| 9.00 | 1 | — | — | — | — | — |
| 17.30 | 1 | — | — | — | — | — |
| 18.00 | 1 | 11.4 | 9.5 | — | — | — |
| 27.00 | 2 | — | 14.2[a] | 12.2 | 10.7 | 9.5 |
| 36.00 | 2 | 22.8 | 19.0 | 16.3 | 14.2 | 12.6 |
| 54.00 | 2 | 34.1 | 28.5 | 24.4 | 21.3 | 19.0 |
| 72.00 | 2 | — | — | 32.5 | 28.5 | 25.3 |

**Notes:**
1. For minimum design airflow, see airflow performance table for each unit. To calculate temp rise at different airflow, use the following formula: Temp. rise across Electric Heater = kW x 3414/1.08 x cfm.
2. *Indicates both downflow and horizontal units.

(a) 27 kW heater can be used with TSD180F4, TSD210F4, TSD240F4, and TSD300F4 only. Cannot be used with oversized motor.

**Table 90. Hot gas reheat temperature rise[a], [b]**

| Tons | SCFM | Leaving Evaporator Dry Bulb [°F][c] | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 12½ | 2500 | 30.6 | 31.8 | 32.9 | 33.8 | 34.7 | 35.5 | 36.2 |
| | 3000 | 25.7 | 26.8 | 27.8 | 28.7 | 29.5 | 30.2 | 30.8 |
| | 3500 | 22.2 | 23.2 | 24.1 | 24.9 | 25.6 | 26.3 | 26.9 |
| | 4000 | 19.4 | 20.4 | 21.2 | 22.0 | 22.6 | 23.2 | 23.8 |
| | 4500 | 17.3 | 18.2 | 19.0 | 19.7 | 20.3 | 20.9 | 21.5 |
| | 5000 | 15.6 | 16.4 | 17.2 | 17.8 | 18.4 | 19.0 | 19.5 |
| | 5500 | 14.2 | 15.0 | 15.7 | 16.3 | 16.9 | 17.4 | 17.9 |
| | 6000 | 13.0 | 13.8 | 14.5 | 15.1 | 15.6 | 16.1 | 16.5 |

**Table 90. Hot gas reheat temperature rise[a], [b] (continued)**

| Tons | SCFM | Leaving Evaporator Dry Bulb [°F][c] | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 15 | 3000 | 30.4 | 31.5 | 32.5 | 33.3 | 34.1 | 34.9 | 35.5 |
| | 3600 | 25.4 | 26.4 | 27.3 | 28.1 | 28.8 | 29.4 | 30.0 |
| | 4200 | 21.9 | 22.8 | 23.6 | 24.4 | 25.1 | 25.7 | 26.3 |
| | 4800 | 19.1 | 20.0 | 20.8 | 21.5 | 22.2 | 22.7 | 23.3 |
| | 5400 | 17.0 | 17.8 | 18.6 | 19.2 | 19.8 | 20.4 | 20.9 |
| | 6000 | 15.3 | 16.1 | 16.8 | 17.4 | 18.0 | 18.5 | 19.0 |
| | 6600 | 13.9 | 14.7 | 15.3 | 15.9 | 16.4 | 16.9 | 17.4 |
| | 7200 | 12.7 | 13.5 | 14.1 | 14.7 | 15.2 | 15.6 | 16.1 |
| 17½ | 3500 | 34.5 | 37.9 | 41.5 | 45.2 | 48.5 | 50.6 | 50.6 |
| | 4200 | 28.0 | 30.9 | 33.9 | 36.8 | 39.6 | 42.0 | 43.8 |
| | 4900 | 23.5 | 26.0 | 28.6 | 31.4 | 34.0 | 36.2 | 37.9 |
| | 5600 | 20.3 | 22.4 | 24.7 | 27.2 | 29.7 | 31.9 | 33.5 |
| | 6300 | 17.9 | 19.7 | 21.7 | 23.8 | 26.1 | 28.3 | 29.9 |
| | 7000 | 16.0 | 17.5 | 19.3 | 21.3 | 23.4 | 25.3 | 26.9 |
| | 7700 | 14.4 | 15.8 | 17.4 | 19.2 | 21.1 | 23.0 | 24.5 |
| | 8400 | 13.2 | 14.4 | 15.8 | 17.4 | 19.3 | 21.0 | 22.5 |
| 20 | 4000 | 30.5 | 31.8 | 33.0 | 34.0 | 35.0 | 35.8 | 36.6 |
| | 4800 | 25.5 | 26.7 | 27.8 | 28.8 | 29.6 | 30.4 | 31.2 |
| | 5600 | 21.8 | 23.0 | 24.0 | 24.9 | 25.7 | 26.4 | 27.1 |
| | 6400 | 19.1 | 20.2 | 21.1 | 22.0 | 22.8 | 23.4 | 24.1 |
| | 7200 | 17.0 | 18.0 | 18.9 | 19.6 | 20.3 | 21.0 | 21.6 |
| | 8000 | 15.3 | 16.2 | 17.1 | 17.8 | 18.5 | 19.1 | 19.6 |
| | 8800 | 13.9 | 14.8 | 15.6 | 16.3 | 16.9 | 17.5 | 18.0 |
| | 9600 | 12.7 | 13.6 | 14.3 | 15.0 | 15.6 | 16.1 | 16.6 |
| 25 | 5000 | 25.5 | 27.3 | 29.03 | 30.4 | 31.7 | 32.5 | 32.4 |
| | 5800 | 21.9 | 23.5 | 25.1 | 26.5 | 27.5 | 28.4 | 28.8 |
| | 6600 | 19.2 | 20.7 | 22.1 | 23.4 | 24.3 | 25.2 | 25.7 |
| | 7400 | 17.1 | 18.4 | 19.7 | 20.9 | 21.7 | 22.7 | 23.2 |
| | 8000 | 15.8 | 17 | 18.3 | 19.3 | 20.3 | 21.1 | 21.6 |
| | 8800 | 14.3 | 15.5 | 16.6 | 17.6 | 18.7 | 19.2 | 19.8 |
| | 9600 | 13.1 | 14.2 | 15.2 | 16.2 | 17.1 | 17.7 | 18.3 |
| | 10400 | 12.1 | 13.1 | 14 | 14.9 | 15.8 | 16.4 | 16.9 |
| | 11200 | 11.2 | 12.1 | 13 | 13.9 | 14.7 | 15.1 | 15.8 |
| | 12000 | 10.4 | 11.2 | 12.2 | 13 | 13.7 | 14.2 | 14.8 |

(a) 70°F OD Ambient Temperature.
(b) For units with the Dehumidification (Hot Gas Reheat) option.
(c) Temperature does not account for indoor fan heat.

# Controls

## Economizer Controls

The standard equipment offering is a fixed dry bulb changeover control. In addition, there are two optional controls, Enthalpy and Differential Enthalpy Control.

### Enthalpy Control

Replaces the dry bulb control with a wet bulb changeover controller which has a fully adjustable setpoint. Enthalpy control offers a higher level of comfort control, along with energy savings potential, than the standard dry bulb control. This is due to the additional wet bulb sensing capability.

### Differential Enthalpy Control

Differential Enthalpy replaces the standard dry bulb control with two enthalpy sensors that compare total heat content of the indoor air and outdoor air to determine the most efficient air source. This control option offers the highest level of comfort control, plus energy efficiency, available.

### Remote Potentiometer

Minimum position setting of economizer can be remotely adjusted with this accessory.

## Zone Sensors

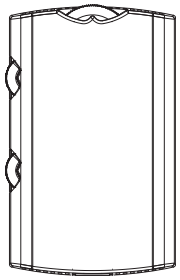
Zone Sensors are the building occupant's comfort control devices. They replace the conventional electro-mechanical thermostats.

***Note:*** *Zone sensor required for units configured for Single Zone VAV indoor fan system control to enable Single Zone VAV functionality.*

### Differential Pressure Switches

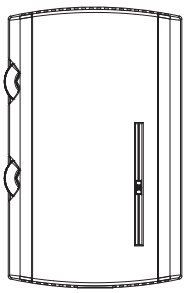
This factory or field-installed option allows individual fan failure and dirty filter indication. The fan failure switch will disable all unit functions and "flash" the Service LED on the zone sensor. The dirty filter switch will light the Service LED on the zone sensor and will allow continued unit operation.

**Manual Changeover**



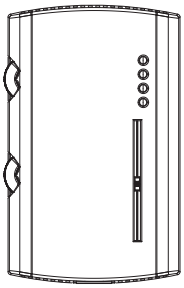
Heat, Cool or Off System Switch. Fan Auto or Off Switch. One temperature setpoint lever.

**Manual/Automatic Changeover**



Auto, Heat, Cool or Off System Switch. Fan Auto or Off Switch. Two temperature setpoint levers.

**Manual/Automatic Changeover**

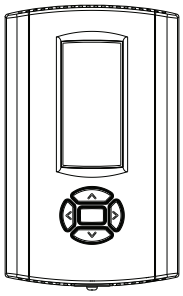


Auto, Heat, Cool or Off System Switch. Fan Auto or Off Switch. Two temperature setpoint levers. Status Indication LED lights, System On, Heat, Cool, or Service.

## RA Remote Sensor and Room Remote Sensor

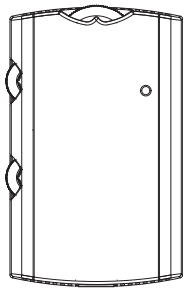
The RA Remote Sensor is a Return Air Remote Sensor which can be mounted in the return air duct to report return air temperature. The Room Remote Sensor is a Space Remote Sensor which can be mounted on the wall to report/control from a remote location in the space.

## Wireless Zone Sensor



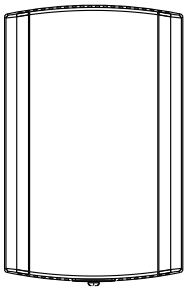
LCD display that provides heat, cool, auto, or off. Includes two temperature setpoints and a lockable setting with °F or °C indicators.

## Manual/Automatic Changeover



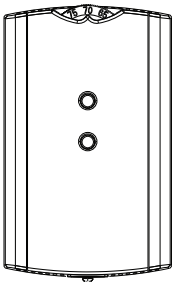
Auto, Heat, Cool or Off System Switch. Fan Auto or Off Switch. Two temperature setpoint levers.

## Remote Sensor



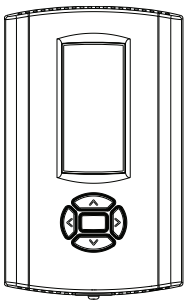
Sensor(s) available for all zone sensors to provide remote sensing capabilities.

## Integrated Comfort™ System



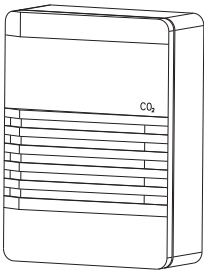
Sensor(s) available with optional temperature adjustment and override buttons to provide central control through a Trane Integrated Comfort™ system.

### Programmable Night Setback



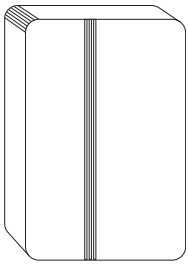
Auto or manual changeover with seven-day programming. Keyboard selection of Heat, Cool, Fan, Auto, or On. All programmable sensors have System On, Heat, Cool, Service LED/indicators as standard. Night Setback Sensors have one (1) Occupied, one (1) Unoccupied, and one (1) Override program per day.

### $CO_2$ Sensor



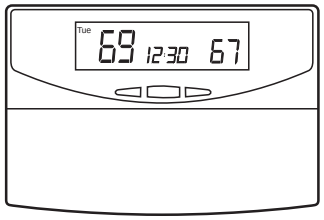

The $CO_2$ sensor shall have the ability to monitor the concentration (parts per million, ppm) of $CO_2$ (Carbon Dioxide) in the air. As the $CO_2$ concentration changes, the outside air damper modulates to meet the current ventilation needs of the zone.

### Humidity Sensor



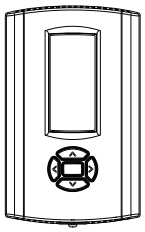
Field installed, wall-mounted or duct-mounted humidity sensor is used to control activation of the hot gas reheat dehumidification option. The humidity sensor can be set for humidity levels between 40 percent and 60 percent relative humidity by adjusting the ReliaTel Options Module.

### Digital Display Programmable Thermostat with Built-In Relative Humidity Sensing (3H/2C)



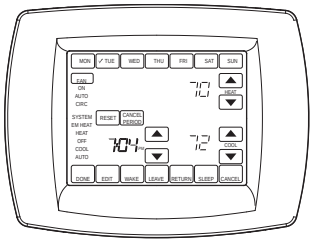

Three Heat/Two Cool digital display thermostat with built-in humidity control and display. This thermostat combines both humidity and dry bulb into one. Fully programmable with night setback.

### Digital Display Programmable Thermostat (3H/2C)



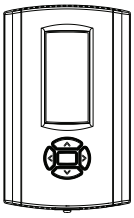
Three Heat/Two Cool auto changeover digital display thermostat. 7-day programmable stat with night setback shall be available.

### Touchscreen Programmable Thermostat (2H/2C)




Two Heat/Two Cool programmable thermostat with touch screen digital display. Menu-driven programming. Effortless set-up. Program each day separately with no need to copy multiple days. All programming can be done on one screen. Easy to read and use. Large, clear backlit digital display.

### Digital Display Thermostat (3H/2C)



Three Heat, Two Cool auto changeover digital display thermostat.

# Communication Interfaces

### Air-Fi® Wireless Communication - Factory Installed

The factory installed Air-Fi® Wireless communication allows customers to benefit from reduced installed/labor cost. This factory installed solution comes pre-wired and tested.

### BACnet® Communications Interface - Factory or Field Installed

The BACnet® communications interface allows the unit to communicate directly with a generic open protocol BACnet® MS/TP Network Building Automation System Controls.

### LonTalk® Communications Interface - Factory or Field Installed

The LonTalk communications interface allows the unit to communicate as a Tracer® LCI-V device or directly with generic LonTalk Network Building Automation System Controls.

### Trane Communication Interface (TCI) - Factory or Field Installed

This factory or field-installed micro-processor interface allows the unit to communicate with Trane's Integrated Comfort™ system.

# Electrical Data

**Table 91. Unit wiring with cooling (no electric heat) or gas heat—standard refrigeration system**

| Tons | Unit Model Number | Unit Operating Voltage Range | Standard Indoor Fan Motor | | Oversized Indoor Fan Motor | |
|---|---|---|---|---|---|---|
| | | | Minimum Circuit Ampacity[a] | Maximum Fuse Size or Maximum Circuit Breaker | Minimum Circuit Ampacity | Maximum Fuse Size or Maximum Circuit Breaker |
| 12½ | T/YS*150G3 | 187–253 | 61 | 80 | 67 | 90 |
| | T/YS*150G4 | 414–506 | 29 | 40 | 32 | 40 |
| | T/YS*150GW | 517–633 | 22 | 30 | 24 | 30 |
| | T/YS*150GK | 342–418 | 36 | 45 | 39 | 50 |
| 15 | T/YS*180G3 | 187–253 | 69 | 90 | 75 | 100 |
| | T/YS*180G4 | 414–506 | 34 | 45 | 37 | 50 |
| | T/YS*180GW | 517–633 | 31 | 40 | 32 | 45 |
| | T/YS*180GK | 342–418 | 45 | 60 | 47 | 60 |
| 17½ | T/YS*210G3 | 187–253 | 77 | 100 | 87 | 110 |
| | T/YS*210G4 | 414–506 | 37 | 50 | 41 | 50 |
| | T/YS*210GW | 517–633 | 34 | 45 | 37 | 50 |
| | T/YS*210GK | 342–418 | 52 | 70 | 56 | 70 |
| 20 | T/YS*240G3 | 187–253 | 105 | 150 | 112 | 150 |
| | T/YS*240G4 | 414–506 | 50 | 70 | 54 | 70 |
| | T/YS*240GW | 517–633 | 43 | 60 | 46 | 60 |
| | T/YS*240GK | 342–418 | 60 | 80 | 64 | 80 |
| 25 | T/YS*300G3 | 187–253 | 112 | 150 | — | — |
| | T/YS*300G4 | 414–506 | 53 | 70 | — | — |
| | T/YS*300GW | 517–633 | 45 | 60 | — | — |
| | T/YS*300GK | 342–418 | 69 | 90 | — | — |

(a) For Standard and Oversized Indoor Fan Motor, values do not include power exhaust accessory.
* Indicates both downflow and horizontal units.

**Table 92. Unit wiring with electric heat (single point connection)—standard refrigeration system (downflow and horizontal)**

| Tons | Unit Model Number | Heater kW Rating | Control Stages | Standard Indoor Motor | | Oversized Indoor Motor | |
|---|---|---|---|---|---|---|---|
| | | | | MCA | Max Fuse Size or Max Circuit Breaker | MCA | Max Fuse Size or Max Circuit Breaker[a] |
| **208/230 Volts Three Phase** | | | | | | | |
| 12½ | TS*150G3 | 13.5/18.0 | 1 | 62/69 | 80/80 | 69/77 | 90/90 |
| | | 27.0/36.0 | 2 | 109/123 | 110/125 | 116/131 | 125/150 |
| | | 40.5/54.0 | 2 | 155/145 | 175/175 | 163/152 | 175/175 |
| 15 | TS*180G3 | 13.5/18.0 | 1 | 69/69 | 90/90 | 75/77 | 100/100 |
| | | 27.0/36.0 | 2 | 109/123 | 110/125 | 116/131 | 125/150 |
| | | 40.5/54.0 | 2 | 155/145 | 175/175 | 163/152 | 175/175 |
| 17½ | TS*210G3 | 27.0/36.0 | 2 | 116/131 | 125/150 | 126/140 | 150/150 |
| | | 40.5/54.0 | 2 | 163/152 | 175/175 | 172/162 | 175/175 |
| | | 54.0/72.0 | 2 | 172/196 | 200/225 | 182/205 | 200/225 |
| 20 | TS*240G3 | 27.0/36.0 | 2 | 116/131 | 150/150 | 126/140 | 150/150 |
| | | 40.5/54.0 | 2 | 163/152 | 175/175 | 172/162 | 175/175 |
| | | 54.0/72.0 | 2 | 172/196 | 200/225 | 182/205 | 200/225 |
| 25 | TS*300G3 | 27.0/36.0 | 2 | 126/140 | 150/150 | — | — |
| | | 40.5/54.0 | 2 | 172/162 | 175/175 | — | — |
| | | 54.0/72.0 | 2 | 182/205 | 200/225 | — | — |
| **460 Volts Three Phase** | | | | | | | |
| 12½ | TS*150G4 | 18.0 | 1 | 28 | 30 | 38 | 40 |
| | | 36.0 | 2 | 62 | 70 | 65 | 70 |
| | | 54.0 | 2 | 72 | 90 | 76 | 90 |
| 15 | TS*180G4 | 18.0 | 1 | 36 | 50 | 39 | 50 |
| | | 36.0 | 2 | 62 | 70 | 65 | 70 |
| | | 54.0 | 2 | 72 | 90 | 76 | 90 |
| 17½ | TS*210G4 | 36.0 | 2 | 65 | 70 | 69 | 70 |
| | | 54.0 | 2 | 76 | 90 | 80 | 90 |
| | | 72.0 | 2 | 98 | 110 | 102 | 110 |
| 20 | TS*240G4 | 36.0 | 2 | 65 | 70 | 69 | 70 |
| | | 54.0 | 2 | 76 | 90 | 80 | 90 |
| | | 72.0 | 2 | 98 | 110 | 102 | 110 |
| 25 | TS*300G4 | 36.0 | 2 | 69 | 70 | — | — |
| | | 54.0 | 2 | 80 | 90 | — | — |
| | | 72.0 | 2 | 102 | 110 | — | — |

**Table 92. Unit wiring with electric heat (single point connection)—standard refrigeration system (downflow and horizontal) (continued)**

| Tons | Unit Model Number | Heater kW Rating | Control Stages | Standard Indoor Motor | | Oversized Indoor Motor | |
|---|---|---|---|---|---|---|---|
| | | | | MCA | Max Fuse Size or Max Circuit Breaker | MCA | Max Fuse Size or Max Circuit Breaker[a] |
| **575 Volts Three Phase** | | | | | | | |
| 12½ | TS*150GW | 18.0 | 1 | 28 | 30 | 31 | 35 |
| | | 36.0 | 2 | 50 | 50 | 52 | 60 |
| | | 54.0 | 2 | 58 | 70 | 61 | 70 |
| 15 | TS*180GW | 18.0 | 1 | 30 | 45 | 32 | 45 |
| | | 36.0 | 2 | 50 | 50 | 52 | 60 |
| | | 54.0 | 2 | 58 | 70 | 61 | 70 |
| 17½ | TS*210GW | 36.0 | 2 | 52 | 60 | 56 | 60 |
| | | 54.0 | 2 | 61 | 70 | 65 | 70 |
| | TSD210GW | 72.0 | 2 | 78 | 90 | 82 | 90 |
| 20 | TS*240GW | 36.0 | 2 | 52 | 60 | 56 | 60 |
| | | 54.0 | 2 | 61 | 70 | 65 | 70 |
| | TSD240GW | 72.0 | 2 | 78 | 90 | 82 | 90 |
| 25 | TS*300GW | 36.0 | 2 | 56 | 60 | — | — |
| | | 54.0 | 2 | 65 | 70 | — | — |
| | TSD300GW | 72.0 | 2 | 82 | 90 | — | — |
| **380 Volts Three Phase** | | | | | | | |
| 12½ | TS*150GK | 18.0 | 2 | 36 | 45 | — | — |
| | | 36.0 | 2 | 52 | 60 | — | — |
| | | 54.0 | 2 | 60 | 70 | — | — |
| 15 | TS*180GK | 18.0 | 2 | 44 | 60 | — | — |
| | | 36.0 | 2 | 52 | 60 | — | — |
| | | 54.0 | 2 | 60 | 70 | — | — |
| 17½ | TS*210GK | 36.0 | 2 | 56 | 70 | — | — |
| | | 54.0 | 2 | 64 | 70 | — | — |
| 20 | TS*240GK | 36.0 | 2 | 60 | 80 | — | — |
| | | 54.0 | 2 | 64 | 80 | — | — |
| | | 72.0 | 2 | 82 | 90 | — | — |
| 25 | TS*300GK | 36.0 | 2 | 69 | 90 | — | — |
| | | 54.0 | 2 | 70 | 90 | — | — |
| | | 72.0 | 2 | 87 | 90 | — | — |

(a) Values do not include power exhaust accessory.
* Indicates both downflow and horizontal units.

**Table 93. Electrical characteristics—compressor motor and condenser motor—60 cycle—standard efficiency**

| Tons | Unit Model No. | Compressor Motors | | | | | | | Condenser Fan Motors | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | Volts | Phase | hp[a] | rpm | Amps[b] | | No. | Phase | hp | Amps[b] | |
| | | | | | | | RLA | LRA | | | | FLA | LRA |
| 12½ | T/YS*150G3 | 2 | 208–230 | 3 | 6.9/3.5 | 3450 | 25/13.7 | 164/83.1 | 2 | 3 | 0.5 | 2.2 | 8.4 |
| | T/YS*150G4 | 2 | 460 | 3 | 6.9/3.5 | 3450 | 12.2/6.2 | 100/41 | 2 | 3 | 0.5 | 1.1 | 4.2 |
| | T/YS*150GW | 2 | 575 | 3 | 6.9/3.5 | 3450 | 9.0/4.8 | 78/33 | 2 | 3 | 0.5 | 1.1 | 3.6 |
| | T/YS*150GK | 2 | 380 | 3 | 6.9/3.5 | 3450 | 13.9/8.1 | 94.3/56 | 2 | 3 | 0.5 | 1.3 | 5.2 |
| 15 | T/YS*180G3 | 2 | 208–230 | 3 | 9.2/4.5 | 3450 | 29.4/15.6 | 267/110 | 2 | 3 | 0.5 | 2.2 | 8.4 |
| | T/YS*180G4 | 2 | 460 | 3 | 9.2/4.5 | 3450 | 14.7/7.7 | 142/52 | 2 | 3 | 0.5 | 1.1 | 4.2 |
| | T/YS*180GW | 2 | 575 | 3 | 9.2/4.5 | 3450 | 14.7/5.8 | 103/38.9 | 2 | 3 | 0.5 | 1.1 | 3.6 |
| | T/YS*180GK | 2 | 380 | 3 | 9.2/4.5 | 3450 | 16.6/10.1 | 160/65.6 | 2 | 3 | 0.5 | 1.3 | 5.2 |
| 17½ | T/YS*210G3 | 2 | 208–230 | 3 | 9.2/4.5 | 3450 | 29.4/15.6 | 267/110 | 2 | 3 | 1.0 | 4.8 | 20.0 |
| | T/YS*210G4 | 2 | 460 | 3 | 9.2/4.5 | 3450 | 14.7/7.7 | 142/52 | 2 | 3 | 1.0 | 2.5 | 10.1 |
| | T/YS*210GW | 2 | 575 | 3 | 9.2/4.5 | 3450 | 14.7/5.8 | 103/38 | 2 | 3 | 1.0 | 1.9 | 8.0 |
| | T/YS*210GK | 2 | 380 | 3 | 9.2/4.5 | 3450 | 16.6/10.1 | 160/65.6 | 2 | 3 | 0.5 | 3.1 | 12.6 |
| 20 | T/YS*240G3 | 2 | 208–230 | 3 | 12.9/6.3 | 3450 | 44.2/25 | 315/164 | 2 | 3 | 1.0 | 4.8 | 20.0 |
| | T/YS*240G4 | 2 | 460 | 3 | 12.9/6.3 | 3450 | 21.1/12.8 | 158/100 | 2 | 3 | 1.0 | 2.5 | 10.1 |
| | T/YS*240GW | 2 | 575 | 3 | 12.9/6.3 | 3450 | 18.6/9.6 | 136/78 | 2 | 3 | 1.0 | 1.9 | 8.0 |
| | T/YS*240GK | 2 | 380 | 3 | 12.9/6.3 | 3450 | 23/12.5 | 177/94.3 | 2 | 3 | 0.5 | 3.1 | 12.6 |
| 25 | T/YS*300G3 | 2 | 208–230 | 3 | 13.4/6.9 | 3450 | 44.2/25 | 315/164 | 2 | 3 | 1.0 | 4.8 | 20.0 |
| | T/YS*300G4 | 2 | 460 | 3 | 13.4/6.9 | 3450 | 21.1/12.2 | 158/100 | 2 | 3 | 1.0 | 2.5 | 10.1 |
| | T/YS*300GW | 2 | 575 | 3 | 13.4/6.9 | 3450 | 18.6/9 | 136/78 | 2 | 3 | 1.0 | 1.9 | 8.0 |
| | T/YS*300GK | 2 | 380 | 3 | 13.4/6.9 | 3450 | 23.7/13.9 | 177/94.3 | 2 | 3 | 0.5 | 3.1 | 12.6 |

(a) Horsepower for each compressor.
*Indicates both downflow and horizontal units.
(b) For Compressor Motors and Condenser Fan Motors: Amp draw for each motor; multiply value by number of motors to determine total amps.

**Table 94. Electrical characteristics—evaporator fan motor—60 cycle—standard and oversized**

| Tons | Unit Model Number | Standard Evaporator Fan Motor | | | | | | Oversized Evaporator Fan Motor | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Amps[b] | | | | | | Amps | |
| | | No. | Volts | Phase | hp[a] | FLA | LRA | No. | Volts | Phase | hp | FLA | LRA |
| 12½ | T/YS*150G3 | 1 | 208–230 | 3 | 3.00 | 10.6 | 81.0 | 1 | 208–230 | 3 | 5.00 | 16.7 | 109.8 |
| | T/YS*150G4 | 1 | 460 | 3 | 3.00 | 4.8 | 40.5 | 1 | 460 | 3 | 5.00 | 7.6 | 54.9 |
| | T/YS*150GW | 1 | 575 | 3 | 3.00 | 3.9 | 31.0 | 1 | 575 | 3 | 5.00 | 6.1 | 41.6 |
| | T/YS*150GK | 1 | 380 | 3 | 5.00 | 9.2 | 66.5 | 1 | — | — | — | — | — |
| 15 | T/YS*180G3 | 1 | 208–230 | 3 | 3.00 | 10.6 | 81.0 | 1 | 208–230 | 3 | 5.00 | 16.7 | 109.8 |
| | T/YS*180G4 | 1 | 460 | 3 | 3.00 | 4.8 | 40.5 | 1 | 460 | 3 | 5.00 | 7.6 | 54.9 |
| | T/YS*180GW | 1 | 575 | 3 | 3.00 | 3.9 | 31.0 | 1 | 575 | 3 | 5.00 | 6.1 | 41.6 |
| | T/YS*180GK | 1 | 380 | 3 | 5.00 | 9.2 | 66.5 | 1 | — | — | — | — | — |
| 17½ | T/YS*210G3 | 1 | 208–230 | 3 | 5.00 | 16.7 | 109.8 | 1 | 208–230 | 3 | 7.50 | 24.2 | 120.4 |
| | T/YS*210G4 | 1 | 460 | 3 | 5.00 | 7.6 | 54.9 | 1 | 460 | 3 | 7.50 | 11.0 | 74.0 |
| | T/YS*210W | 1 | 575 | 3 | 5.00 | 6.1 | 41.6 | 1 | 575 | 3 | 7.50 | 9.0 | 60.0 |
| | T/YS*210GK | 1 | 380 | 3 | 7.50 | 13.3 | 83.5 | 1 | — | — | — | — | — |
| 20 | T/YS*240G3 | 1 | 208–230 | 3 | 5.00 | 16.7 | 109.8 | 1 | 208–230 | 3 | 7.50 | 24.2 | 120.4 |
| | T/YS*240G4 | 1 | 460 | 3 | 5.00 | 7.6 | 54.9 | 1 | 460 | 3 | 7.50 | 11.0 | 74.0 |
| | T/YS*240GW | 1 | 575 | 3 | 5.00 | 6.1 | 41.6 | 1 | 575 | 3 | 7.50 | 9.0 | 60.0 |
| | T/YS*240GK | 1 | 380 | 3 | 7.50 | 13.3 | 83.5 | 1 | — | — | — | — | — |
| 25 | T/YS*300G3 | 1 | 208–230 | 3 | 7.50 | 24.2 | 120.4 | — | — | — | — | — | — |
| | T/YS*300G4 | 1 | 460 | 3 | 7.50 | 11.0 | 74.0 | — | — | — | — | — | — |
| | T/YS*300GW | 1 | 575 | 3 | 7.50 | 9.0 | 60 | — | — | — | — | — | — |
| | T/YS*300GK | 1 | 380 | 3 | 7.50 | 13.3 | 83.5 | — | — | — | — | — | — |

(a) Horsepower for each compressor.
* Indicates downflow and horizontal units.
(b) For Compressor Motors and Condenser Fan Motors: Amp draw for each motor; multiply value by number of motors to determine total amps.

**Table 95. Electrical characteristics—power exhaust (cooling and gas/electric)**

| Tons | Volts | Phase | hp | rpm | Amps | |
|---|---|---|---|---|---|---|
| | | | | | FLA | LRA |
| 12½–25 | 208–230 | 1 | 3/4 | 1040 | 6.6 | 13.5 |
| | 460 | 1 | 3/4 | 1040 | 3.2 | 8.4 |
| | 575 | 1 | 3/4 | 1040 | 2.1 | 5.2 |

**Table 96. Unit wiring with cooling (no electric heat) or gas heat—high efficiency**

| Tons | Unit Model Number | Unit Operating Voltage Range | Standard Indoor Fan Motor | | Oversized Indoor Fan Motor | |
|---|---|---|---|---|---|---|
| | | | Minimum Circuit Ampacity[a] | Maximum Fuse Size or Maximum Circuit Breaker | Minimum Circuit Ampacity | Maximum Fuse Size or Maximum Circuit Breaker |
| 12½ | T/YH*150G3 | 187–253 | 64 | 90 | 71 | 90 |
| | T/YH*150G4 | 414–506 | 30 | 40 | 33 | 45 |
| | T/YH*150GW | 517–633 | 23 | 30 | 26 | 35 |
| 15 | T/YH*180G3 | 187–253 | 68 | 90 | 74 | 100 |
| | T/YH*180G4 | 414–506 | 33 | 45 | 36 | 50 |
| | T/YH*180GW | 517–633 | 26 | 35 | 27 | 35 |
| 17½ | T/YH*210G3 | 187–253 | 83 | 125 | 91 | 110 |
| | T/YH*210G4 | 414–506 | 41 | 50 | 44 | 60 |
| | T/YH*210GW | 517–633 | 33 | 45 | 36 | 45 |
| 20 | T/YH*240G3 | 187–253 | 96 | 125 | 103 | 125 |
| | T/YH*240G4 | 414–506 | 44 | 60 | 48 | 60 |
| | T/YH*240GW | 517–633 | 38 | 50 | 41 | 50 |
| 25 | T/YH*300G3 | 187–253 | 117 | 150 | N/A | N/A |
| | T/YH*300G4 | 414–506 | 54 | 70 | N/A | N/A |
| | T/YH*300GW | 517–633 | 44 | 50 | N/A | N/A |

(a) For Standard and Oversized Indoor Fan Motor, values do not include power exhaust accessory.
* Indicates both downflow and horizontal units.

**Table 97. Unit wiring with cooling (no electric heat) or gas heat—dehumidification (hot gas reheat) option (downflow only)**

| Tons | Unit Model Number | Unit Operating Voltage Range | Standard Indoor Fan Motor | | Oversized Indoor Fan Motor | |
|---|---|---|---|---|---|---|
| | | | Minimum Circuit Ampacity[a] | Maximum Fuse Size or Maximum Circuit Breaker | Minimum Circuit Ampacity | Maximum Fuse Size or Maximum Circuit Breaker |
| 12½ | T/YHD150G3 | 187–253 | 67 | 80 | 73 | 90 |
| | T/YHD150G4 | 414–506 | 32 | 40 | 35 | 40 |
| | T/YHD150GW | 517–633 | 23 | 30 | 26 | 30 |
| 15 | T/YHD180G3 | 187–253 | 73 | 90 | 79 | 100 |
| | T/YHD180G4 | 414–506 | 35 | 45 | 38 | 45 |
| | T/YHD180GW | 517–633 | 27 | 35 | 29 | 35 |
| 17½ | T/YHD210G3 | 187-253 | 86 | 125 | 92 | 110 |
| | T/YHD210G4 | 414-506 | 41 | 50 | 45 | 50 |
| | T/YHD210GW | 517-633 | 34 | 45 | 37 | 45 |
| 20 | T/YHD240G3 | 187–253 | 113 | 150 | 120 | 150 |
| | T/YHD240G4 | 414–506 | 53 | 70 | 57 | 70 |
| | T/YHD240GW | 517–633 | 45 | 50 | 48 | 60 |
| 25 | T/YHD300G3 | 187–253 | 117 | 150 | - | - |
| | T/YHD300G4 | 414–506 | 54 | 70 | - | - |
| | T/YHD300GW | 517–633 | 42 | 50 | - | - |

(a) For Standard and Oversized Indoor Fan Motor, values do not include power exhaust accessory.

**Table 98. Unit wiring with electric heat (single point connection)—high efficiency**

| Tons | Unit Model Number | Heater kW Rating | Control Stages | Standard Indoor Motor | | Oversized Indoor Motor | |
|---|---|---|---|---|---|---|---|
| | | | | MCA | Max Fuse Size or Max Circuit Breaker | MCA | Max Fuse Size or Max Circuit Breaker[a] |
| **208/230 Volts Three Phase** | | | | | | | |
| 12½ | TH*150G3 | 13.5/18.0 | 1 | 64/69 | 90/90 | 71/77 | 90/90 |
| | | 27.0/36.0 | 2 | 109/123 | 110/125 | 116/131 | 125/150 |
| | | 40.5/54.0 | 2 | 155/145 | 175/175 | 163/152 | 175/175 |
| 15 | TH*180G3 | 13.5/18.0 | 1 | 68/69 | 90/90 | 74/77 | 100/100 |
| | | 27.0/36.0 | 2 | 109/123 | 110/125 | 116/131 | 125/150 |
| | | 40.5/54.0 | 2 | 155/145 | 175/175 | 163/152 | 175/175 |
| 17½ | TH*210G3 | 27.0/36.0 | 2 | 116/131 | 125/150 | 126/140 | 150/150 |
| | | 40.5/54.0 | 2 | 163/152 | 175/175 | 172/162 | 175/175 |
| | | 54.0/72.0 | 2 | 172/196 | 200/225 | 182/205 | 200/225 |
| 20 | TH*240G3 | 27.0/36.0 | 2 | 116/131 | 125/150 | 126/140 | 150/150 |
| | | 40.5/54.0 | 2 | 163/152 | 175/175 | 172/162 | 175/175 |
| | | 54.0/72.0 | 2 | 172/196 | 200/225 | 182/205 | 200/225 |
| 25 | TH*300G3 | 27.0/36.0 | 2 | 126/140 | 150/150 | — | — |
| | | 40.5/54.0 | 2 | 172/162 | 175/175 | — | — |
| | | 54.0/72.0 | 2 | 182/205 | 200/225 | — | — |
| **460 Volts Three Phase** | | | | | | | |
| 12½ | TH*150G4 | 18.0 | 1 | 35 | 40 | 38 | 45 |
| | | 36.0 | 2 | 62 | 70 | 65 | 70 |
| | | 54.0 | 2 | 72 | 90 | 76 | 90 |
| 15 | TH*180G4 | 18.0 | 1 | 35 | 45 | 38 | 50 |
| | THD180G4 | 27.0 | 2 | 48 | 50 | 52 | 60 |
| | TH*180G4 | 36.0 | 2 | 62 | 70 | 65 | 70 |
| | | 54.0 | 2 | 72 | 90 | 76 | 90 |
| 17½ | THD210G4 | 27.0 | 2 | 52 | 60 | 56 | 60 |
| | TH*210G4 | 36.0 | 2 | 65 | 70 | 69 | 70 |
| | | 54.0 | 2 | 76 | 90 | 80 | 90 |
| | | 72.0 | 2 | 98 | 110 | 102 | 110 |
| 20 | THD240G4 | 27.0 | 2 | 52 | 60 | 56 | 60 |
| | TH*240G4 | 36.0 | 2 | 65 | 70 | 69 | 70 |
| | | 54.0 | 2 | 76 | 90 | 80 | 90 |
| | | 72.0 | 2 | 98 | 110 | 102 | 110 |
| 25 | THD300G4 | 27.0 | 2 | 56 | 70 | — | — |
| | TH*300G4 | 36.0 | 2 | 69 | 70 | — | — |
| | | 54.0 | 2 | 80 | 90 | — | — |
| | | 72.0 | 2 | 102 | 110 | — | — |

**Table 98. Unit wiring with electric heat (single point connection)—high efficiency (continued)**

| Tons | Unit Model Number | Heater kW Rating | Control Stages | Standard Indoor Motor | | Oversized Indoor Motor | |
|---|---|---|---|---|---|---|---|
| | | | | MCA | Max Fuse Size or Max Circuit Breaker | MCA | Max Fuse Size or Max Circuit Breaker[a] |
| 575 Volts Three Phase | | | | | | | |
| 12½ | TH*150GW | 18.0 | 1 | 28 | 30 | 31 | 35 |
| | | 36.0 | 2 | 50 | 50 | 52 | 60 |
| | | 54.0 | 2 | 58 | 70 | 61 | 70 |
| 15 | TH*180GW | 18.0 | 1 | 28 | 35 | 31 | 35 |
| | | 36.0 | 2 | 50 | 50 | 52 | 60 |
| | | 54.0 | 2 | 58 | 70 | 61 | 70 |
| 17½ | TH*210GW | 36.0 | 2 | 52 | 60 | 56 | 60 |
| | | 54.0 | 2 | 61 | 70 | 65 | 70 |
| | THD210GW | 72.0 | 2 | 78 | 90 | 82 | 90 |
| 20 | TH*240GW | 36.0 | 2 | 52 | 60 | 56 | 60 |
| | | 54.0 | 2 | 61 | 70 | 65 | 70 |
| | THD240GW | 72.0 | 2 | 78 | 90 | 82 | 90 |
| 25 | TH*300GW | 36.0 | 2 | 56 | 60 | — | — |
| | | 54.0 | 2 | 65 | 70 | — | — |
| | THD300GW | 72.0 | 2 | 82 | 90 | — | — |

(a) Values do not include power exhaust accessory.
* Indicates both downflow and horizontal units.

**Table 99. Unit wiring with electric heat (single point connection)—dehumidification (hot gas reheat) refrigeration system (downflow only)**

| Tons | Unit Model Number | Heater kW Rating | Control Stages | Standard Indoor Motor | | Oversized Indoor Motor | |
|---|---|---|---|---|---|---|---|
| | | | | MCA | Max Fuse Size or Max Circuit Breaker | MCA | Max Fuse Size or Max Circuit Breaker[a] |
| 208/230 Volts Three Phase | | | | | | | |
| 12½ | THD150G3 | 13.5/18.0 | 1 | 67/69 | 80/80 | 73/77 | 90/90 |
| | | 27.0/36.0 | 2 | 109/123 | 110/125 | 116/131 | 125/150 |
| | | 40.5/54.0 | 2 | 155/145 | 175/150 | 163/152 | 175/175 |
| 15 | THD180G3 | 13.5/18.0 | 1 | 73/73 | 90/90 | 79/79 | 100/100 |
| | | 27.0/36.0 | 2 | 109/123 | 110/125 | 116/131 | 125/150 |
| | | 40.5/54.0 | 2 | 155/145 | 175/175 | 163/152 | 175/175 |
| 17½ | THD210G3 | 27.0/36.0 | 2 | 116/131 | 125/150 | 126/140 | 150/150 |
| | | 40.5/54.0 | 2 | 163/152 | 175/175 | 172/162 | 175/175 |
| | | 54.0/72.0 | 2 | 172/196 | 200/225 | 182/205 | 200/225 |
| 20 | THD240G3 | 27.0/36.0 | 2 | 116/131 | 125/150 | 126/140 | 150/150 |
| | | 40.5/54.0 | 2 | 163/152 | 175/175 | 172/162 | 175/175 |
| | | 54.0/72.0 | 2 | 172/196 | 200/225 | 182/205 | 200/225 |
| 25 | THD300G3 | 27.0/36.0 | 2 | 126/140 | 150/150 | - | - |
| | | 40.5/54.0 | 2 | 172/162 | 175/175 | - | - |
| | | 54.0/72.0 | 2 | 182/205 | 200/225 | - | - |

**Table 99. Unit wiring with electric heat (single point connection)—dehumidification (hot gas reheat) refrigeration system (downflow only) (continued)**

| Tons | Unit Model Number | Heater kW Rating | Control Stages | Standard Indoor Motor | | Oversized Indoor Motor | |
|---|---|---|---|---|---|---|---|
| | | | | MCA | Max Fuse Size or Max Circuit Breaker | MCA | Max Fuse Size or Max Circuit Breaker[a] |
| **460 Volts Three Phase** | | | | | | | |
| 12½ | THD150G4 | 18.0 | 1 | 35 | 40 | 38 | 40 |
| | | 36.0 | 2 | 62 | 70 | 65 | 70 |
| | | 54.0 | 2 | 72 | 90 | 76 | 90 |
| 15 | THD180G4 | 18.0 | 1 | 35 | 45 | 38 | 45 |
| | | 27.0 | 2 | 48 | 50 | 52 | 60 |
| | | 36.0 | 2 | 62 | 70 | 65 | 70 |
| | | 54.0 | 2 | 72 | 90 | 76 | 90 |
| 17½ | THD210G4 | 27.0 | 2 | 52 | 60 | 56 | 60 |
| | | 36.0 | 2 | 65 | 70 | 69 | 70 |
| | | 54.0 | 2 | 76 | 90 | 80 | 90 |
| | | 72.0 | 2 | 98 | 110 | 102 | 110 |
| 20 | THD240G4 | 27.0 | 2 | 53 | 70 | 57 | 70 |
| | | 36.0 | 2 | 65 | 70 | 69 | 70 |
| | | 54.0 | 2 | 76 | 90 | 80 | 90 |
| | | 72.0 | 2 | 98 | 110 | 102 | 110 |
| 25 | THD300G4 | 27.0 | 2 | 56 | 70 | - | - |
| | | 36.0 | 2 | 69 | 70 | - | - |
| | | 54.0 | 2 | 80 | 90 | - | - |
| | | 72.0 | 2 | 102 | 110 | - | - |
| **575 Volts Three Phase** | | | | | | | |
| 12½ | THD150GW | 18.0 | 1 | 28 | 30 | 31 | 35 |
| | | 36.0 | 2 | 50 | 50 | 52 | 60 |
| | | 54.0 | 2 | 58 | 70 | 61 | 70 |
| 15 | THD180GW | 18.0 | 1 | 28 | 35 | 31 | 35 |
| | | 36.0 | 2 | 50 | 50 | 52 | 60 |
| | | 54.0 | 2 | 58 | 70 | 61 | 70 |
| 17½ | THD210GW | 36.0 | 2 | 52 | 60 | 56 | 60 |
| | | 54.0 | 2 | 61 | 70 | 65 | 70 |
| | | 72.0 | 2 | 78 | 90 | 82 | 90 |
| 20 | THD240GW | 36.0 | 2 | 52 | 60 | 56 | 60 |
| | | 54.0 | 2 | 61 | 70 | 65 | 70 |
| | | 72.0 | 2 | 78 | 90 | 82 | 90 |
| 25 | THD300GW | 36.0 | 2 | 56 | 60 | - | - |
| | | 54.0 | 2 | 65 | 70 | - | - |
| | | 72.0 | 2 | 82 | 90 | - | - |

(a) Values do not include power exhaust accessory.

**Table 100. Electrical characteristics—compressor motor and condenser motor—60 cycle—high efficiency**

| Tons | Unit Model No. | Compressor Motors | | | | | | | Condenser Fan Motors | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | Volts | Phase | hp[a] | rpm | Amps[b] | | No. | Phase | hp | Amps[b] | |
| | | | | | | | RLA | LRA | | | | FLA | LRA |
| 12½ | T/YH*150G3 | 2 | 208–230 | 3 | 5.6/3.67 | 3450 | 27.5/13.6 | 191/100 | 2 | 3 | 0.5 | 2.2 | 8.4 |
| | T/YH*150G4 | 2 | 460 | 3 | 5.6/3.67 | 3450 | 12.8/6.1 | 100/41 | 2 | 3 | 0.5 | 1.1 | 4.2 |
| | T/YH*150GW | 2 | 575 | 3 | 5.6/3.67 | 3450 | 10.38/4.2 | 78/33 | 2 | 3 | 0.5 | 1.1 | 3.6 |
| 15 | T/YH*180G3 | 2 | 208–230 | 3 | 7.5/4.75 | 3450 | 28.3/15.9 | 240/110 | 2 | 3 | 0.5 | 2.2 | 8.4 |
| | T/YH*180G4 | 2 | 460 | 3 | 7.5/4.75 | 3450 | 14.7/7.0 | 130/52 | 2 | 3 | 0.5 | 1.1 | 4.2 |
| | T/YH*180GW | 2 | 575 | 3 | 7.5/4.75 | 3450 | 11.3/5.1 | 93.7/39.5 | 2 | 3 | 0.5 | 1.1 | 3.6 |
| 17½ | T/YH*210G3 | 2 | 208–230 | 3 | 8.6/4.75 | 3450 | 34.1/15.6 | 240/110 | 2 | 3 | 1.0 | 4.8 | 20.0 |
| | T/YH*210G4 | 2 | 460 | 3 | 8.6/4.75 | 3450 | 17.3/7.7 | 140/52 | 2 | 3 | 1.0 | 2.5 | 10.1 |
| | T/YH*210GW | 2 | 575 | 3 | 8.6/4.75 | 3450 | 13.32/5.8 | 107.6/38.9 | 2 | 3 | 1.0 | 1.9 | 8.0 |
| 20 | T/YH*240G3 | 2 | 208–230 | 3 | 11.7/6.9 | 3450 | 41.0/19.6 | 304/136 | 2 | 3 | 1.0 | 4.8 | 20.0 |
| | T/YH*240G4 | 2 | 460 | 3 | 11.7/6.9 | 3450 | 19.75/8.2 | 147/66.1 | 2 | 3 | 1.0 | 2.5 | 10.1 |
| | T/YH*240GW | 2 | 575 | 3 | 11.7/6.9 | 3450 | 16.7/6.6 | 122/55.3 | 2 | 3 | 1.0 | 1.9 | 8.0 |
| 25 | T/YH*300G3 | 3 | 208–230 | 3 | 12.8/6.9 | 3450 | 19.6/19.6/36.63 | 136/136/240 | 2 | 3 | 1.0 | 4.8 | 20.0 |
| | T/YH*300G4 | 3 | 460 | 3 | 12.8/6.9 | 3450 | 8.2/8.2/18.26 | 66.1/66.1/140 | 2 | 3 | 1.0 | 2.5 | 10.1 |
| | T/YH*300GW | 3 | 575 | 3 | 12.8/6.9 | 3450 | 6.6/6.6/14.06 | 55.3/55.3/107.6 | 2 | 3 | 1.0 | 1.9 | 8.0 |

(a) Horsepower for each compressor.
*Indicates both downflow and horizontal units.
(b) For Compressor Motors and Condenser Fan Motors: Amp draw for each motor; multiply value by number of motors to determine total amps.

**Table 101. Electrical characteristics—compressor motor and condenser motor—60 cycle—dehumidification (hot gas reheat) option (downflow only)**

| Tons | Unit Model No. | No. | Compressor Motors | | | | | | Condenser Fan Motors | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Volts | Phase | hp[b] | rpm | Amps[a] | | No. | Phase | hp | Amps[b] | |
| | | | | | | | RLA | LRA | | | | FLA | LRA |
| 12½ | T/YHD150G3 | 2 | 208–230 | 3 | 5.6 | 3450 | 22.4/22.4 | 149/149 | 2 | 3 | 0.5 | 2.2 | 8.4 |
| | T/YHD150G4 | 2 | 460 | 3 | 5.6 | 3450 | 10.6/10.6 | 75/75 | 2 | 3 | 0.5 | 1.1 | 4.2 |
| | T/YHD150GW | 2 | 575 | 3 | 5.6 | 3450 | 7.7/7.7 | 54/54 | 2 | 3 | 0.5 | 1.1 | 3.6 |
| 15 | T/YHD180G3 | 2 | 208–230 | 3 | 6.9 | 3450 | 25.0/25.0 | 149/149 | 2 | 3 | 0.5 | 2.2 | 8.4 |
| | T/YHD180G4 | 2 | 460 | 3 | 6.9 | 3450 | 13.2/13.2 | 75/75 | 2 | 3 | 0.5 | 1.1 | 4.2 |
| | T/YHD180GW | 2 | 575 | 3 | 6.9 | 3450 | 11.5/11.5 | 54/54 | 2 | 3 | 0.5 | 1.1 | 3.6 |
| 17½ | T/YHD210G3 | 2 | 208-230 | 3 | 7.5 / 6.9 | 3450 | 27.6 / 26.2 | 203 / 164 | 2 | 3 | 1.0 | 4.8 | 20.0 |
| | T/YHD210G4 | 2 | 460 | 3 | 7.5 / 6.9 | 3450 | 14.1 / 13.2 | 98 / 100 | 2 | 3 | 1.0 | 2.5 | 10.1 |
| | T/YHD210GW | 2 | 575 | 3 | 7.5 / 6.9 | 3450 | 11.6 / 11.5 | 84 / 78 | 2 | 3 | 1.0 | 1.9 | 8.0 |
| 20 | T/YHD240G3 | 2 | 208–230 | 3 | 10 | 3450 | 39.1/39.1 | 267/267 | 2 | 3 | 1.0 | 4.8 | 20.0 |
| | T/YHD240G4 | 2 | 460 | 3 | 10 | 3450 | 18.6/18.6 | 142/142 | 2 | 3 | 1.0 | 2.5 | 10.1 |
| | T/YHD240GW | 2 | 575 | 3 | 10 | 3450 | 15.4/15.4 | 103/103 | 2 | 3 | 1.0 | 1.9 | 8.0 |
| 25 | T/YHD300G3 | 2 | 208–230 | 3 | 10 | 3450 | 36.6/36.6 | 240/240 | 2 | 3 | 1.0 | 4.8 | 20.0 |
| | T/YHD300G4 | 2 | 460 | 3 | 10 | 3450 | 17.2/17.8 | 140/140 | 2 | 3 | 1.0 | 2.5 | 10.1 |
| | T/YHD300GW | 2 | 575 | 3 | 10 | 3450 | 12.9/12.9 | 108/108 | 2 | 3 | 1.0 | 1.9 | 8.0 |

(a) For Compressor Motors and Condenser Fan Motors: Amp draw for each motor; multiply value by number of motors to determine total amps.
(b) Horsepower for each compressor.

**Table 102. Electrical characteristics—evaporator fan motor—60 cycle—standard and oversized**

| Tons | Unit Model Number | Standard Evaporator Fan Motor | | | | | | Oversized Evaporator Fan Motor | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Amps[b] | | | | | | Amps | |
| | | No. | Volts | Phase | hp[a] | FLA | LRA | No. | Volts | Phase | hp | FLA | LRA |
| 12½ | T/YH*150G3 | 1 | 208–230 | 3 | 3 | 10.6 | 81 | 1 | 208–230 | 3 | 5 | 16.7 | 109.8 |
| | T/YH*150G4 | 1 | 460 | 3 | 3 | 4.8 | 40.5 | 1 | 460 | 3 | 5 | 7.6 | 54.9 |
| | T/YH*150GW | 1 | 575 | 3 | 3 | 3.9 | 31 | 1 | 575 | 3 | 5 | 6.1 | 41.6 |
| 15 | T/YH*180G3 | 1 | 208–230 | 3 | 3 | 10.6 | 81 | 1 | 208–230 | 3 | 5 | 16.7 | 109.8 |
| | T/YH*180G4 | 1 | 460 | 3 | 3 | 4.8 | 40.5 | 1 | 460 | 3 | 5 | 7.6 | 54.9 |
| | T/YH*180GW | 1 | 575 | 3 | 3 | 3.9 | 31 | 1 | 575 | 3 | 5 | 6.1 | 41.6 |
| 17½ | T/YH*210G3 | 1 | 208–230 | 3 | 5 | 16.7 | 109.8 | 1 | 208–230 | 3 | 7.5 | 24.2 | 120.4 |
| | T/YH*210G4 | 1 | 460 | 3 | 5 | 7.6 | 54.9 | 1 | 460 | 3 | 7.5 | 11 | 74 |
| | T/YH*210GW | 1 | 575 | 3 | 5 | 6.1 | 41.6 | 1 | 575 | 3 | 7.5 | 9 | 60 |
| 20 | T/YH*240G3 | 1 | 208–230 | 3 | 5 | 16.7 | 109.8 | 1 | 208–230 | 3 | 7.5 | 24.2 | 120.4 |
| | T/YH*240G4 | 1 | 460 | 3 | 5 | 7.6 | 54.9 | 1 | 460 | 3 | 7.5 | 11 | 74 |
| | T/YH*240GW | 1 | 575 | 3 | 5 | 6.1 | 41.6 | 1 | 575 | 3 | 7.5 | 9 | 60 |
| 25 | T/YH*300G3 | 1 | 208–230 | 3 | 7.5 | 24.2 | 120.4 | — | — | — | — | — | — |
| | T/YH*300G4 | 1 | 460 | 3 | 7.5 | 11 | 74 | — | — | — | — | — | — |
| | T/YH*300GW | 1 | 575 | 3 | 7.5 | 9 | 60 | — | — | — | — | — | — |

(a) Horsepower for each compressor.
*Indicates both downflow and horizontal units.
(b) For Compressor Motors and Condenser Fan Motors: Amp draw for each motor; multiply value by number of motors to determine total amps.

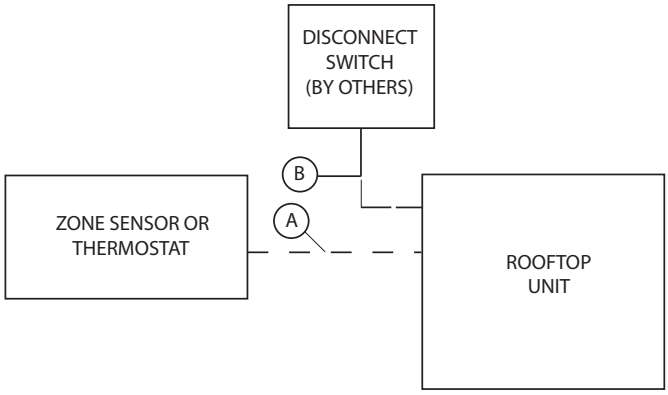
**Table 103. Electrical characteristics—power exhaust (cooling and gas/electric)**

| Tons | Volts | Phase | hp | rpm | Amps | |
|---|---|---|---|---|---|---|
| | | | | | FLA | LRA |
| 12½–25 | 208–230 | 1 | 3/4 | 1040 | 6.6 | 13.5 |
| | 460 | 1 | 3/4 | 1040 | 3.2 | 8.4 |
| | 575 | 1 | 3/4 | 1040 | 2.1 | 5.2 |

# Jobsite Connections

**Table 104. Typical number of wires**

| Zone Sensors | | |
|---|---|---|
| A | Manual Changeover..... | 4 |
| | Manual/Auto Changeover..... | 5 |
| | Manual/Auto Changeover with Status Indication LEDs..... | 10 |
| | Programmable Night Setback with Status Indication LEDs..... | 7 |
| B | 3 Power Wires + 1 Ground Wire (three phase) | |
| | 2 Power Wires + 1 Ground Wire (single phase) | |




***Notes:***

- *For specific wiring information, see the installation instructions.*
- *All wiring except power wire is low voltage.*
- *All customer supplied wiring to be copper and must conform to applicable electrical codes and local electric codes. Wiring shown dotted is to be furnished and installed by the customer.*
- *Zone sensors are required for units configured for Single Zone VAV indoor fan system control in order to enable Single Zone VAV functionality.*

# Dimensional Data

**Figure 1. Cooling with optional electric heat and gas/electric models—12½ tons standard efficiency**

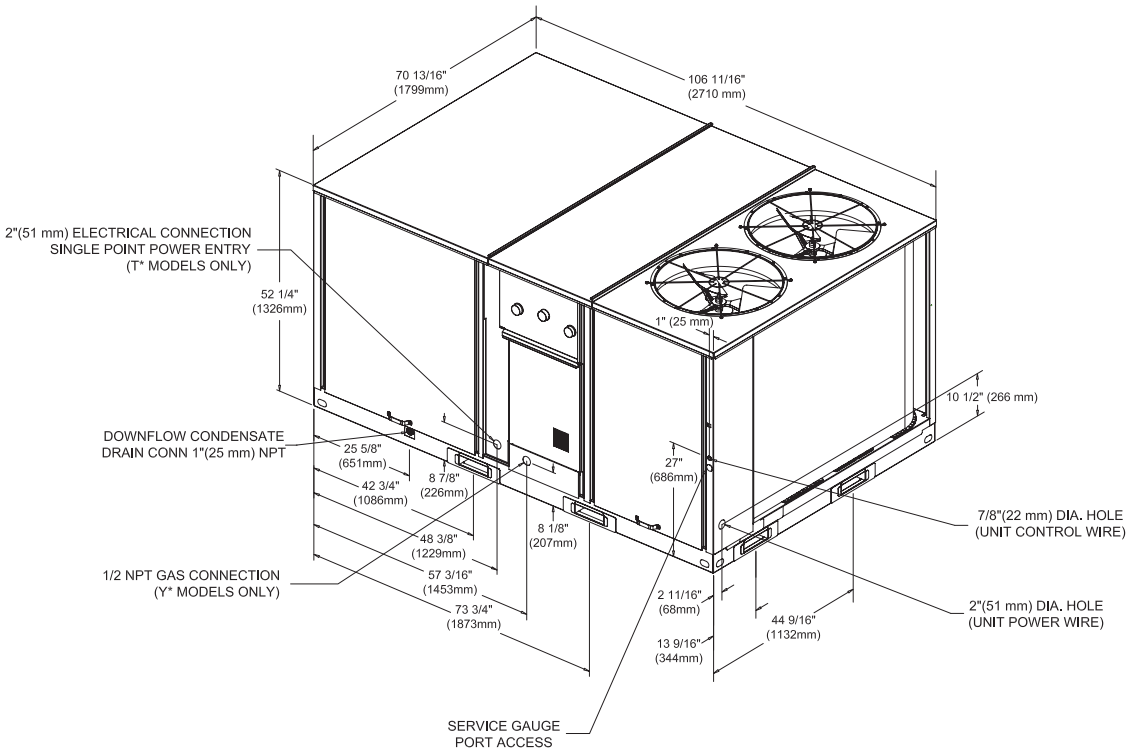



**Figure 2. Cooling with optional electric heat and gas/electric models—12½ tons standard efficiency horizontal unit clearance**

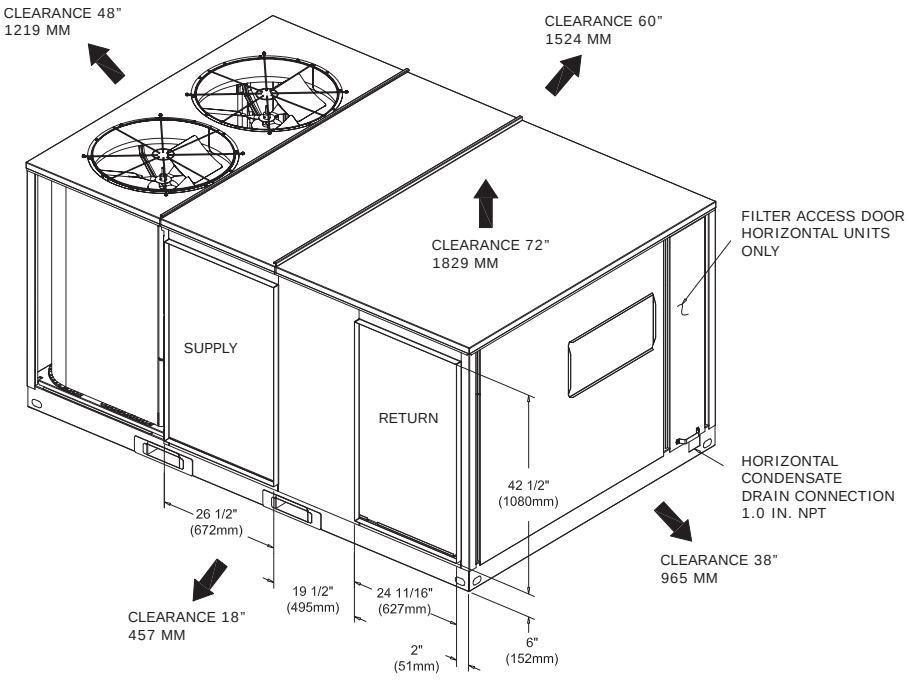


**Figure 3. Cooling with optional electric heat and gas/electric models 12½ tons standard efficiency—roof curb**

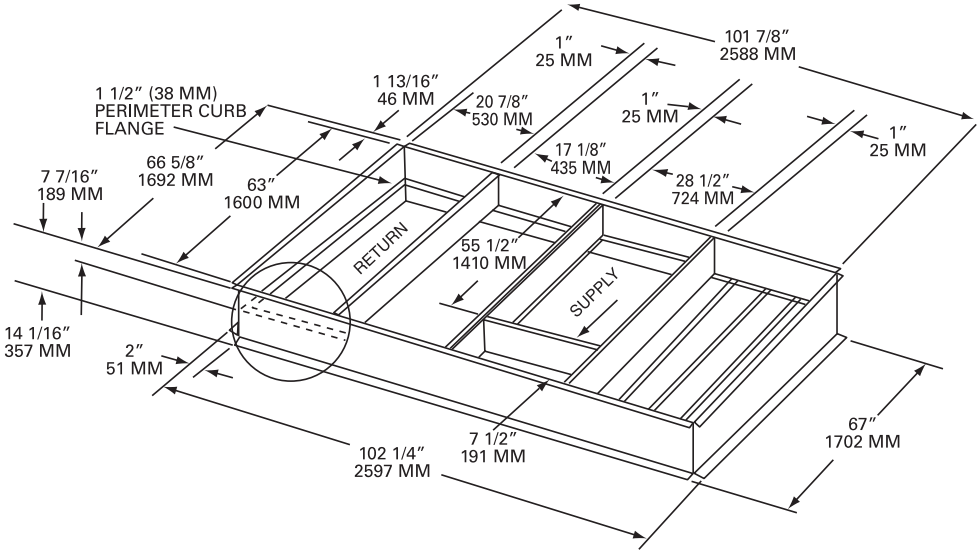
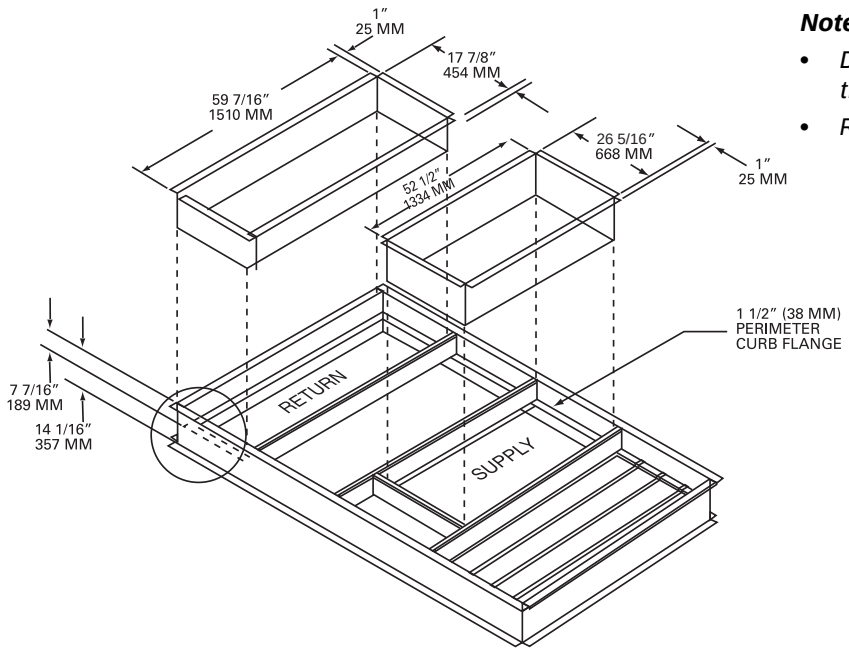



**Figure 4. Cooling with optional electric heat and gas/electric models 12½ tons standard efficiency—downflow duct connections—field fabricated**




***Notes:***

- *Duct flanges mount 7-7/16-inch down inside the curb on the 1-1½-inch curb flanges.*
- *Roofcurb is intended for downflow use only.*

**Figure 5. Cooling with optional electric heat and gas/electric models—12½ tons standard efficiency—downflow unit supply/return and unit clearance**

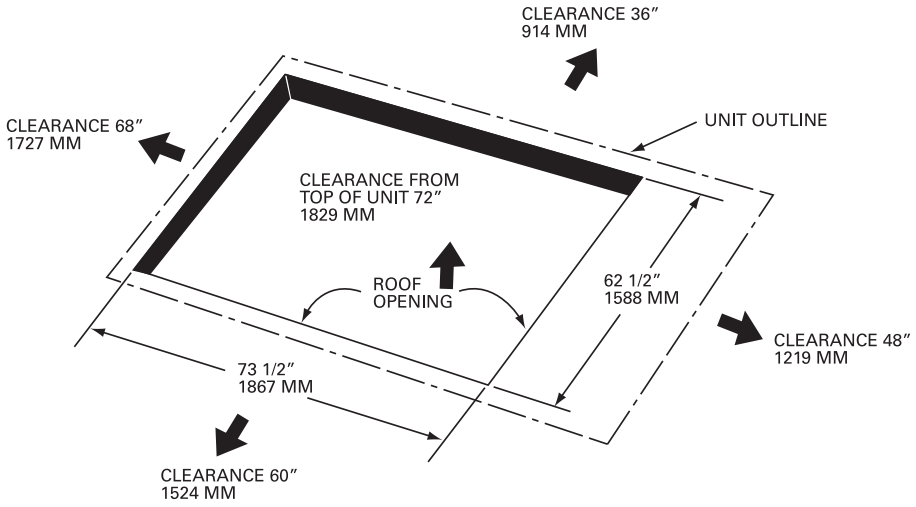



**Figure 6. Cooling with optional electric heat and gas/electric models—15–25 tons standard efficiency and 12.5 ton high efficiency**

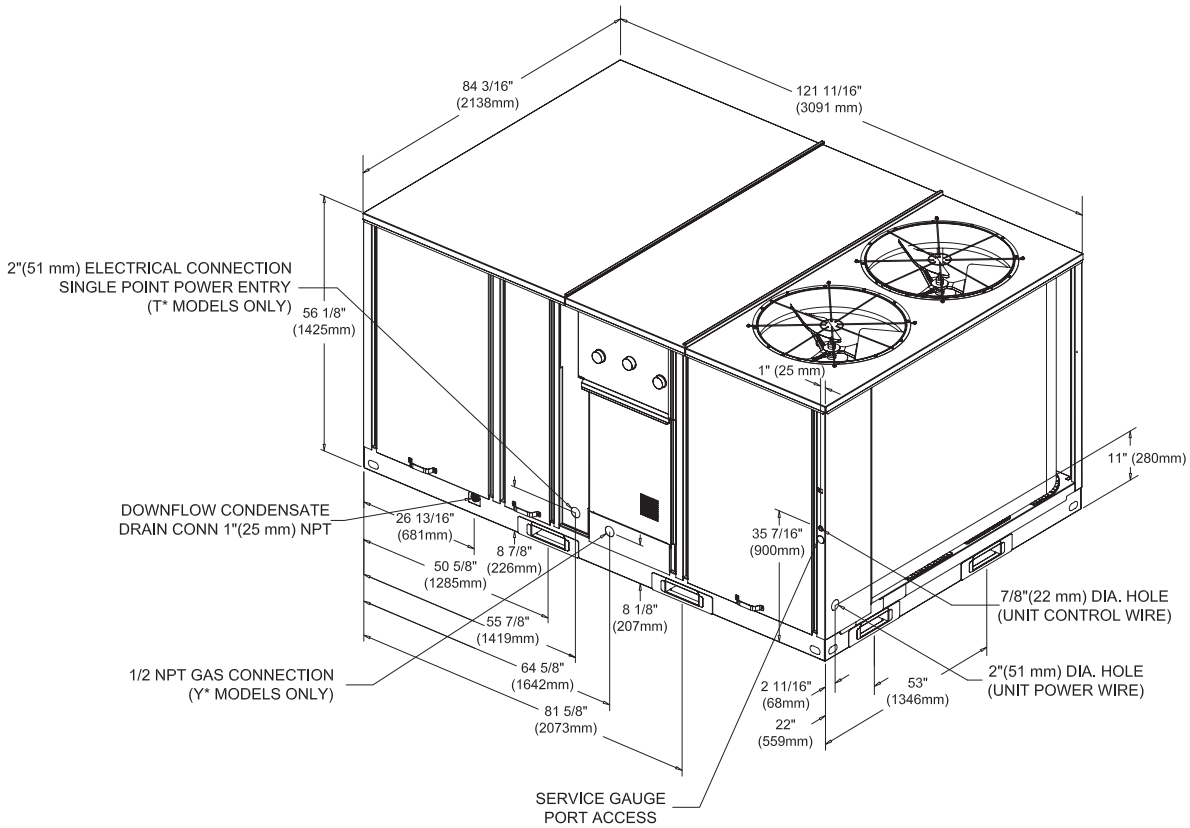


**Figure 7. Cooling with optional electric heat and gas/electric models—15–25 tons high efficiency**

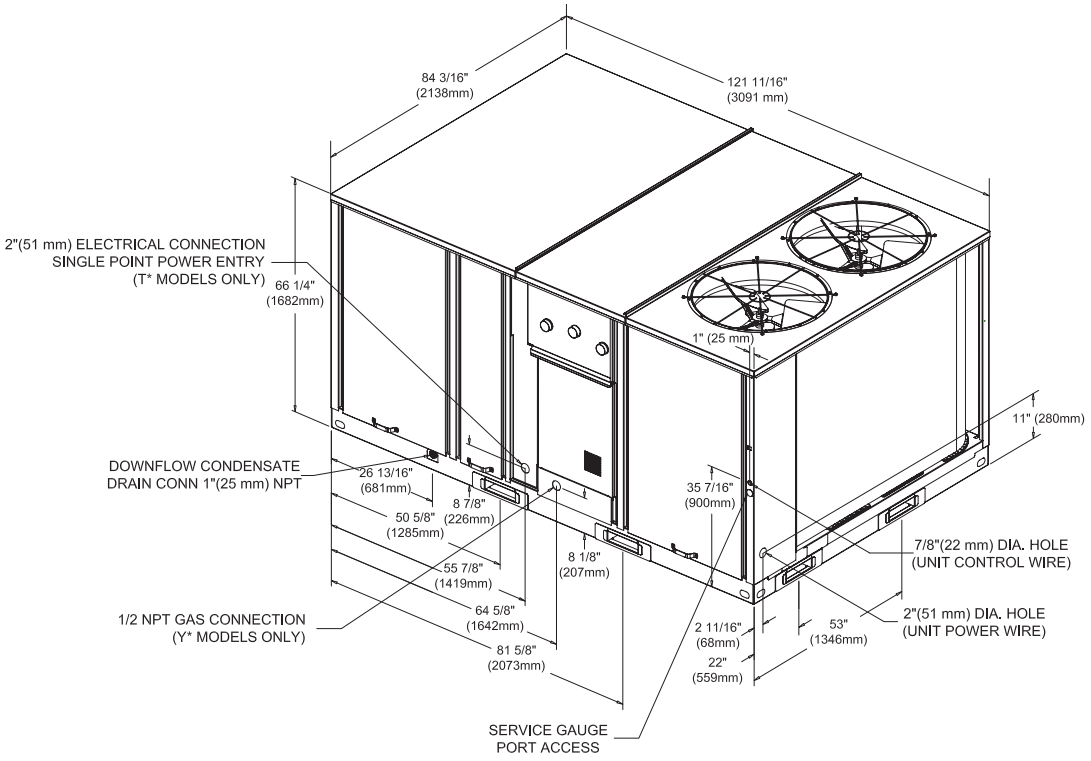
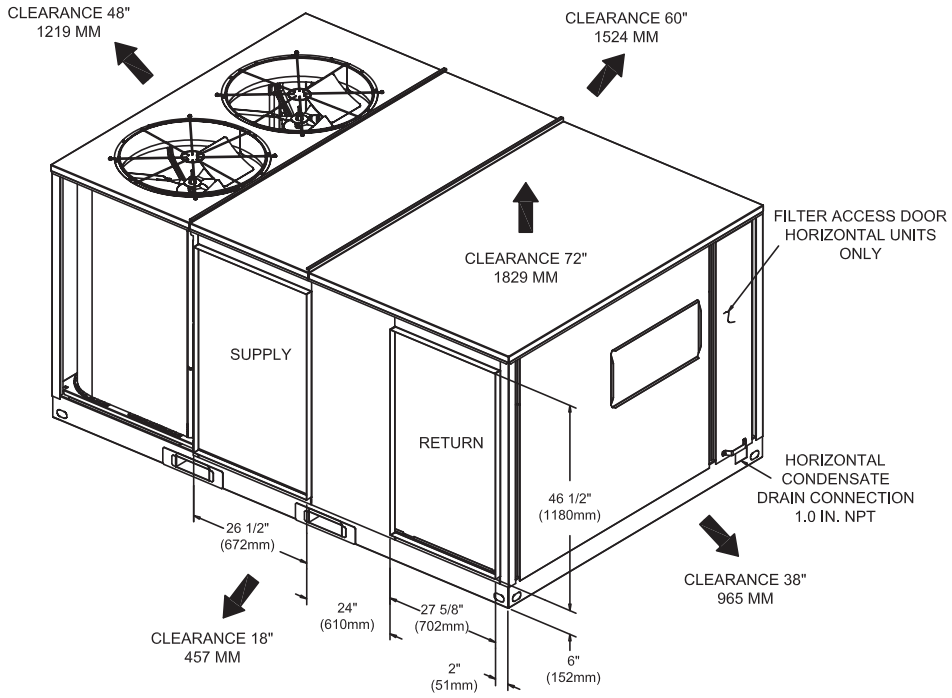



**Figure 8. Cooling with optional electric heat and gas/electric models—15–25 tons standard efficiency, 12½–25 tons high efficiency—unit clearance and horizontal unit supply/return**



## Dimensional Data

**Figure 9. Cooling with optional electric heat and gas/electric models—15–25 tons standard efficiency, 12½–25 tons high efficiency—roof curb**

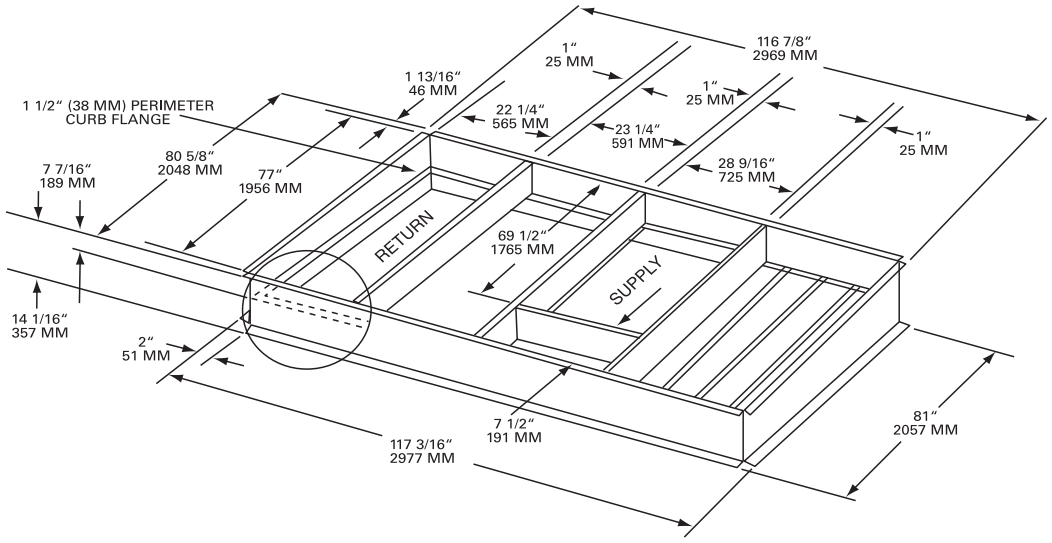
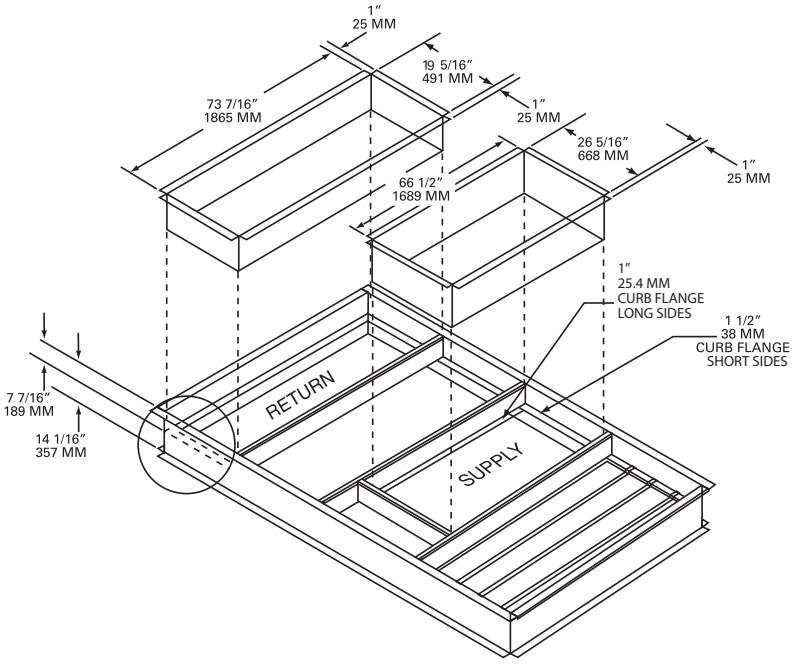



**Figure 10. Cooling with optional electric heat and gas/electric models—15–25 tons standard efficiency, 12½–25 tons high efficiency—downflow duct connections—field fabricated**




***Notes:***

- *Duct flanges mount 7-7/16-inch down inside the curb on the 1-1½-inch curb flanges.*
- *Roofcurb is intended for downflow use only.*

**Figure 11. Cooling with optional electric heat and gas/electric models—15–25 tons standard efficiency, 12½–25 tons high efficiency—downflow unit clearance**

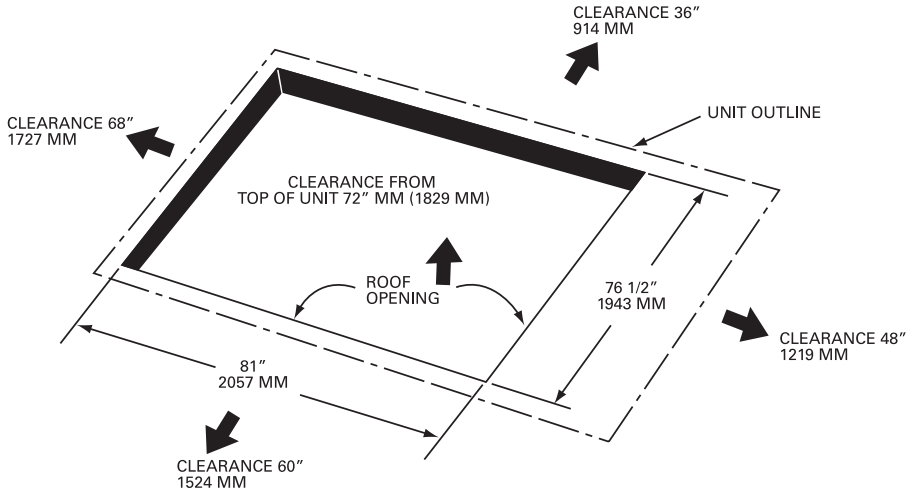



**Figure 12. Downflow and horizontal condensate locations**

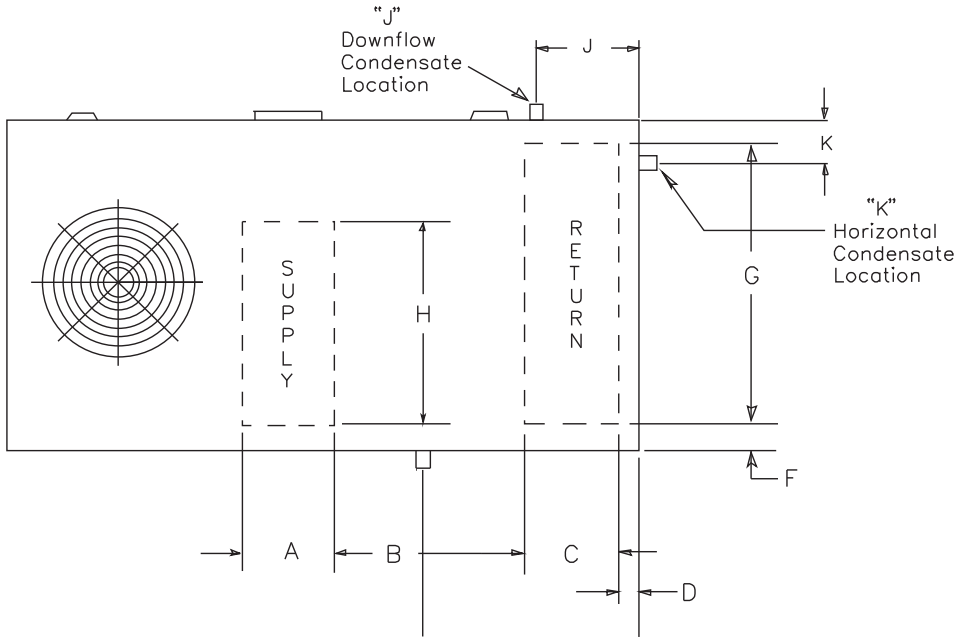



**Table 105. Standard efficiency units (cooling and gas/electric)**

| Tons | Downflow Only | | | | | | | Condensate Drain Size | Condensate Drain Location | |
|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | F | G | H | | Downflow | Horizontal |
| | | | | | | | | | J | K |
| 12½ | 26 7/16 | 22 1/2 | 18 11/16 | 4 1/4 | 4 1/4 | 62 7/16 | 54 11/16 | 1 NPT | 25 5/8 | 6 |
| 15–25 | 26 7/16 | 28 3/4 | 19 15/16 | 4 1/4 | 4 1/4 | 76 5/16 | 68 11/16 | 1 NPT | 26 3/4 | 5 3/8 |

**Table 106. High efficiency units (cooling and gas/electric)**

| Tons | Downflow Only | | | | | | | Condensate Drain Size | Condensate Drain Location | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Downflow | Horizontal |
| | A | B | C | D | F | G | H | | J | K |
| 12½–25 | 26 7/16 | 28 3/4 | 19 15/16 | 4 1/4 | 4 1/4 | 76 5/16 | 68 11/16 | 1 NPT | 26 3/4 | 5 3/8 |

**Table 107. Cooling unit—swing diameter and through the base electrical**

| Unit Model # | A | B | C | D | E |
|---|---|---|---|---|---|
| TSD150G | 42 3/8 | 48 3/8 | 31 | N/A | N/A |
| TSD180–300G, THD150–300G | 29 1/2 | 56 | 38 1/2 | 18 1/2 | N/A |
| TSH150G | 42 3/8 | N/A | 31 | N/A | 12 |
| TSH180–300G, THH150–300G | 29 1/2 | N/A | 38 1/2 | 18 1/2 | 14 |

**Note:** All dimensions are in inches.

TOP VIEW SHOWING THROUGH THE BASE
ELECTRICAL UTILITY LOCATIONS AND ACCESS PANEL SWING CLEARANCES.

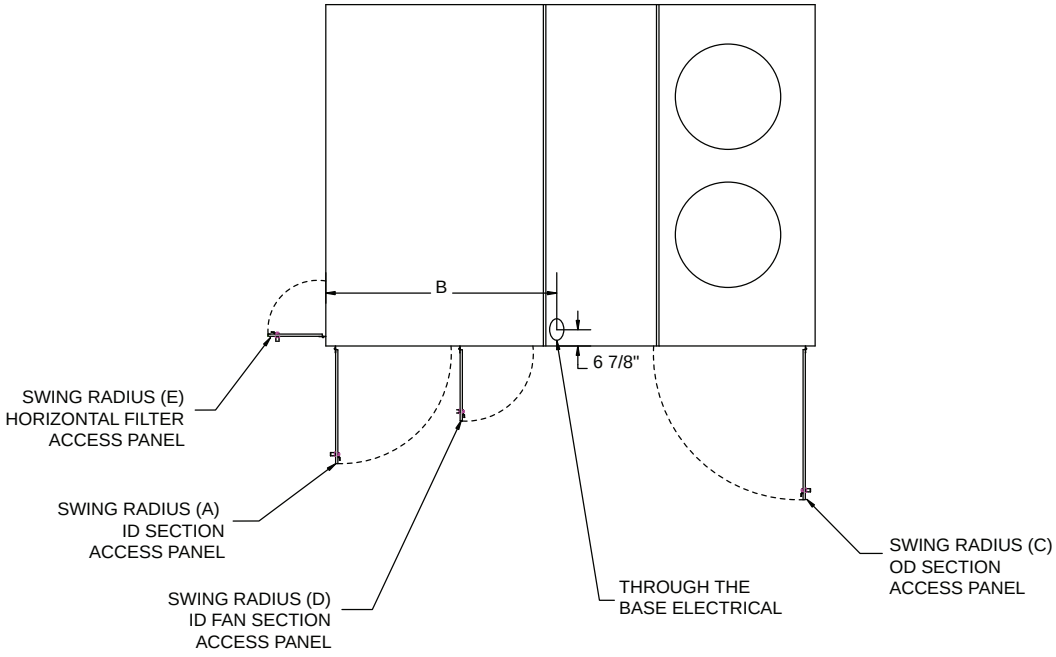


**Table 108. Gas/electric unit—swing diameter and through the base electrical; height of gas pipe**

| Unit Model # | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| YSD150G | 42 3/8 | 66 3/8 | 48 3/8 | N/A | N/A | 31 |
| YSD180–300G, YHD150–300G | 29 1/2 | 77 7/8 | 56 | 18 1/2 | N/A | 38 1/2 |
| YSH150G | 42 3/8 | N/A | N/A | N/A | 12 | 31 |
| YSH180–300G, YHH150–300G | 29 1/2 | N/A | N/A | 18 1/2 | 14 | 38 1/2 |

**Note:** All dimensions are in inches.

TOP VIEW SHOWING THROUGH THE BASE
ELECTRICAL UTILITY LOCATIONS AND ACCESS PANEL SWING CLEARANCES.

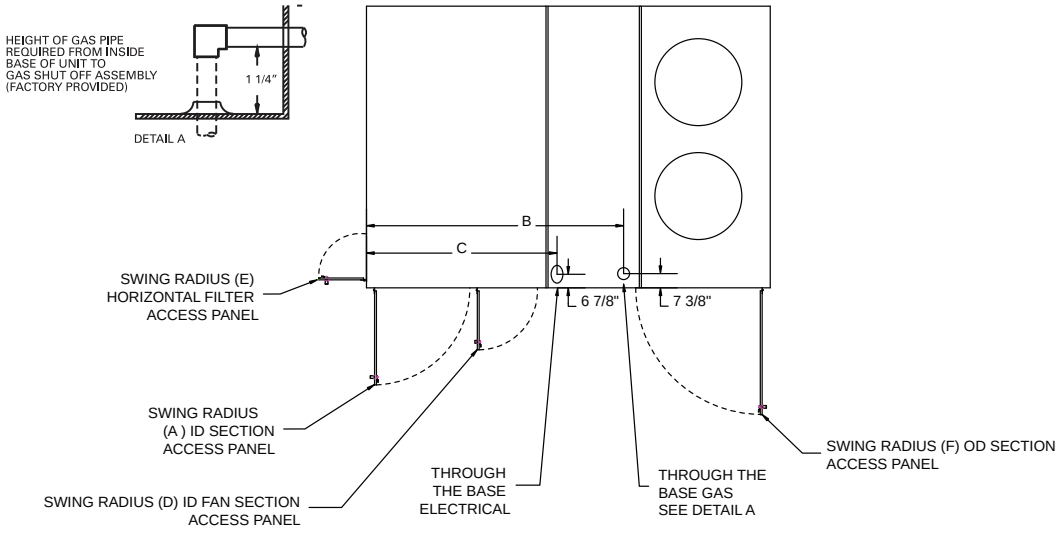



**Figure 13. Fresh air hood (horizontal units)**

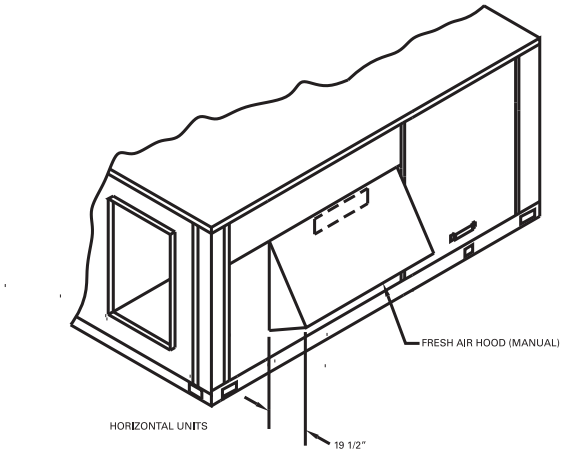
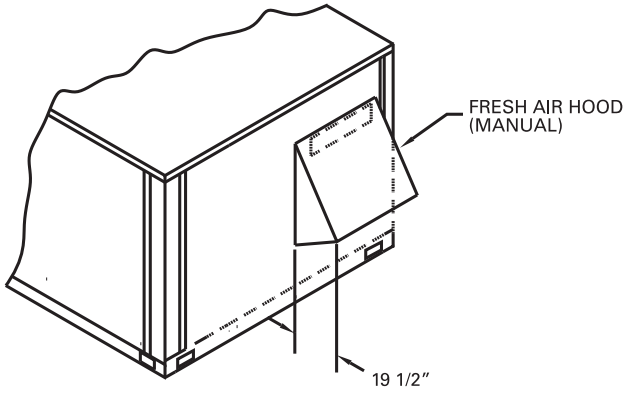



**Figure 14. Fresh air hood (downflow units)**




DOWNFLOW ECONOMIZER

**Figure 15. Power exhaust—downflow economizers**

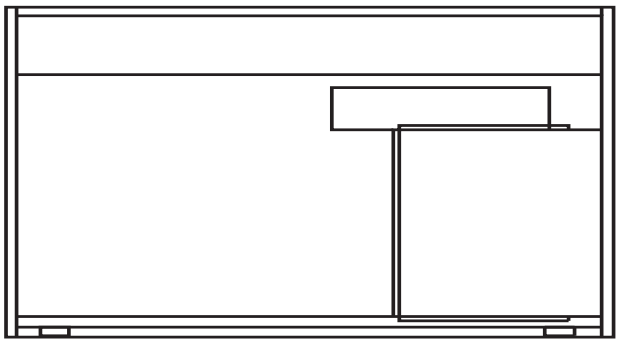



**Figure 16. Power exhaust—downflow economizers—side view**

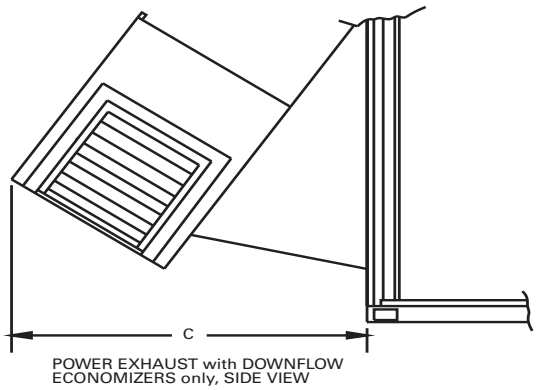
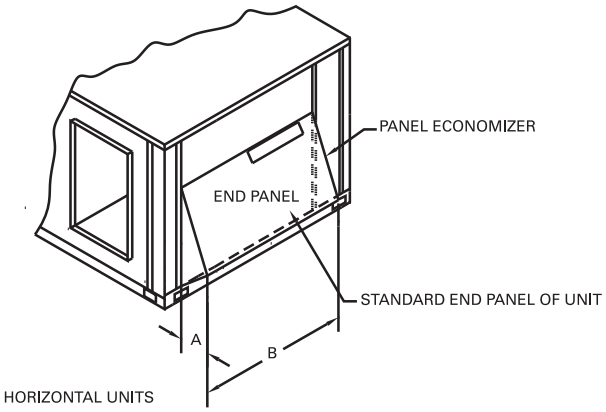



**Figure 17. Economizer—horizontal units**




**Note:** When applying economizer to horizontal units, connected ductwork must be run full size to allow proper operation of economizer damper.

**Figure 18. Economizer—downflow units**

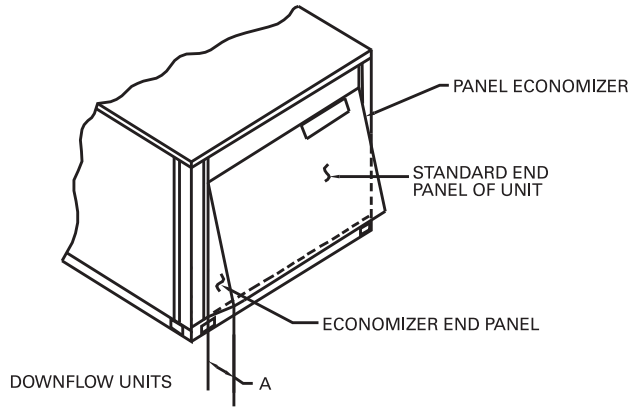



**Table 109. Power exhaust dimensions**

| Unit Model # | A | B(a) | C(b) |
|---|---|---|---|
| T/YS*150G | 17½ | 53¾ | 36 |
| T/YH*150G, T/YS*180–300G, T/YH*180-300G | 19½ | 64¾ | 39 |

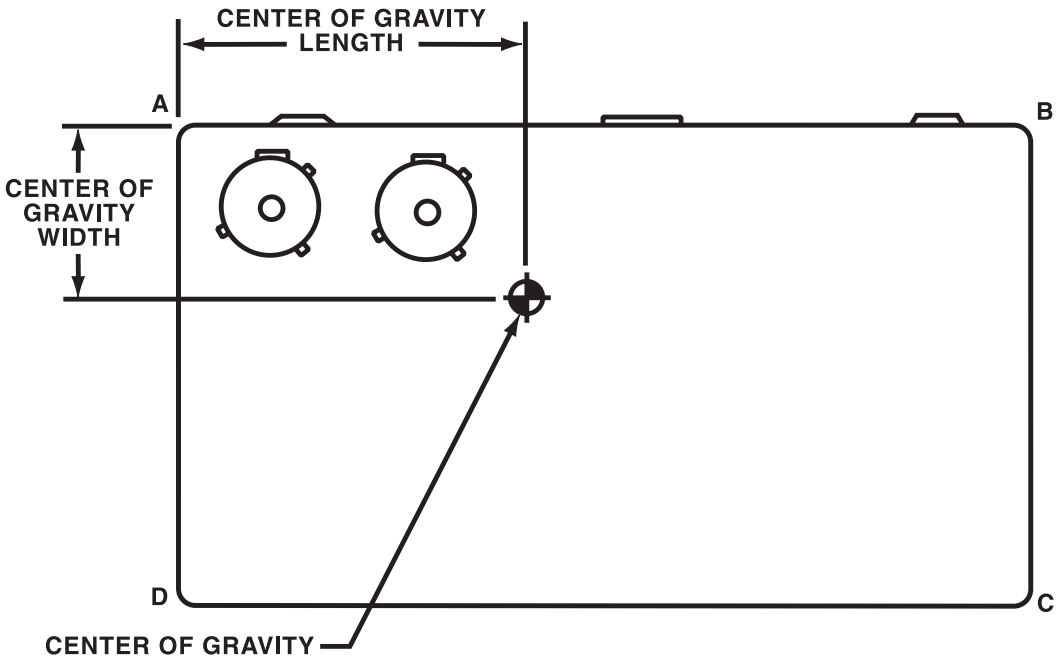
(a) Horizontal dimension only. Downflow economizer is width of end panel.
(b) Power exhaust is applied on downflow economizer only.

# Weights

**Table 110. Maximum unit and corner weights (lb) and center of gravity dimensions (in.) cooling with optional electric heat units only**

| Tons | Unit Model No. | Weights (lb)[a], [b] | | Corner Weights[c] | | | | Center of Gravity (in.) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Shipping | Net | A | B | C | D | Length | Width |
| 12½ | TS*150G | 1745 | 1373 | 516 | 364 | 208 | 285 | 44 | 25 |
| | TH*150G | 2299 | 1868 | 632 | 503 | 345 | 391 | 55 | 33 |
| | THD150G(Reheat Units) | 2390 | 1959 | 693 | 470 | 337 | 458 | 50 | 34 |
| 15 | TS*180G | 2194 | 1763 | 575 | 480 | 338 | 370 | 56 | 34 |
| | TH*180G | 2519 | 2076 | 619 | 564 | 425 | 469 | 58 | 36 |
| | THD180G (Reheat Units) | 2469 | 2026 | 701 | 491 | 360 | 474 | 51 | 35 |
| 17½ | TS*210G | 2251 | 1819 | 583 | 494 | 354 | 388 | 57 | 34 |
| | TH*210G | 2480 | 2037 | 622 | 542 | 399 | 474 | 56 | 36 |
| | THD210G (Reheat Units) | 2514 | 2071 | 736 | 495 | 360 | 480 | 50 | 34 |
| 20 | TS*240G | 2334 | 1902 | 615 | 498 | 357 | 433 | 55 | 35 |
| | TH*240G | 2550 | 2107 | 671 | 552 | 401 | 483 | 55 | 35 |
| | THD240G (Reheat Units) | 2534 | 2091 | 751 | 497 | 361 | 482 | 50 | 34 |
| 25 | TS*300G | 2376 | 1945 | 624 | 512 | 369 | 440 | 55 | 35 |
| | TH*300G | 2551 | 2108 | 672 | 556 | 400 | 481 | 55 | 35 |
| | THD300G (Reheat Units) | 2576 | 2133 | 738 | 522 | 385 | 487 | 52 | 34 |

(a) Weights are approximate. Horizontal and downflow unit and corner weights may vary slightly.
(b) Weights do not include additional factory or field installed options/accessories. For option/accessory additional weights, reference Table 112, p. 146 to be added to unit weights.
(c) Corner weights are given for information only. 12½–25 ton models must be supported continuously by a curb or equivalent frame support.
* Indicates both downflow and horizontal units.



## Weights

### Table 111. Maximum unit and corner weights (lb) and center of gravity dimensions (in.) gas/electric heat units only

| Tons | Unit Model No. | Weights (lb)[a],[b] | | Corner Weights[c] | | | | Center of Gravity (in.) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Shipping | Net | A | B | C | D | Length | Width |
| 12½ | YS*150G | 1820 | 1448 | 537 | 381 | 225 | 306 | 45 | 26 |
| | YH*150G | 2402 | 1971 | 680 | 515 | 352 | 423 | 54 | 33 |
| | YHD150G (Reheat Units) | 2465 | 2034 | 714 | 487 | 354 | 478 | 50 | 34 |
| 15 | YS*180G | 2269 | 1838 | 595 | 497 | 355 | 390 | 56 | 34 |
| | YH*180G | 2665 | 2222 | 665 | 602 | 453 | 503 | 58 | 36 |
| | YHD180G (Reheat Units) | 2544 | 2101 | 722 | 508 | 377 | 494 | 51 | 35 |
| 17½ | YS*210G | 2326 | 1894 | 604 | 511 | 371 | 409 | 57 | 35 |
| | YH*210G | 2629 | 2186 | 670 | 581 | 427 | 508 | 56 | 36 |
| | YHD210G (Reheat Units) | 2589 | 2146 | 756 | 512 | 377 | 500 | 50 | 34 |
| 20 | YS*240G | 2409 | 1977 | 635 | 515 | 374 | 454 | 55 | 35 |
| | YH*240G | 2700 | 2257 | 719 | 591 | 430 | 517 | 55 | 35 |
| | YHD240G (Reheat Units) | 2609 | 2166 | 771 | 514 | 378 | 503 | 50 | 34 |
| 25 | YS*300G | 2451 | 2020 | 644 | 529 | 386 | 461 | 55 | 35 |
| | YH*300G | 2734 | 2291 | 734 | 603 | 432 | 523 | 55 | 35 |
| | YHD300G (Reheat Units) | 2651 | 2208 | 759 | 539 | 402 | 508 | 52 | 35 |

(a) Weights are approximate. Horizontal and downflow unit and corner weights may vary slightly.
(b) Weights do not include additional factory or field installed options/accessories. For option/accessory additional weights, reference Table 112, p. 146 to be added to unit weights.
(c) Corner weights are given for information only. 12½–25 ton models must be supported continuously by a curb or equivalent frame support.
* Indicates both downflow and horizontal units.

### Table 112. Factory installed options (FIOPS)/accessory net weight (lb)[a], [b]

| Accessories | B Cabinet | | C Cabinet | | C+ Cabinet | |
|---|---|---|---|---|---|---|
| | T/YSD150G | T/YSH150G | T/YSD180-300G T/YHD150G | T/YSH180-300G T/YHH150G | T/YHD180-300G | T/YHH180-300G |
| Standard Economizer | 65 | 50 | 80 | 65 | 80 | 65 |
| Low Leak Economizer | 180 | 180 | 250 | 250 | 250 | 250 |
| Manual Outside Air Damper | 32 | 32 | 32 | 32 | 32 | 32 |
| Motorized Outside Air Damper | 60 | 60 | 75 | 75 | 75 | 75 |
| Power Exhaust[c] | 95 | — | 95 | — | 95 | — |
| Roof Curb[c] | 205 | — | 235 | — | 235 | — |
| Oversized Motor | 5 | 5 | 5 | 5 | 5 | 5 |
| Hail Guard | 34 | 34 | 43 | 43 | 51 | 51 |
| Hinged Access Doors[d] | 27 | 27 | 27 | 27 | 27 | 27 |
| Powered Conv. Outlet | 38 | 38 | 38 | 38 | 38 | 38 |
| Through the Base Electrical | 23 | 23 | 23 | 23 | 23 | 23 |
| Circuit Breaker | 10 | 10 | 10 | 10 | 10 | 10 |
| Disconnect | 10 | 10 | 10 | 10 | 10 | 10 |
| Smoke Detector Supply | 5 | 5 | 5 | 5 | 5 | 5 |
| Smoke Detector Return | 5 | 5 | 5 | 5 | 5 | 5 |
| Novar | 7 | 7 | 7 | 7 | 7 | 7 |
| High Static Drive Kit[e] | 2 | 2 | 2 | 2 | 2 | 2 |
| Low Static Drive Kit[e] | 2 | 2 | — | — | — | — |

**Table 112. Factory installed options (FIOPS)/accessory net weight (lb)[a], [b]**

| Accessories | B Cabinet | | C Cabinet | | C+ Cabinet | |
|---|---|---|---|---|---|---|
| | T/YSD150G | T/YSH150G | T/YSD180-300G T/YHD150G | T/YSH180-300G T/YHH150G | T/YHD180-300G | T/YHH180-300G |
| LP Gas Conversion | 5 | 5 | 5 | 5 | 5 | 5 |
| All Zone Sensors | 1 | 1 | 1 | 1 | 1 | 1 |
| Electric Heaters | | | | | | |
| 6–23 kW[f] [g] | 28/21 | 28/21 | 28/21[h] | 28/21[h] | — | — |
| 27–36 kW[f] [g] | 31/27 | 31/27 | 33/27 | 33/27 | 33/27 | 33/27 |
| 54 kW[f] [g] | 38/32 | 38/32 | 40/32 | 40/32 | 40/32 | 40/32 |
| 72 kW[f] [g] [i] | — | — | 43/34 | 43/34 | 43/34 | 43/34 |
| Stainless Steel Heat Exchanger | | | | | | |
| 150 MBh | 50 | 50 | 50[h] | 50[h] | — | — |
| 250 MBh | 50 | 50 | 50 | 50 | 50 | 50 |
| 350 MBh | 75 | 75 | 75 | 75 | 75 | 75 |
| 400 MBh[j] | — | — | 75 | 75 | 75 | 75 |
| Stainless Steel Drain Pan | 6.6 | 6.6 | 8.1 | 8.1 | 8.1 | 8.1 |
| VFD | | | | | | |
| 3 and 5 HP[k] | 32 | 34 | 32 | 34 | 32 | 34 |
| 7.5 HP[i] | — | — | 63 | 65 | 63 | 65 |
| Traq Dampers | 25 | 25 | 23 | 23 | 23 | 23 |

(a) Net weight should be added to unit weight when ordering factory-installed accessories.
(b) Weights for FIOP accessories not listed are < 5 lb.
(c) Downflow only.
(d) An additional 30lbs should be added to the shipping weight when hinged door option is ordered.
(e) Not available on all models (see Fan Performance tables for specific models).
(f) For 600V heaters net weights are same as 480V heaters.
(g) To estimate shipping weight add 5 lb to net weight.
(h) Applicable to T/YH*150G units only.
(i) Not applicable to T/YH*150-180G, and T/YS*180G units.
(j) Applicable to T/Y**240-300* units only.
(k) Not applicable to T/Y**300* 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 AHRI testing procedures. All units shall be factory assembled, internally wired, fully charged with R-410A, and 100 percent run tested to check cooling operation, fan and blower rotation and control sequence, before leaving the factory. Wiring internal to the unit shall be colored and numbered for simplified identification. Units shall be UL listed and labeled, classified in accordance to UL 1995/C 22.2, 236-05 3rd Edition.

Packaged Rooftop units cooling, heating capacities, and efficiencies are AHRI certified within scope of AHRI Standard 340/360 (I-P) and ANSIZ21.47 and 10 CFR Part 431 pertaining to Commercial Warm Air Furnaces (gas heating units).

## Barometric Relief

Designed to be used on downflow units, barometric relief is an unpowered means of relieving excess building pressure.

## Casing

Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel. Exterior surfaces shall be cleaned, phosphatized, and finished with a weather-resistant baked enamel finish. Unit's surface shall be tested 672 hours in a salt spray test in compliance with ASTM B117. Cabinet construction shall allow for all maintenance on one side of the unit. In order to ensure a water and air tight seal, service panels shall have lifting handles and no more than three screws to remove. All exposed vertical panels and top covers in the indoor air section shall be insulated with a 1/2-inch, 1-pound density foil-faced, fire-resistant, permanent, odorless, glass fiber material. The base of the downflow unit shall be insulated with 1/2-inch, 1-pound density foil-faced, closed-cell material. The downflow unit’s base pan shall have no penetrations within the perimeter of the curb other than the raised 11/8-inch high supply/return openings to provide an added water integrity precaution, if the condensate drain backs up. The base of the unit shall have provisions for forklift and crane lifting.

## Compressors

All units shall have direct-drive, hermetic, scroll type compressors with centrifugal type oil pumps. Motor shall be suction gas-cooled and shall have a voltage utilization range of plus or minus 10 percent of nameplate voltage. Internal overloads shall be provided with the scroll compressors. All models shall have crankcase heaters, phase monitors and low and high pressure control as standard. Dual compressors are available on all standard efficiency models and 12.5 to 20 tons high efficiency models and allow for efficient cooling utilizing 3 stages of compressor operation (high efficiency models only). 25 tons high efficiency units have 3 compressors for up to 4 stages of compressor operation.

## Controls

Unit shall be completely factory wired with necessary controls and contactor pressure lugs or terminal block for power wiring. Unit shall provide an external location for mounting a 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. A centralized control shall provide anti-short cycle timing and time delay between compressors to provide a higher level of machine protection.

## Crankcase Heaters

These band heaters provide improved compressor reliability by warming the oil to prevent migration during off-cycles or low ambient conditions. These are standard on all Voyager models.

## Defrost Controls

Adaptive demand defrost shall be provided to permit defrost wherever coil icing conditions begin to significantly reduce unit capacity.

## Discharge Line Thermostat

A bi-metal element discharge line thermostat is installed as a standard option on the discharge line of each system. This standard option provides extra protection to the compressors against high discharge temperatures in case of loss of charge, extremely high ambient and other conditions which could drive the discharge temperature higher. Discharge line thermostat is wired in series with high pressure control. When the discharge temperature rises above the protection limit, the bi-metal disc in the thermostat switches to the off position, opening the 24 Vac circuit. When the temperature on the discharge line cools down, the bi-metal disc closes the contactor circuit, providing power to the compressor. When the thermostat opens the fourth time, the ReliaTel control must be manually reset to resume operation on that stage.

## Evaporator and Condenser Coils

Microchannel coils will be burst tested by the manufacturer. Internally finned, 5/16-inch copper tubes mechanically bonded to a configured aluminum plate fin shall be standard on high efficiency models and microchannel shall be standard on standard efficiency for evaporator coils. Microchannel condenser coils shall be standard on all units. Coils shall be leak tested to ensure the pressure integrity. The evaporator coil and condenser coil shall be leak tested to 225 psig and pressure tested to 450 psig. Sloped condensate drain pans are standard.

## Filters

Two inch standard filters shall be factory supplied on all units. Optional MERV 8 or MERV 13 filters with filter removal tool shall be available.

## Gas Heating Section

The heating section shall have a drum and tube heat exchanger design using corrosion resistant steel components. 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 negative pressure gas valve shall be used on standard furnaces and a pressure switch on furnaces with modulating heat that requires blower operation to initiate gas flow. On an initial call for heat, the combustion blower shall purge the heat exchanger 45 seconds before ignition.

After three unsuccessful ignition attempts, the entire heating system shall be locked out until manually reset at the thermostat. Units shall be suitable for use with natural gas or propane (field installed kit) and shall also comply with California requirements for low $NO_x$ emissions. The 12½–25 tons shall have two stage heating (Gas/Electric only).

## Indoor Fan

Units above shall have belt driven, FC centrifugal fans with adjustable motor sheaves. Units with standard motors shall have an adjustable idler-arm assembly for quick-adjustment of fan belts and motor sheaves. All motors shall be thermally protected. Oversized motors shall be available for high static application. All indoor fan motors meet the U.S. Energy Policy Act of 1992 (EPACT).

## 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 shall have built-in thermal overload protection.

## Phase Monitor

The Phase Monitor is a three-phase line monitor module that protects against phase loss, phase reversal and phase unbalance. It is intended to protect compressors from reverse rotation. It has

an operating input voltage range of 190–600 Vac, and LED indicators for ON and FAULT. There are no field adjustments and the module will automatically reset from a fault condition.

### Refrigerant Circuits

Each refrigerant circuit shall have independent fixed orifice or 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. Thermal Expansion Valves (TXVs) shall be standard on all high efficiency units.

### Unit Top

The top cover shall be one piece, or where seams exist, double hemmed and gasket sealed to prevent water leakage.

### Variable Frequency Drive

Variable Frequency Drives are factory installed and tested to provide supply fan motor speed modulation, as well as modulating gas heat. VFDs on the supply fan, as compared to inlet guide vanes or discharge dampers, are quieter, more efficient, and are eligible for utility rebates. All VFDs are designed to allow bypass if required.

***Note:*** *It has to be hard wired with relay and removed for temporary operations; see wave 121927.*

Bypass control will simply provide full nominal airflow in the event of drive failure.

Modulating gas heat models with VFDs allow tighter space temperature control with less temperature swing.

## Factory Installed Options

### $CO_2$ Sensor Wiring

The unit wiring for field installed $CO_2$ sensors. Factory-installed $CO_2$ sensor wiring saves time and ensures proper unit connections for the field installed $CO_2$ sensor kits.

### Complete Coat™ Microchannel Condenser Coil

The cathodic epoxy type electrodisposition coating is formulated for high edge build to a number of different types of heat exchangers. The coating is selected to provide excellent resistance and durability to corrosive effects of alkalies, acids, alcohols, petroleum, seawater, salty air, and other corrosive environments. This coating shall be available on microchannel condenser coils.

### Condensate Overflow Switch

This option shall shut the unit down in the event that a clogged condensate drain line prevents proper condensate removal from the unit.

### Fault Detection and Diagnostics (FDD)

This offering meets the mandatory requirement of Title 24. This option provides detection of the following faults: Air temperature sensor failure/fault, not economizing when it should, economizing when it should not, damper not modulating, and excessive outdoor air. The FDD system shall be certified by the Energy Commission as meeting the requirements.

### High Efficiency Motors

This option is available with efficiency ratings from 86.5 up to 91.0. It is not available for all models.

### High Short Circuit Current Rating

Unit shall be provided with electrical subsystem that will withstand fault currents up to 65kA (208/230, 460 Vac) or 25kA (575 Vac) compliant with UL 1995 and NEC 440.4 (B). Each compressor circuit and the indoor fan shall have dedicated overcurrent protection. Three phase motors shall be protected by Class J time delay fuses. Single phase motors shall be protected by Class CC time

delay fuses. All transformers shall also be protected with Class CC time delay fuses. Contactors shall be din rail mounted.

### Hinged Access Doors

Sheet metal hinges are available on the Filter/Evaporator Access Door and the Compressor/Control Access Door. This option is available on all downflow models.

### Horizontal Side Access with Circuit Breaker

This option is a thermal magnetic, molded case, HACR Circuit Breaker with provisions for through the base electrical connections. The circuit breaker will be installed in a water tight enclosure in the unit with access through a swinging door. Factory wiring will be provided from the switch to the unit high voltage terminal block. The circuit breaker will provide overcurrent protection, be sized per NEC and UL guidelines, and be agency recognized by UL/CSA.

### Horizontal Side Access with Disconnect Switch

Three-pole, molded case, disconnect switch with provisions for through the base electrical connections are available. The disconnect switch will be installed in the unit in a water tight enclosure with access through a swinging door. Factory wiring will be provided from the switch to the unit high voltage terminal block. The switch will be UL/CSA agency recognized.

***Note:*** *The disconnect switch will be sized per NEC and UL guidelines but will not be used in place of unit overcurrent protection.*

### Human Interface

The Human Interface shall have a 5 inch color touchscreen display that conforms to FCC Part 15 Class B with an Ingress Protection Rating of IP24. The display text shall be readable by a person with 20/20 vision at a distance of 3 feet and 60° angle at lighting levels ranging from 100 lux - 25,000 lux. Also, the display shall operate at temperatures of -40° C to 70° C. Firmware and unit configurations shall be able to be restored via a USB storage device.

### Multi-Speed Indoor Fan System

The multiple-speed (two-speed) indoor fan control option shall automatically switch operation of the indoor fan between high speed and low speed, based on the number of compressors operating. The indoor fan shall operate at high speed whenever the gas or electric heater is operating.

### Multiple-Zone VAV Control

Multiple-zone VAV control shall vary the speed of the indoor fan to maintain the duct static pressure at a setpoint. In cooling mode, the compressors shall be cycled (or economizer modulated) to maintain the supply air temperature (SAT) at the desired setpoint. In heating mode, the indoor fan shall operate at maximum speed whenever the heater operating.

### Powered or Unpowered Convenience Outlet

This option is a GFCI, 120V/15amp, 2-plug, convenience outlet, either powered or unpowered. When the convenience outlet is powered, a service receptacle disconnect will be available. The convenience outlet is powered from the line side of the disconnect or circuit breaker, and therefore will not be affected by the position of the disconnect or circuit breaker. This option can only be ordered when the Through the Base Electrical with either the Disconnect Switch, or Circuit Breaker, option is ordered. This option is available on all downflow models (Gas/Electric only).

### Single Zone VAV

SZVAV systems combine Trane application, control and system integration knowledge to exactly match fan speed with cooling and heating loads, regardless of the operating condition.

***Note:*** *Zone sensors are required for units configured for Single Zone VAV indoor fan system control in order to enable Single Zone VAV functionality.*

### Stainless Steel Drain Pan

This option provides excellent corrosion and oxidation resistance. Drain pan shall be constructed of 304 stainless steel.

### Stainless Steel Heat Exchanger

Gas heat exchanger shall be of drum and tube design constructed from a minimum 439 Grade stainless steel. The stainless steel heat exchanger shall have a 10-year warranty as standard (Gas/ Electric only).

### Supply, Return and Plenum Air Smoke Detector

With this option installed, if smoke is detected, all unit operation will be shut down. Reset will be manual at the unit. Return Air Smoke Detectors require minimum allowable airflow when used with certain models. See the Installation, Operation, and Maintenance (IOM) manual for the models affected and the minimum allowable airflow required. This option is available on all downflow models. Supply and/or Return Detectors may not be used with the Plenum Smoke Detector.

### Through the Base Electrical with Circuit Breaker

This option is a thermal magnetic, molded case, HACR Circuit Breaker with provisions for through the base electrical connections. The circuit breaker will be installed in a water tight enclosure in the unit with access through a swinging door. Factory wiring will be provided from the switch to the unit high voltage terminal block. The circuit breaker will provide overcurrent protection, be sized per NEC and UL guidelines, and be agency recognized by UL/CSA.

### Through the Base Electrical with Disconnect Switch

Three-pole, molded case, disconnect switch with provisions for through the base electrical connections are available. The disconnect switch will be installed in the unit in a water tight enclosure with access through a swinging door. Factory wiring will be provided from the switch to the unit high voltage terminal block. The switch will be UL/CSA agency recognized.

***Note:*** *The disconnect switch will be sized per NEC and UL guidelines but will not be used in place of unit overcurrent protection.*

### Through the Base Utilities Access

An electrical service entrance shall be provided allowing electrical access for both control and main power connections inside the curb and through the base of the unit. Option will allow for field installation of liquid-tight conduit and an external field installed disconnect switch.

### Trane® Air-Fi® Wireless

Trane® Air-Fi® wireless communication shall be factory installed and pre-wired. Air-Fi® must also be Zigbee® Building Automation certified and the system communicates using standard BACnet® open protocol.

### Two-Inch Pleated Filters

Two-inch MERV 8 and MERV 13 media filters with filter removal tool shall be available on all models.

### VAV Operation

The VFD shall receive a 0-10 Vdc signal from the unit control 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.

# Factory or Field Installed Options

## BACnet® Communications Interface

This option shall be provided to allow the unit to communicate directly with a generic open protocol BACnet® MS/TP Network Building Automation System Controls.

## Clogged Filter/Fan Failure Switch

A dedicated differential pressure switch is available to achieve active fan failure indication and/or clogged filter indication. These indications will be registered with either a zone sensor with status indication lights or an Integrated Comfort™ System.

## Differential Pressure Switches

These options allow for individual fan failure and dirty filter indication. The fan failure switch will disable all unit functions and “flash” the Service LED on the zone sensor. The dirty filter switch will light the Service LED on the zone sensor and will allow continued unit operation.

## Discharge Air Temperature Sensing Kit

This kit provides true discharge air temperature sensing in heating models. This sensor is a status indicator readable through Tracer® or Tracker™. The kit is functional only with the ReliaTel Options Module.

## Economizer— Standard, Downflow

The assembly includes fully modulating 0–100% motor and dampers, barometric relief, minimum position setting, preset linkage, wiring harness with plug, fixed dry bulb and spring return actuator. The barometric relief damper shall be standard with the downflow economizer and shall provide a pressure operated damper that shall be gravity closing and shall prohibit entrance of outside air during the equipment “off” cycle. Solid state enthalpy and differential enthalpy control shall be field-installed.

## Economizer - Low Leak, Downflow

This accessory meets low leak requirements for ASHRAE 90.1, IECC, and CA Title 24 standards (3 cfm/ft^2@1" wg exterior air, 4 cfm/ft^2@1" wg return air). This option allows 100% outdoor air supply from 0-100% modulating dampers and is standard with barometric relief. It can be paired with powered exhaust for additional building pressure relief.This option can be paired with or without Fault Detection and Diagnostics (FDD) to meet current mandatory CA Title 24 requirements. Available on downflow units only. The economizers come with three control options, dry bulb and reference or comparative enthalpy (optional).

## Electric Heaters

Electric heat modules shall be available for installation within the 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 ReliaTel. Each heater package shall have multiple automatic reset and single operation high temperature limit controls operating to break line power to the heater element. All heaters shall be individually fused from the factory, where required, and shall meet all NEC and CEC requirements when properly installed. Power assemblies shall provide single-point connection. Electric heat modules shall be UL listed or CSA certified. If ordering the Through the Base Electrical option with an Electric Heater, the heater must be factory installed.

## Indoor Fan Motor Shaft Grounding Ring

Shaft grounding rings are used on all VFD driven motors to provide a conductive discharge path away from the motor bearings to ground. Bearing Protection Ring shall be maintenance free circumferential ring of conductive micro fibers that discharges voltages to ground.

### LonTalk® Communications Interface

The LonTalk communications interface, when installed in a Voyager unit, allows the unit to communicate as a Tracer® LCI-V device or directly with generic LonTalk Network Building Automation System Controls.

### Oversized Motors

Oversized motors shall be available for high static applications.

### Reference or Comparative Enthalpy

Reference Enthalpy is used to measure and communicate outdoor humidity. The unit receives and uses this information to provide improved comfort cooling while using the economizer. Comparative Enthalpy measures and communicates humidity for both outdoor and return air conditions, and return air temperature. The unit receives and uses this information to maximize use of economizer cooling, and to provide maximum occupant comfort control. Reference or Comparative Enthalpy option shall be available when a factory or field installed Downflow Economizer is ordered. This option is available on all downflow models.

### Tool-less Hail Guards

Tool-less, hail protection quality coil guards are available for condenser coil protection.

### Trane Communication Interface

This factory or field-installed option shall be provided to interface ReliaTel™ controlled units with the Trane Integrated Comfort™ systems.

## Field Installed Options

### $CO_2$ Sensor

The $CO_2$ sensor shall have the ability to monitor the concentration (parts per million, ppm) of $CO_2$ (Carbon Dioxide) in the air. As the $CO_2$ concentration changes, the outside air damper modulates to meet the current ventilation needs of the zone.

***Note:*** *Two field installed kits are offered: $CO_2$ sensor and wiring or $CO_2$ sensor only. The $CO_2$ sensor only kit should be ordered with factory installed $CO_2$ sensor wiring. Factory installed $CO_2$ sensor wiring saves set-up time and ensures proper unit connections for the $CO_2$ sensor.*

### Economizer — Standard, Horizontal

The horizontal economizer shall contain the same features as the downflow economizer with the exception of barometric relief.

### Economizer - Low Leak, Downflow and Horizontal

This accessory meets low leak requirements for ASHRAE 90.1, IECC, and CA Title 24 standards (3 cfm/ft^2@1" wg exterior air, 4 cfm/ft^2@1" wg return air).This option allows 100% outdoor air supply from 0-100% modulating dampers and is standard with barometric relief. It can be paired with powered exhaust for additional building pressure relief.

### High Static Drive

The high static drive option shall allow the standard motor on the 12½ , 15, 17½, 20 and 25 ton units to operate with improved external static capabilities.

### Humidity Sensor

Field installed, wall-mounted or duct-mounted humidity sensor is used to control activation of the hot gas reheat dehumidification option. The humidity sensor can be set for humidity levels between 40% and 60% relative humidity by adjusting the ReliaTel Options Module.

### Manual Outside Air Damper

The rain hood and screen shall provide up to 25% outside air.

### Motorized Outside Air Dampers

Manually set outdoor air dampers shall provide up to 50% outside air. Once set, outdoor air dampers shall open to set position when indoor fan starts. The damper shall close to the full closed position when indoor fan shuts down.

### Outside Air Measuring/Monitoring Control (Traq Dampers)

Requires Low Leak Economizer (Factory or Field Installed) and include:

- UC400 Controller
- Damper Actuator
- Pressure Sensors

### Powered Exhaust

The powered exhaust shall provide exhaust of return air, when using an economizer, to maintain better building pressurization.

### Roof Curb—Downflow

The roof curb shall be designed to mate with the downflow 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. Curb shall be shipped knocked down for field assembly and shall include wood nailer strips.

### Remote Potentiometer

The minimum position setting of the economizer shall be adjusted with this accessory.

### Ventilation Override Accessory

With the Ventilation Override Accessory installed, the unit can be set to transition up to three different pre-programmed sequences for Smoke Purge, Pressurization, and Exhaust. The transition occurs when a binary input on the RTOM is closed (shorted). This would typically be a hard wired relay output from a smoke detector or fire control panel.

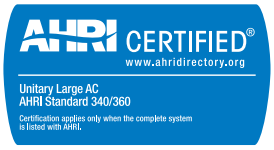
### Wireless Zone Sensor

LCD display that provides heat, cool, auto, or off. Includes two temperature setpoints and a lockable setting with °F or °C indicators.

### Zone Sensors

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

***Note:*** *Zone sensors are required for units configured for Single Zone VAV indoor fan system control in order to enable Single Zone VAV functionality.*



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