TRANE®

Product Catalog

Packaged Climate Changer™

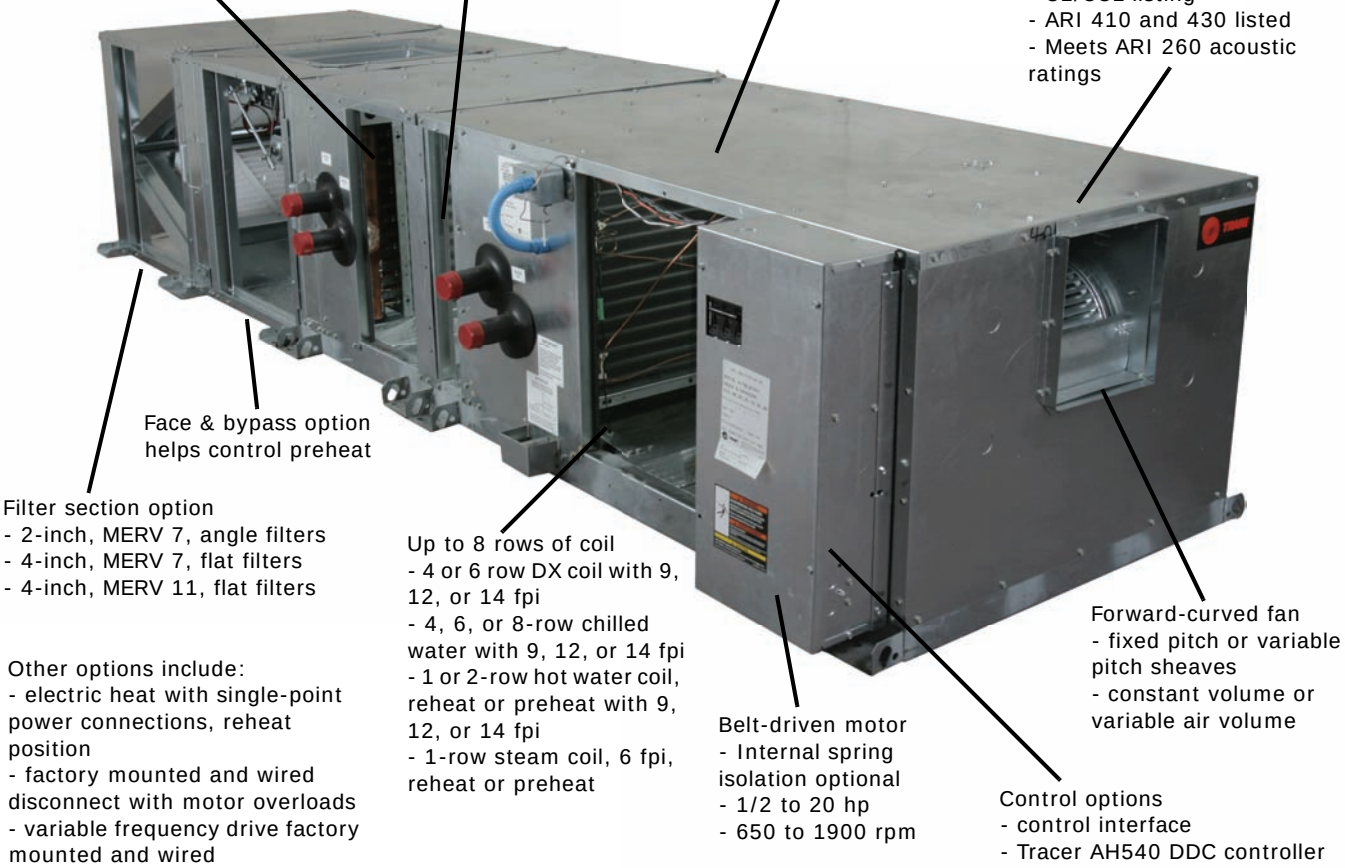
Air Handler

September 2008

CLCH-PRC007-EN

Introduction

The Packaged Climate Changer offers added feature flexibility without added cost!



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Features and Benefits

The Trane Packaged Climate Changer, model LPC, is one of the lowest cost, IAQ compliant air handling units on the market today. Also, the model LPC has many of the same standard features as more elaborate air handlers — but without added cost. This includes features that add flexibility while aiding indoor air quality, such as:

- single point power,
- factory mounted controls,
- double-wall cooling coil sections and access panels, or double-wall throughout the whole unit,
- filter options that include a 4-inch, MERV 11 filter
- and a variety of coil options that include hydronic, steam, and DX.

Flexibility

The Trane Packaged Climate Changer is available in both a horizontal and vertical configuration with a variety of discharge arrangements. Units ship with mounting brackets on all corners to aid installation. Horizontal units may be either floor mounted or ceiling suspended using threaded rods. Vertical units are typically floor mounted.

Coil Options

Coil options include:

- Chilled water with four, six, or eight rows
- Direct expansion with four or six rows
- Hot water with one or two-rows, reheat or preheat
- Steam distributing, one row reheat or preheat

All cooling and hot water coils are available in three fin series (9, 12, or 14 fpi) to optimize coil performance and airside pressure drop. Steam coils are available in 6 fpi.

Access Section Option

If access between the coils is required, an additional module is available to house the preheat coil and provide access between the two coils. The access section is also available without a coil.

Electric Heat Section

Additionally, units are available with factory mounted and wired electric heat (reheat position) using single-point power connections.

Motors

Units are belt driven with motor sizes ranging from 1/2 to 20 horsepower, in a wide range of voltages. All motors smaller than one horsepower are provided with internal overload protection. Motors one horsepower and larger require external overload protection.

Control Options

Control options range from the simple controls interface for field-mounted controllers to the sophisticated Tracer AH540 controller.

The controls interface includes a factory mounted and wired disconnect with motor overloads (where applicable), transformer, fan contactor, and customer connection terminal strip.

The Tracer AH540 controller is factory mounted, wired, and tested. It can be either a stand-alone or communicating controller with Trane Integrated Comfort™ System or other building automation system. The controller can be configured to operate in either a constant or variable air volume application.

Sheave options are either fixed pitch or variable pitch sheaves, depending on the application. Also, a factory mounted and wired variable frequency drive (VFD) is available for variable air volume (VAV) applications.

Filter Options

The Packaged Climate Changer is available with two-inch flat filters in the base unit. Also, an optional accessory module with a two-inch, MERV 7 angle filter or a four-inch MERV 7 and MERV 11 flat filter is available.

Mixing Section Option

Mixing sections with low leak dampers are available for applications where both return air and fresh air are delivered directly to the unit.

Face and Bypass Section Option

The face and bypass section diverts airflow around the auxiliary coil to help control preheat.

Easy to Service

The coils, motors and drives are easily accessible for service through the double-wall access panels on both sides of the unit. If the motor should require servicing, only the drive side needs to be accessed.

Indoor Air Quality

Indoor air quality continues to be an important design aspect of air handling equipment today. That's why we designed the Packaged Climate Changer to meet the requirements of ASHRAE Standard 62-1999, with features that include a double wall cooling coil section, cleanable unit interiors, and sloped drain pans.

Sloped Drain Pan

The drain pan is positively sloped in every plane to assure proper drainage and help maximize protection from microbial growth.

Drain pans are made from a noncorrosive polymer material, double wall construction, and foamed in place to help eliminate condensation beneath the drain pan. An optional stainless steel drain pan is also available.

Accessibility and Cleanability

The Trane Packaged Climate Changer has a double-wall and single-wall construction available. Both options have a solid, double-wall cooling coil with no exposed insulation. The coil and fan sections include large, double-wall access panels or doors on both sides.

• The single-wall option has one-inch dual density (matt-faced) insulation designed to withstand high velocities and meet NFPA90A and UL181. In addition, the unit may have optional foil-faced insulation that meets NFPA90A, UL181, and bacteriological standard ASTM C665. The coil and fan sections include large, double-wall access panels on both sides. All access panels on optional sections are also double-wall.

• The double-wall option is a solid one-inch construction. The smooth, cleanable interior double-wall surfaces helps achieve optimal indoor air quality. The coil, and fan sections and optional sections include large, double-wall access doors on both sides. All access doors are fully removable.

Coils mount above, not in, the drain pan. This allows for easier access to the drain pan for cleaning.

Filtration

The Packaged Climate Changer is available with two-inch flat filters in the base unit. Also, an optional accessory module is available that can hold a two-inch angle filter or a four-inch flat filter. Filtration options for the four-inch flat filter include options for MERV 7 and MERV 11 filters.

A factory-mounted dirty filter switch can be used to indicate when the filter needs replacement.

Ventilation

An optional mixing section with low-leak dampers is available for use when ventilation air is delivered directly to the unit. This mixing section can also function as a zero to 100% economizer to improve energy efficiency.

Dehumidification

The Packaged Climate Changer can be configured for either a constant-volume or VAV application. VAV systems generally provide effective, coincidental dehumidification over a wide range of indoor load conditions. As long as any space needs cooling, the VAV air handler supplies dry (low dew point) air to all of the VAV terminal units.

For direct control of space humidity in a constant-volume application, the Packaged Climate Changer can be configured with a hydronic or steam heating coil in the reheat position. This would allow the cooling and heating coils to modulate independently to directly control both temperature and humidity in the space. A unit-mounted electric heater, with a single-point power connection, is also available in the reheat position.

The Tracer 540 controller, when coupled with the Trane Packed Climate Changer Air Handler provides a complete dehumidification package with both occupied and unoccupied dehumidification control. With the cooling and reheat capacity, the dehumidification control sequence is allowed on units configuration with hydronic or DX cooling and hydronic or electric reheat.

Optional Accessory Sections

All accessory sections have access on both sides of the unit. Single-wall units feature large double-wall panels that are lift-off type on unit sizes 2 through 21 and those on sizes 25 and 30 are hinged. Optional foil-faced insulation aids in cleanability.

Double-wall units feature large doors on both sides of the section. These doors feature a 90 degree stop handle and hinges that allow for easy removability of the door.

Access Section with Auxiliary Coil

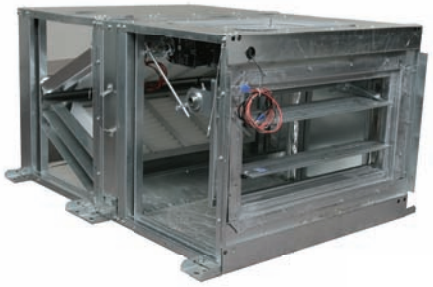
The access section with auxiliary coil allows a unit with up to eight rows of cooling to also have a preheat coil in the access section, with some distance between the coils (see Figure 1).

Figure 1. Access section

Mixing Section

A mixing section is available for those applications where both return air and fresh air are delivered directly to the unit or as part of an economizer control strategy (see Figure 2, p. 8).

Figure 2. Mixing section



Filter Section

The Packaged Climate Changer is available with a filter section that can be configured with a four-inch flat filter or a two-inch angle filter (see Figure 3).

Figure 3. Filter section and bypass section

Face and Bypass Section

An external face and bypass section option diverts airflow around the auxiliary coil and helps control preheat (see Figure 3).

Electric Heat

In addition to the hydronic and steam coils options, the unit is also available with a unit mounted electric heater in the reheat position. The unit will have single point power connection to the electric heater (see Figure 4).

Figure 4. Electric heat section

Application Considerations

The Packaged Climate Changer, model LPC, offers a wide range of application flexibility while maintaining a simple, easy to install unit design. These units provide an additional choice to the Trane air handler products, such as the blower coil and M-Series Climate Changer.

Typical unit applications include many different types of buildings such as; schools, office buildings, hospitals, and stores. Applications can be either constant volume or variable air volume. Following below is a partial listing of possible Packaged Climate Changer applications.

Some typical constant volume applications are:

- Two pipe hydronic system for cooling and/or heating
- Two pipe hydronic cooling system with electric heat
- Four pipe system with dedicated heating and cooling coils
- Direct expansion (DX) split systems with hydronic heat

Some typical variable air volume applications are:

- Cooling only air handling units with heat in the terminal units
- Air handling units with both cooling and heating capability with additional heat in the terminal unit. The heating within the air handling unit may be used for a morning warm-up cycle.

Installation

Horizontal units are typically suspended from the ceiling using threaded rods through the installation brackets. These brackets may also be used to secure the unit to the floor. Vertical units are floor-mounted on a house-keeping pad.

For units without internal isolation, install units with external vibration isolation on all connection points, including the corner brackets, ductwork connections, and piping connections.

It is important to consider proper condensate management before installation. You must mount the unit high enough so that the condensate drain can be properly trapped. Please refer to the Trane literature number LPC-SVX01C-EN, *Installation, Operation, and Maintenance - Packaged Climate Changer Air Handler*, for specifics on this issue.

Install units in accordance to all applicable ASHRAE standards, SMACNA, and local code requirements.

Acoustics

Controlling outdoor and equipment noise within the occupied space is increasingly important to designers and building owners/occupants. Therefore, give proper consideration to this when designing Packaged Climate Changer unit applications.

The unit's inherent flexibility of the fan and coil combinations allows application in sound-sensitive areas. For example, a fan running at low speed with a high capacity coil normally yields satisfactory acoustical results. Also, you may select a larger nominal capacity unit and operate it at a less than nominal airflow for further acoustic benefit.

Packaged Climate Changer sound power data (Lw) for ducted discharge, ducted inlet, casing radiated, and inlet + casing radiated components is available. This sound power data is useful for estimating the sound levels in the occupied space, for a given application. Three-phase motors are recommended for sound-sensitive applications to avoid potential single phase motor hum. All sound-power data is based on units with three-phase motors.

Note: *Trane recommends three-phase motors for sound-sensitive applications to avoid potential single-phase motor hum. All sound power data is based on units with three-phase motors.*

Note: *Do not operate the unit in the fan stall region of the fan curve. It may cause unsatisfactory noise levels and excessive unit vibration.*

Operating Limitations

Do not operate units above maximum fan speed or unit airflow as shown in the unit fan curves. Unit operation at greater than maximum fan speed can drastically reduce bearing life and may

result in a catastrophic failure. Operating at greater than the maximum allowable airflow in the cooling mode may result in unsatisfactory operation due to moisture carryover from the coil. In addition, it is often not economical to operate a unit at its maximum fan speed due to the greater motor power requirements.

Do not operate units with electric heat below the minimum airflow listed in Table 2, p. 19. This is to prevent excessive leaving air temperatures and electric heat limit trips.

Do not operate a hydronic (or steam) coil and electric heat simultaneously. This is to prevent excessive leaving air temperatures and limit trips. Electric heat units are equipped with a lockout switch to disable the electric heater if the temperature of the hydronic (or steam) coil is greater than 95°F (35°C).

Do not operate coils above the fluid flow limits listed in Table 2, p. 19. This is to prevent noise and erosion within the coil. A minimum or "self venting" fluid flow rate is also listed in Table 2. If coils operate below this flow rate, you should periodically vent them by flushing at a higher flow rate. These low fluid flow rates may also be too low to be included in the ARI certification.

DX Cooling Units

A Packaged Climate Changer with a DX cooling coil will often be connected to an air-cooled condensing unit. Some condensing units have two, independent refrigeration circuits, while the DX coil in size 3 through 10 units can be configured with a single circuit. Do not manifold two, independent refrigeration circuits into a single-circuited DX (evaporator) coil. If the condensing unit will have two, independent refrigeration circuits, configure the DX coil to have either two or four distributors.

DX coils, equipped with either two or four distributors, can be configured with either intertwined or horizontal split circuiting. Intertwined circuiting is preferred in VAV applications. At low loads, refrigerant is fed to alternating tubes, and the coil performs as though its fin surface area is substantially greater. Therefore, the coil surface can be warmer at part load, which reduces the risk of frost and still provides a constant leaving-air temperature.

Selection Procedure

Packaged Climate Changer Unit Selection Procedure

Following is the selection procedure for a Packaged Climate Changer, model LPC, unit with a chilled water coil. You can also use the Trane Official Product Selection System, TOPSS™, to computer-generate a product selection. Contact your local Trane office to obtain a copy.

1. **Determine Unit Capacity**

   Determine unit capacities using the performance data tables in this catalog. Capacity data is based on various conditions to aid interpolation. Interpolate between values when necessary.

2. **Verify Air and Water Flow Operating Limits**

   If the design airflow equals the rated unit airflow with the desired coil size, use the water flow rate shown for that coil in the table. If using interpolation to determine the capacity, calculate the water flow using the following formula:

   water flow = total capacity x Y/water temperature rise
   where Y = 2

   Water flow and airflow must fall within the limits shown in Table 2, p. 19 or you must reselect equipment.

3. **Calculate the Water Pressure Drop**

   Calculate the water pressure drop through hydronic coils using the water pressure drop data in the appropriate capacity tables. Interpolate if necessary.

4. **Check Fan Performance Requirements**

   Check the unit fan performance characteristics using either the fan performance tables (see Table 8, p. 24 through Table 49, p. 65) or the unit fan curves (see Figure 4, p. 24 through Figure 45, p. 65). Note that the fan curves and tables include pressure drop for the casing only. Use Table 5, p. 21 through Table 7, p. 23 to calculate the total airside pressure drop from coils, filters, and accessories.

5. **Calculate Total Static Pressure Requirements**

   Add the required external static pressure based on your application, to the total unit airside pressure drop to obtain the fan total static pressure requirements.

   Then verify your specific fan requirements with the fan performance curves or tables.

6. **Determine Motor and Drive Size**

   Check required motor power and fan speed requirements to determine the size of the motor and drive selection. Drives are available as fixed or variable pitch.

Cooling Selection Example

Job requirements:

- horizontal LPC unit with front/top fan discharge
- two-inch 30% efficient flat filters
- mixing section
- total capacity required = 245 MBh
- sensible capacity required = 185 MBh
- airflow = 7200 cfm at 1.5" ESP
- entering air conditions = 80°F DB/67°F WB
- entering water temperature (EWT) = 45°F
- desired water temperature rise (delta T) = 10°F

1. Referencing the chilled water cooling capacity tables, use Table 75, p. 92. The capacity of a size 14 unit with four-row coil, 14 fins per inch, at 10°F delta T, and 7000 cfm is 245.0 MBh total and 183.8 MBh sensible. At 8400 cfm, the capacity is 276.3 MBh total and 212.6 MBh sensible. Interpolate between these values to determine capacity at 7200 cfm = 249.5 MBh total and is 187.9 MBh sensible.
2. Waterflow = 249.5 x 2 / 10 = 49.9 gpm. Referencing Table 2, p. 19, waterflow rate of 49.9 gpm and airflow of 7200 cfm fall within the range specified for an LPC size 14 with a four-row coil.
3. Interpolate between the values in Table 75, the water pressure drop for a size 14 LPC with a four-row coil at 49.9 gpm is 5.1 feet of water.
4. Using Table 5, p. 21 through Table 7, p. 23, interpolate the additional airside pressure drop (APD) for the coil, filter, and accessories at 7200 cfm.

Four-row, 14 fpi cooling coil:	0.71 in. wg
2" 30% flat filter:	+ 0.24 in. wg
Mixing section:	+ 0.14 in. wg
Total accessory APD	1.09 in. wg

5.

Unit airside pressure drop	1.09 in. wg
	+ 1.5 in. wg
Total static pressure	2.59 in. wg

6. From Table 38, p. 54, interpolate 7200 cfm at 2.52 in. wg total static pressure to determine a 1008 rpm and 5.30 bhp motor requirement. This leads to a selection of a 7-1/2 hp motor.

Heating Selection Example

Following is the selection procedure for the previous example with a hydronic heating coil added.

1. Reference heating capacity data in Table 80, p. 97 through Table 89, p. 115. Capacities are tabulated for various water flow and airflow conditions. Capacity correction factors for additional entering conditions are in Table 90 through Table 91, p. 117. Interpolate between values when necessary.
2. If entering air and water conditions are other than those catalogued, refer to the capacity correction factors on p. 117.
3. Divide the required capacity by the correction factor and then refer to the associated table to locate the corrected capacity.
4. Interpolate for airflow and/or water flow to obtain capacity at desired conditions. Determine the water pressure drop using Table 80, p. 97 through Table 89, p. 115
5. Obtain airside pressure drop for the coil selected from Table 2, p. 19.
6. Check required motor power and fan speed requirements to determine the motor size and drive selection. Drives can be ordered fixed or variable pitch. Select a heating coil for the size 14 LPC, used previously in the chilled water example, operating at 7200 cfm (with 200°F EWT, 60°F EAT) to obtain a 100°F LAT.

1. Required Capacity = (Airflow)(Z)(LAT - EAT)
   Z = 1.0845 (English)
   Z = 1.213 (SI)

   Required Capacity =
   7200 x 1.0845 x (100 - 60) =
   312,336 Btuh (312.3 MBh)
2. The capacity correction factor for a one-row coil for 60°F EAT and 200°F EWT is 1.167.
3. Corrected Capacity Required = 338.0/1.167 = 289.6 MBh
4. Heating capacity for a size 14 unit with one-row heating coil, 14 fins per inch, is as follows:

   Capacity at 30°F water temperature drop,

At 7000 cfm:	307.1 MBh 20.5 gpm 100.4°F LAT 1.4 ft WPD
At 8400 cfm:	333.9 MBh 22.3 gpm 96.7°F LAT 1.7 ft WPD

   Interpolating at 7200 cfm and 30°F water temperature drop,

At 7200 cfm:	310.9 MBh 20.8 gpm 99.9°F LAT 1.4 ft WPD

   Capacity at 40°F water temperature drop,

At 7000 cfm:	272.9 MBh 13.6 gpm 95.9°F LAT 0.7 ft WPD

At 8400 cfm:	297.1 MBh
	14.9 gpm
	92.6°F LAT
	0.8 ft WPD

Interpolating at 7200 cfm and 40°F water temperature drop,

At 7200 cfm:	276.4 MBh
	13.8 gpm
	95.4°F LAT
	0.7 ft WPD

Interpolating for 289.6 MBh at 7200 cfm between 30°F and 40°F water temperature drop,

At 7200 cfm:	289.6 MBh
	97.1°F LAT
	16.46 gpm
	36.4 F water temp. drop
	0.97 ft WPD

Using the water pressure drop correction factor for 200°F EWT = 0.99, WPD = 0.97/ 0.99 = 0.98 ft. wg.

To interpolate additional airside pressure drops through other unit components, use Table 7, p. 23. Interpolate for 7200 cfm as shown below:

- Cooling coil, four-row, 14 fins per inch = 0.65 in. wg
- Heating coil, one-row, 14 fins per inch = 0.16 in. wg
- 2″ 30% flat filter = 0.24 in. wg
- Mixing section = 0.14 in. wg

Total unit airside pressure drop = 1.19 in. wg

5. 1.19 in. wg unit APD + 1.50 in. wg = 2.69 in. wg total static pressure
6. From Table 38, p. 54 interpolating 7200 cfm at 2.69 in. wg TSP, we obtain 1038 rpm and 5.59 bhp. Therefore, select a 7-1/2 hp motor.

Model Number Descriptions

Packaged Climate Changer Model Number Descriptions

Following is a complete description of the Packaged Climate Changer model number. Each digit in the model number has a corresponding code that identifies specific unit options.

Digit 1, 2, 3 — Unit Model

LPC= Packaged Climate Changer

Digit 4 — Development Sequence

A = "A" Development Sequence

Digit 5 — Configuration

A = Horizontal / Front Top
B = Horizontal / Top Front
C = Vertical / Front Top
D = Vertical / Top Front
E = Vertical / Back Top
F = Vertical / Top Back

Digit 6, 7 — Unit Size

03 = 3 Square Feet of Coil
06 = 6 Square Feet of Coil
08 = 8 Square Feet of Coil
10 = 10 Square Feet of Coil
12 = 12 Square Feet of Coil
14 = 14 Square Feet of Coil
17 = 17 Square Feet of Coil
21 = 21 Square Feet of Coil
25 = 25 Square Feet of Coil
30 = 30 Square Feet of Coil

Digit 8 — Unit Voltage

0 = No Motor, Controls, Electric Heat
A = 208/60 /1
B = 230/60/1
C = 277/60/1
D = 208/60/3
E = 230/60 /3
F = 460/60/3
G = 575/60/3
H = 380/50/3
J = 415/50/3

Digit 9 — Insulation & Isolation

1 = 1-inch, Matte Faced
2 = 1-inch, Foil Faced
3 = 1-inch, Double-Wall with Field-Provided External Isolation
4 = 1-inch, Double-Wall with Internal Isolation

Digit 10, 11 — Design Sequence

Digit 12 —Drain Pan Type, Coil & Motor Connection Location

R = Polymer Drain Pan, RH Coil & Motor
L = Polymer Drain Pan, LH Coil & Motor
C = Polymer Drain Pan, RH Coil & LH Motor
D = Polymer Drain Pan, LH Coil & RH Motor
E = SS Drain Pan, RH Coil & Motor
F = SS Drain Pan, LH Coil & Motor
G = SS Drain Pan, RH Coil & LH Motor
H = SS Drain Pan, LH Coil & RH Motor

Digit 13 — Unit Coil #1 Type (1st in Air Stream)

0 = No Unit Coil #1

Hydronic Heat Coils

A = 1-row, 9 fpi
B = 1-row, 12 fpi
C = 1-row, 14 fpi
D = 2-row, 9 fpi
E = 2-row, 12 fpi
F = 2-row, 14 fpi

Chilled Hydronic Coils

G = 4-row, 9 fpi
H = 4-row,12 fpi
J = 4-row, 14 fpi
K = 6-row, 9 fpi
L = 6-row, 12 fpi
M = 6-row, 14 fpi
N = 8-row, 9 fpi
P = 8-row, 12 fpi
R = 8-row, 14 fpi

DX Coils, 3/16 Inch, Distributor

T = 4-row DX, 9 fpi
U = 4-row DX, 12 fpi
V = 4-row DX, 14 fpi

Steam Coil

1 = 1-row, 6 fpi

DX Coils, 1/4 Inch, Distributor

5 = 6-row DX, 9 fpi
6 = 6-row DX, 12 fpi
7 = 6-row DX, 14 fpi

Digit 14 — Unit Coil #2 Type (2nd in Air Stream)

0 = No Unit Coil #1

Hydronic Reheat Coils

A = 1-row, 9 fpi
B = 1-row, 12 fpi
C = 1-row, 14 fpi
D = 2-row, 9 fpi
E = 2-row, 12 fpi
F = 2-row, 14 fpi

Chilled Hydronic Coils

G = 4-row, 9 fpi
H = 4-row,12 fpi
J = 4-row, 14 fpi
K = 6-row, 9 fpi
L = 6-row, 12 fpi
M = 6-row, 14 fpi

DX Coils, 3/16 Inch, Distributor

N = 4-row DX, 9 fpi
P = 4-row DX, 12 fpi
R = 4-row DX, 14 fpi

Steam Coil

W = 1-row, 6 fpi

DX Coils, 1/4 Inch, Distributor

2 = 6-row DX, 9 fpi
3 = 6-row DX, 12 fpi
4 = 6-row DX, 14 fpi

Digit 15 — Access Section (Preheat)

0 = None

Hydronic Coils

A = 1-row, 9 fpi
B = 1-row, 12 fpi
C = 1-row, 14 fpi
D = 2-row, 9 fpi
E = 2-row, 12 fpi
F = 2-row, 14 fpi
G = 1-row Steam Coil, Type NS, 6 fpi
R = No Coil, Matte Face Insulation

Digit 16 — Electric Heat, Factory Mounted Only

0 = None
1 = Electric Heat with 1 Stage
2 = Electric Heat with 2 Stages
4 = Electric Heat with 4 Stages

Digit 17, 18, 19 — Electric Heater kW

006–018 = 1 kW Increments
020–038 = 2 kW Increments
041–059 = 3 kW Increments
063–095 = 4 kW Increments
95 and < = 5 kW Increments

Digit 20 — Control Type

0 = None
1 = Control Interface
2 = Tracer™ AH540 Zone Temp. Control
3 = Tracer AH540 Discharge Temp. Control

Digit 21 — Electric Heater Options

0 = None
A = Line Fuse
B = Door Interlocking Disconnect Switch
C = Air Flow Switch Combined Options
D = A & B
E = A & C
F = B & C
G = A, B, & C

Digit 22 — Refrigerant Circuit Options

0 = None
1 = Single Circuit with 1-stage DX
2 = Face Split Circuit with 2-stage DX
3 = Intertwined Circuit with 2-stage DX
5 = Single Circuit with 2-stage DX
6 = Face Split Circuit with 4-stage DX
7 = Intertwined Circuit with 4-stage DX

Note: *Staging is used for configuration of the AH540 controller.*

Digit 23 — Motor Horsepower (hp)

0	=	None	F	=	3 hp
A	=	1/2 hp	G	=	5 hp
B	=	3/4 hp	H	=	7-1/2 hp
C	=	1 hp	J	=	10 hp
D	=	1-1/2 hp	K	=	15 hp
E	=	2 hp	L	=	20 hp

Digit 24 — Volume Control

A = CV with Variable Pitch Sheaves
B = CV with Fixed Pitch Sheaves
C = VFD with Fixed Pitch Sheaves

Digit 25 — Drives, Fixed / Variable

0 = None
A = 650 rpm / 600–700 rpm
B = 700 rpm / 650–750 rpm
C = 750 rpm / 700–800 rpm
D = 800 rpm / 750–850 rpm
E = 850 rpm / 800–900 rpm
F = 900 rpm / 850–950 rpm
G = 950 rpm / 900–1000 rpm
H = 1000 rpm / 950–1050 rpm
J = 1050 rpm / 1000–1100 rpm
K = 1100 rpm / 1050–1150 rpm
L = 1150 rpm / 1100–1200 rpm
M = 1200 rpm / 1150–1250 rpm
N = 1250 rpm / 1200–1300 rpm
P = 1300 rpm / 1250–1350 rpm
R = 1350 rpm / 1300–1400 rpm
T = 1400 rpm / 1350–1450 rpm
U = 1450 rpm / 1400–1500 rpm
V = 1500 rpm / 1450–1550 rpm
W = 1550 rpm / 1500–1600 rpm
Y = 1600 rpm / 1550–1650 rpm
Z = 1650 rpm / 1600–1700 rpm
1 = 1700 rpm / 1650–1750 rpm
2 = 1750 rpm / 1700–1800 rpm
3 = 1800 rpm / 1750–1850 rpm
4 = 1850 rpm / 1800–1900 rpm
5 = 1900 rpm / 1850–1950 rpm
6 = 1950 rpm / 1900–2000 rpm
7 = 2000 rpm / 1950–2050 rpm

Digit 26 — Filter Type / Filter / Mixing Section

0 = None
A = 2-inch, Flat Unit Filter
B = 2-inch, Flat Unit Filter & Mixing Section
C = 2-inch, Angle Filter Section
D = 4-inch, Flat Filter Section
E = 2-inch, Angle Filter Section & Mixing Section
F = 4-inch, Flat Filter Section & Mixing Section
G = 4-inch, MERV 11 Flat Filter Section
H = 4-inch, MERV 11 Flat Filter & Mixing Section

Digit 27 — Face & Bypass Section (F & B, Preheat Position)

0 = None
A = F & B w/ NC Actuator
B = F & B w/ NO Actuator
C = F & B w/ Field-Supplied NO Actuator
D = F & B w/ Field-Supplied NC Actuator

Digit 28 — Control Option

0 = None
1 = Dehumidification w/ RH Sensor
2 = Dehumidification w/ Comm. RH
3 = 2-pipe Changeover w/ EWT Sensor
4 = 2-pipe Changeover w/ Comm. EWT
5 = CO_2 Sensor
6 = 1 & 4

Digit 29 — Control Options 1, Factory Mounted

0 = None
A = Low Limit Switch
B = Condensate Overflow Switch
C = Dirty Filter Switch
D = Fan Status Switch

Combined Options

E = A & B
F = A & C
G = A & D
H = B & C
J = B & D
K = C & D
L = A, B, &, C
M = A, B, & D
N = A, C, & D
P = B, C, & D
R = A, B, C, & D

Digit 30 — Control Options 2

0 = None
A = Discharge Air Sensor (DAS)
B = Mixed Air Sensor (MAS)
D = NO Mixing Box Act.
E = NC Mixing Box Act.

Combined Options

F = A & B
H = A & D
J = A & E
L = B & D
M = B & E
R = A, B, & D
T = A, B, & E
1 = Field-Mounted, NO, Mixing Box Act.
2 = Field-Mounted, NC, Mixing Box Act.
3 = A & 1
4 = A & 2
5 = B & 1
6 = B & 2
7 = A, B, & 1
8 = A, B, & 2

Digit 31 — Control Function

0 = None
1 = Mixed Air Ctrl.
2 = Mixed Air Preheat Ctrl.
3 = Economizing with Mixed Air Ctrl.
4 = Economizing with Mixed Air Preheat Ctrl.

Digit 32 — Control Options 3, Factory Provided, Field Installed

0 = None
A = Outdoor Air Temperature Sensor
B = Duct Static Pressure Sensor
C = A & B
D = Outdoor Air Temperature Communicated
E = Duct Static Pressure Communicated
F = D & E

Digit 33 — Preheat Control Valve Options

0 = None
A = 3/4-inch, 2-way, NO 7.3 Cv
B = 3/4-inch, 2-way, NC 7.3 Cv
C = 3/4-inch, 3-way, NO 7.3 Cv
D = 3/4-inch, 3-way, NC 7.3 Cv
E = 1-inch, 2-way, NO 11.6 Cv
F = 1-inch, 2-way, NC 11.6 Cv
G = 1-inch, 3-way, NO 11.6 Cv
H = 1-inch, 3-way, NC 11.6 Cv
J = 1-1/4-inch, 2-way, NO 18.5 Cv
K = 1-1/4-inch, 2-way, NC 18.5 Cv
L = 1-1/4-inch, 3-way, NO 18.5 Cv
M = 1-1/4-inch, 3-way, NC 18.5 Cv
N = 1-1/2-inch, 2-way, NO 28.9 Cv
P = 1-1/2-inch, 2-way, NC 28.9 Cv
Q = 1-1/2-inch, 3-way, NO 28.9 Cv
R = 1-1/2-inch, 3-way, NC 28.9 Cv
T = 2-inch, 2-way, NO 46.2 Cv
U = 2-inch, 2-way, NC 46.2 Cv
V = 2-inch, 3-way, NO 46.2 Cv
W = 2-inch, 3-way, NC 46.2 Cv
X = 2-1/2-inch, 2-way, NO 54 Cv
Y = 2-1/2-inch, 2-way, NC 54 Cv
Z = 2-1/2-inch, 3-way, NO 54 Cv
1 = 2-1/2-inch, 3-way, NC 54 Cv
2 = Field-Supplied 2-way NO
3 = Field-Supplied 2-way NC
6 = Field-Supplied 3-way NO
7 = Field-Supplied 3-way NC

Note: *NO = Normally open & NC = Normally closed in the valve's de-energized state.*

Digit 34 — Cooling Control Valve Options

0 = None
A = 3/4-inch, 2-way, NO 7.3 Cv
B = 3/4-inch, 2-way, NC 7.3 Cv
C = 3/4-inch, 3-way, NO 7.3 Cv
D = 3/4-inch, 3-way, NC 7.3 Cv
E = 1-inch, 2-way, NO 11.6 Cv
F = 1-inch, 2-way, NC 11.6 Cv
G = 1-inch, 3-way, NO 11.6 Cv
H = 1-inch, 3-way, NC 11.6 Cv
J = 1-1/4-inch, 2-way, NO 18.5 Cv
K = 1-1/4-inch, 2-way, NC 18.5 Cv
L = 1-1/4-inch, 3-way, NO 18.5 Cv
M = 1-1/4-inch, 3-way, NC 18.5 Cv
N = 1-1/2-inch, 2-way, NO 28.9 Cv
P = 1-1/2-inch, 2-way, NC 28.9 Cv
Q = 1-1/2-inch, 3-way, NO 28.9 Cv
R = 1-1/2-inch, 3-way, NC 28.9 Cv
T = 2-inch, 2-way, NO 46.2 Cv
U = 2-inch, 2-way, NC 46.2 Cv
V = 2-inch, 3-way, NO 46.2 Cv
W = 2-inch, 3-way, NC 46.2 Cv
X = 2-1/2-inch, 2-way, NO 54 Cv
Y = 2-1/2-inch, 2-way, NC 54 Cv
Z = 2-1/2-inch, 3-way, NO 54 Cv
1 = 2-1/2-inch, 3-way, NC 54 Cv
2 = Field-Supplied, 2-way NO
3 = Field-Supplied, 2-way NC
6 = Field-Supplied, 3-way NC
7 = Field-Supplied, 3-way NC

Note: *NO = Normally open & NC = Normally closed in the valve's de-energized state.*

Digit 35 — Reheat Control Valve Options

0 = None
A = 3/4-inch, 2-way, NO 7.3 Cv
B = 3/4-inch, 2-way, NC 7.3 Cv
C = 3/4-inch, 3-way, NO 7.3 Cv
D = 3/4-inch, 3-way, NC 7.3 Cv
E = 1-inch, 2-way, NO 11.6 Cv
F = 1-inch, 2-way, NC 11.6 Cv
G = 1-inch, 3-way, NO 11.6 Cv
H = 1-inch, 3-way, NC 11.6 Cv
J = 1-1/4-inch, 2-way, NO 18.5 Cv
K = 1-1/4-inch, 2-way, NC 18.5 Cv
L = 1-1/4-inch, 3-way, NO 18.5 Cv
M = 1-1/4-inch, 3-way, NC 18.5 Cv
N = 1-1/2-inch, 2-way, NO 28.9 Cv
P = 1-1/2-inch, 2-way, NC 28.9 Cv
Q = 1-1/2-inch, 3-way, NO 28.9 Cv
R = 1-1/2-inch, 3-way, NC 28.9 Cv
T = 2-inch, 2-way, NO 46.2 Cv
U = 2-inch, 2-way, NC 46.2 Cv
V = 2-inch, 3-way, NO 46.2 Cv
W = 2-inch, 3-way, NC 46.2 Cv
X = 2-1/2-inch, 2-way, NO 54 Cv
Y = 2-1/2-inch, 2-way, NC 54 Cv
Z = 2-1/2-inch, 3-way, NO 54 Cv
1 = 2-1/2-inch, 3-way, NC 54 Cv
2 = Field-Supplied, 2-way NO
3 = Field-Supplied, 2-way NC
6 = Field-Supplied 3-way NO
7 = Field-Supplied 3-way NC

Note: *NO = Normally open & NC = Normally closed in the valve's de-energized state.*

Digit 36 — External Exhaust Fan Support

0 = None
1 = Configure for Control
2 = Configure for Exhaust Fan Start / Stop & Status Support
3 = Generic Temperature Thermistor

Digit 37 — Zone Sensor Options

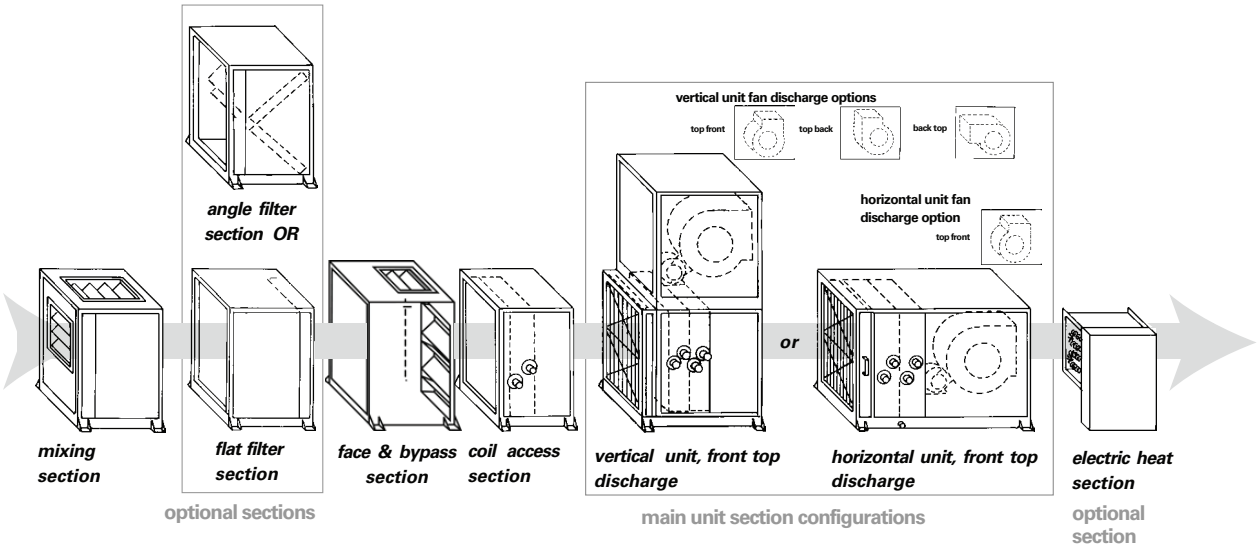
0 = None
1 = Sensor w/Off, Auto, Fahrenheit Knob, On / Cancel and Comm Jack
2 = Sensor w/Fahrenheit Knob, On / Cancel and Comm Jack
4 = Sensor Only
5 = Field-Supplied Zone Sensor
6 = Digital Zone Sensor
F = Standalone Operator Display
G = 1 & F
H = 2 & F
J = 4 & F
K = 5 & F
L = 6 & F

Digit 38 — Field Installed Option

0 = None
1 = Finishing Kit
2 = M-series Module Translation Kit
3 = 1 & 2

General Data

Packaged Climate Changer Unit Configurations and Optional Sections



Available DX Coil Options

Figure 1. Single circuit DX coil

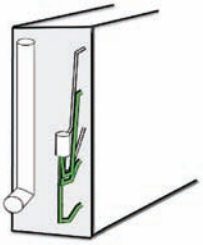


Figure 2. Intertwined DX coil

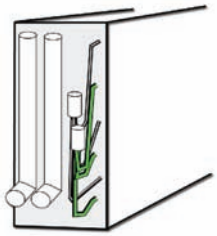


Figure 3. Horizontal face split DX coil

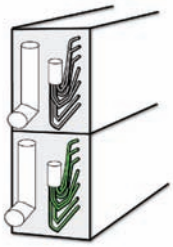


Table 1. Packaged climate changer DX coil configuration options

Unit Size	Single				Horizontal Face Split				Intertwined			
			Coil Fin				Coil Fin				Coil Fin	
	# Dist.	# Circuits	Width	Length	# Dist.	# Circuits	Width	Length	# Dist.	# Circuits	Width	Length
3	1	3	17.5	23	–	–	–	–	–	–	–	–
6	1	5	22.5	36	–	–	–	–	–	–	–	–
8	1	7	27.5	39	2	7	27.5	39	2	7	27.5	39
10	1	10	27.5	51	2	10	27.5	51	2	10	27.5	51
12	–	–	–	–	2	13	35	51	2	13	35	51
14	–	–	–	–	2	13	35	59	2	13	35	59
17	–	–	–	–	2	17	45	54	4	17	45	54
21	–	–	–	–	2	17	45	66	4	17	45	66
25	–	–	–	–	2	20	51.3	68	4	20	51.5	68
30	–	–	–	–	4	40	51.3	81	4	40	51.3	81

Notes:
1. Four-row coils have a 3/16" distributor. 6-row coils have a 1/4" distributor. Units size 3 through 10 can be equipped with a single distributor.
2. **Do not manifold two, independent refrigeration circuits into a single-circuited DX (evaporator) coil.** Instead, use a single-circuited condensing unit or a DX coil with two distributors.

Table 2. Packaged climate changer general data

Unit Size	3	6	8	10	12	14	17	21	25	30
Unit Nominal Airflow (cfm)	**1500**	**3000**	**4000**	**5000**	**6000**	**7000**	**8500**	**10500**	**12500**	**15000**
Hydronic & DX coil										
Coil area (ft^2)	2.8	5.6	7.5	9.7	12.4	14.3	16.9	20.6	24.2	28.8
width (in.)	17.5	22.5	27.5	27.5	35.0	35.0	45.0	45.0	51.2	51.2
length (in.)	23.0	36.0	39.0	51.0	51.0	59.0	54.0	66.0	68.0	81.0
velocity (ft/min)	536.7	533.3	537.1	513.3	484.0	488.1	503.7	509.1	516.5	520.3
dry weight (lb)[a]										
1-row	23.5	35.0	41.8	51.5	66.2	72.1	82.8	93.2	109.7	122.5
2-row	29.5	46.3	56.8	70.8	91.0	100.5	116.6	134.2	168.5	190.2
4-row	46.6	75.8	94.7	120.5	152.8	170.7	207.3	240.7	276.3	317.0
6-row	58.6	98.5	124.7	159.3	202.4	227.8	274.9	322.8	372.7	431.2
8-row	73.6	125.4	159.5	204.7	259.4	292.9	351.3	414.5	479.5	556.8
Wet weight (lbs)[a]										
1-row	29.2	43.6	52.5	64.0	85.8	93.2	108.2	121.5	141.9	158.2
2-row	37.7	59.0	73.0	90.5	119.9	132.4	161.1	184.4	226.6	255.4
4-row	59.8	97.6	123.1	155.7	201.6	225.4	279.1	323.9	373.1	427.8
6-row	76.9	129.4	165.2	210.0	271.2	305.3	374.0	438.9	508.2	587.7
8-row	96.9	165.5	212.2	271.0	348.2	393.3	477.6	563.5	653.7	759.0
Waterflow limits										
1-row										
Minimum gpm[b]	6.1	7.9	9.6	9.6	12.2	12.2	15.7	15.7	17.5	17.5
Maximum gpm[c]	32.6	42.0	51.3	51.3	65.3	65.3	83.9	83.9	93.3	93.6
2, 4, 6, & 8-row										
Minimum gpm[b]	6.1	14.9	18.4	18.4	23.6	23.6	30.6	30.6	35.0	35.0
Maximum gpm[c]	32.6	79.3	51.3	51.3	65.3	125.9	163.2	163.2	186.6	186.6
Volume (gallons)										
1-row	0.7	1.0	1.3	1.5	2.3	2.5	3.1	3.4	3.9	4.3
2-row	1.0	1.5	2.0	2.4	3.5	3.8	5.3	6.0	7.0	7.8
4-row	1.6	2.6	3.4	4.2	5.9	6.6	8.6	10.0	11.6	13.3
6-row	2.2	3.7	4.9	6.1	8.3	9.3	11.9	13.9	16.3	18.8
8-row	2.8	4.8	6.3	7.9	10.6	12.0	15.2	17.9	20.9	24.3
Steam coil										
Area (ft^2)	1.9	4.5	6.5	8.5	11.7	13.5	6.8	8.4	11.0	13.2
Width (in.)[d]	12.0	18.0	24.0	24.0	33.0	33.0	18.0	18.0	24.0	24.0
Length (in.)[e]	23.0	36.0	39.0	51.0	51.0	59.0	54.0	67.0	66.0	79.0
Area (ft^2)[f]	–	–	–	–	–	–	9.0	11.2	11.0	13.2
Width (in.)[d], [f]	–	–	–	–	–	–	24.0	24.0	24.0	24.0
Length (in.)[e], [f]	–	–	–	–	–	–	54.0	67.0	66.0	79.0
Weight (lb)	31.7	54.8	74.8	86.0	114.1	123.3	157.6	179.9	200.0	224.2
Fan / motor data										
Fan wheel size (in.)[g]	9x7	12x9	12x12	15x15	18x15	18x18	20x15	20x20	20x18	22x20
Maximum rpm	2000	1500	1700	1400	1200	1200	1100	1000	1300	1150
Motor hp	1/2 - 2	1/2 - 3	3/4 - 5	1 - 5	1 - 7 1/2	1 - 7 1/2	1 -10	2 - 15	3 - 20	3 - 20
Minimum design cfm[h]	1050	2100	2800	3500	4200	4900	5950	7350	8750	10500
Maximum design cfm[i]	1800	3600	4800	6000	7200	8400	10200	12600	15000	18000
2- and 4-in. Flat filter data										
Quantity - size (in.)	1 - 20x25	2 - 20x25	2 - 20x25	1 - 16x25 2 - 20x25	2 - 16x20 1 - 16x25 2 - 20x20 1 - 20x25	2 - 16x20 1 - 16x25 2 - 20x20 1 - 20x25	2 - 16x20 2 - 16x25 2 - 20x20 2 - 20x25	2 - 16x20 2 - 16x25 2 - 20x20 2 - 20x25	2 - 16x25 6 - 20x25	6 - 16x25 4 - 20x25
Area (ft^2)	3.5	6.9	6.9	9.7	16.3	16.3	22.5	22.5	26.4	30.6
Nominal air velocity (ft/min)	432.0	432.0	576.0	514.3	369.2	430.8	377.8	466.7	473.5	490.2
2-in. Angle filter section data										
Quantity - size (in.)	2 - 16x25	4 - 20x20	4 - 20x20	4 - 20x20 2 - 16x20	9 - 20x20	9 - 20x20	6 - 16x25 6 - 20x25	6 - 16x25 6 - 20x25	4 - 16x20 12 - 20x20	12 - 16x20 8 - 20x20
Area (ft^2)	5.6	11.1	11.1	15.6	25.0	25.0	37.5	37.5	42.2	48.9
Velocity (ft/min)	270.0	270.0	360.0	321.3	240.0	280.0	226.7	280.0	296.2	306.7
Mixing section										
Nominal air velocity, (ft/min)	966.4	1066.3	1123.4	1120.4	1184.1	1161.7	1171.1	1120.1	1218.5	1247.1

(a) Coil weight based on 12 fpi coil.
(b) Unit sizes 17–30 have two stacked steam coils.
(c) To prevent erosion/noise problems.
(d) Coil width = length in the direction of a coil header, typically vertical.
(e) Coil length = length of coil in direction of the coil tubes, typically horizontal and perpendicular to airflow.
(f) The minimum waterflow is to assure self venting of the coil. There is no minimum water flow limit for coils that do not require self venting.

(g) Fan wheel size is diameter x length of blade (width).
(h) Minimum airflow limit is for units with hot water, steam, or electric heat. There is no minimum airflow for cooling-only units.
(i) Due to moisture carryover limits.

Table 3. Available motor horsepower and unit voltage

	Motor Horsepower										
Unit Voltage	**1/2**	**3/4**	**1**	**1-1/2**	**2**	**3**	**5**	**7-1/2**	**10**	**15**	**20**
208/60/1	•	•	•								
230/60/1	•	•	•								
277/60/1	•	•	•								
208/60/3	•	•	•	•	•	•	•	•	•	•	•
230/60/3	•	•	•	•	•	•	•	•	•	•	•
460/60/3	•	•	•	•	•	•	•	•	•	•	•
575/60/3			•	•	•	•	•	•	•	•	•
380/50/3			•	•	•	•	•	•	•	•	
415/50/3			•	•	•	•	•	•	•	•	

Note: 5 hp motors are not available on size 8 or 10 units, or 380 or 415 volts.

Table 4. Available motor horsepower by unit size

	Motor Horsepower										
Unit Size	**1/2**	**3/4**	**1**	**1-1/2**	**2**	**3**	**5**	**7-1/2**	**10**	**15**	**20**
3	•	•	•	•	•						
6	•	•	•	•	•	•					
8		•	•	•	•	•	•				
10			•	•	•	•	•				
12			•	•	•	•	•	•			
14			•	•	•	•	•	•			
17			•	•	•	•	•	•	•		
21					•	•	•	•	•		
25						•	•	•	•	•	•

Note: 5 hp motors are not available on size 8 or 10 units, or 380 or 415 volts.

Performance Data

Table 5. Cooling coil airside pressure drop

Unit Size	cfm	Face Velocity (fpm)	4-row fpf (in. wg)			6-row fpf (in. wg)			8-row fpf (in. wg)		
			108	144	168	108	144	168	108	144	168
3	1050	376	0.33	0.38	0.45	0.49	0.57	0.67	0.65	0.76	0.89
	1200	429	0.40	0.47	0.55	0.60	0.71	0.83	0.80	0.94	1.11
	1350	483	0.47	0.57	0.67	0.71	0.85	1.00	0.95	1.13	1.33
	1500	537	0.55	0.66	0.78	0.83	1.00	1.17	1.11	1.33	1.57
	1650	590	0.63	0.76	0.90	0.95	1.15	1.35	1.26	1.53	1.81
	1800	644	0.71	0.86	1.02	1.07	1.30	1.53	1.43	1.73	2.05
6	2100	373	0.32	0.38	0.44	0.48	0.57	0.66	0.65	0.76	0.88
	2400	427	0.40	0.47	0.55	0.59	0.70	0.82	0.79	0.93	1.09
	2700	480	0.47	0.56	0.66	0.71	0.84	0.99	0.94	1.12	1.32
	3000	533	0.55	0.66	0.78	0.82	0.99	1.16	1.10	1.32	1.55
	3300	587	0.63	0.76	0.89	0.94	1.14	1.34	1.25	1.51	1.79
	3600	640	0.71	0.86	1.01	1.06	1.28	1.52	1.41	1.71	2.03
8	2800	376	0.33	0.38	0.45	0.49	0.57	0.67	0.65	0.76	0.89
	3200	430	0.40	0.47	0.55	0.60	0.71	0.83	0.80	0.94	1.11
	3600	483	0.48	0.57	0.67	0.71	0.85	1.00	0.95	1.13	1.33
	4000	537	0.55	0.66	0.78	0.83	1.00	1.18	1.11	1.33	1.57
	4400	591	0.63	0.76	0.90	0.95	1.15	1.36	1.27	1.53	1.81
	4800	644	0.71	0.87	1.02	1.07	1.30	1.54	1.43	1.73	2.05
10	3500	359	0.30	0.36	0.41	0.46	0.53	0.62	0.61	0.71	0.83
	4000	411	0.37	0.44	0.51	0.56	0.66	0.77	0.75	0.88	1.03
	4500	462	0.44	0.53	0.62	0.67	0.79	0.93	0.89	1.06	1.24
	5000	513	0.52	0.62	0.73	0.78	0.93	1.10	1.04	1.24	1.46
	5500	565	0.59	0.72	0.84	0.89	1.07	1.27	1.19	1.43	1.69
	6000	616	0.67	0.81	0.96	1.01	1.22	1.44	1.34	1.62	1.92
12	4200	339	0.28	0.32	0.38	0.42	0.48	0.56	0.56	0.65	0.75
	4800	387	0.34	0.40	0.47	0.51	0.60	0.70	0.68	0.80	0.94
	5400	436	0.41	0.48	0.57	0.61	0.72	0.85	0.81	0.97	1.13
	6000	484	0.48	0.57	0.67	0.71	0.85	1.00	0.95	1.14	1.34
	6600	532	0.55	0.66	0.77	0.82	0.98	1.16	1.09	1.31	1.55
	7200	581	0.62	0.75	0.88	0.93	1.12	1.32	1.24	1.49	1.76
14	4900	342	0.28	0.33	0.38	0.42	0.49	0.57	0.56	0.65	0.76
	5600	391	0.35	0.41	0.47	0.52	0.61	0.71	0.69	0.81	0.95
	6300	439	0.41	0.49	0.57	0.62	0.73	0.86	0.83	0.98	1.15
	7000	488	0.48	0.58	0.68	0.72	0.86	1.02	0.96	1.15	1.35
	7700	537	0.55	0.66	0.78	0.83	1.00	1.18	1.11	1.33	1.57
	8400	586	0.63	0.75	0.89	0.94	1.13	1.34	1.25	1.51	1.78
17	5950	353	0.30	0.34	0.40	0.44	0.52	0.60	0.59	0.69	0.80
	6800	403	0.36	0.43	0.50	0.54	0.64	0.75	0.72	0.85	1.00
	7650	453	0.43	0.51	0.60	0.65	0.77	0.90	0.86	1.03	1.21
	8500	504	0.50	0.60	0.71	0.76	0.91	1.07	1.01	1.21	1.42
	9350	554	0.58	0.70	0.82	0.87	1.04	1.23	1.16	1.39	1.64
	10200	604	0.65	0.79	0.93	0.98	1.18	1.40	1.31	1.58	1.87
21	7350	356	0.30	0.35	0.41	0.45	0.53	0.61	0.60	0.70	0.82
	8400	407	0.37	0.43	0.51	0.55	0.65	0.76	0.74	0.87	1.02
	9450	458	0.44	0.52	0.61	0.66	0.78	0.92	0.88	1.04	1.23
	10500	509	0.51	0.61	0.72	0.77	0.92	1.08	1.02	1.23	1.44
	11550	560	0.59	0.71	0.83	0.88	1.06	1.25	1.17	1.41	1.67
	12600	611	0.66	0.80	0.95	0.99	1.20	1.42	1.33	1.60	1.90
25	8750	362	0.31	0.36	0.42	0.46	0.54	0.63	0.61	0.72	0.84
	10000	413	0.38	0.44	0.52	0.56	0.67	0.78	0.75	0.89	1.04
	11250	465	0.45	0.53	0.63	0.67	0.80	0.94	0.90	1.07	1.25
	12500	517	0.52	0.63	0.74	0.78	0.94	1.11	1.05	1.25	1.48
	13750	568	0.60	0.72	0.85	0.90	1.08	1.28	1.20	1.44	1.71
	15000	620	0.68	0.82	0.97	1.01	1.23	1.45	1.35	1.64	1.94
30	10500	364	0.31	0.36	0.42	0.47	0.54	0.64	0.62	0.73	0.85
	12000	416	0.38	0.45	0.53	0.57	0.67	0.79	0.76	0.90	1.05
	13500	468	0.45	0.54	0.63	0.68	0.81	0.95	0.91	1.08	1.27
	15000	520	0.53	0.63	0.75	0.79	0.95	1.12	1.06	1.27	1.49
	16500	572	0.61	0.73	0.86	0.91	1.10	1.29	1.21	1.46	1.72
	18000	624	0.68	0.83	0.98	1.03	1.24	1.47	1.37	1.65	1.96

Note: Cooling coil APΔ based on 100% wetted fin surface.

Table 6. Hot water and steam coil air pressure drop

			Hot Water Coil															Steam Coil	
		Face	1-row			2-row			4-row			6-row			8-row			Face	fpf
Unit		Velocity	fpf (in. wg)			fpf (in. wg)			fpf (in. wg)			fpf (in. wg)			fpf (in. wg)			Velocity	(in. wg)
Size	cfm	(fpm)	108	144	168	108	144	168	108	144	168	108	144	168	108	144	168	(fpm)	72
3	1050	376	0.058	0.084	0.100	0.11	0.13	0.16	0.21	0.27	0.32	0.32	0.40	0.48	0.42	0.54	0.64	548	0.17
	1200	429	0.075	0.107	0.125	0.13	0.17	0.20	0.26	0.33	0.39	0.40	0.50	0.59	0.53	0.66	0.78	626	0.21
	1350	483	0.094	0.131	0.153	0.16	0.20	0.24	0.32	0.40	0.47	0.49	0.60	0.71	0.65	0.80	0.95	704	0.27
	1500	537	0.115	0.158	0.182	0.19	0.24	0.28	0.39	0.48	0.56	0.58	0.71	0.84	0.78	0.95	1.12	783	0.32
	1650	590	0.137	0.187	0.214	0.23	0.28	0.33	0.46	0.56	0.65	0.69	0.84	0.98	0.92	1.11	1.31	861	0.38
	1800	644	0.161	0.218	0.248	0.27	0.32	0.38	0.53	0.64	0.76	0.80	0.97	1.13	1.07	1.29	1.51	939	0.44
6	2100	373	0.058	0.083	0.099	0.10	0.13	0.16	0.21	0.27	0.32	0.31	0.40	0.47	0.42	0.53	0.63	467	0.13
	2400	427	0.074	0.105	0.124	0.13	0.16	0.19	0.26	0.33	0.39	0.39	0.49	0.58	0.52	0.66	0.78	533	0.16
	2700	480	0.093	0.130	0.151	0.16	0.20	0.23	0.32	0.40	0.47	0.48	0.59	0.70	0.64	0.79	0.94	600	0.20
	3000	533	0.113	0.156	0.180	0.19	0.24	0.28	0.38	0.47	0.55	0.58	0.71	0.83	0.77	0.94	1.11	667	0.24
	3300	587	0.135	0.185	0.212	0.23	0.28	0.32	0.45	0.55	0.65	0.68	0.83	0.97	0.91	1.10	1.30	733	0.28
	3600	640	0.159	0.215	0.246	0.26	0.32	0.37	0.53	0.64	0.75	0.79	0.96	1.12	1.05	1.28	1.50	800	0.33
8	2800	376	0.058	0.084	0.101	0.11	0.13	0.16	0.21	0.27	0.32	0.32	0.40	0.48	0.42	0.54	0.64	431	0.11
	3200	430	0.075	0.107	0.125	0.13	0.17	0.20	0.27	0.33	0.39	0.40	0.50	0.59	0.53	0.66	0.79	492	0.14
	3600	483	0.094	0.131	0.153	0.16	0.20	0.24	0.32	0.40	0.47	0.49	0.60	0.71	0.65	0.80	0.95	554	0.17
	4000	537	0.115	0.158	0.182	0.19	0.24	0.28	0.39	0.48	0.56	0.58	0.71	0.84	0.78	0.95	1.12	615	0.21
	4400	591	0.137	0.187	0.214	0.23	0.28	0.33	0.46	0.56	0.66	0.69	0.84	0.98	0.92	1.12	1.31	677	0.25
	4800	644	0.161	0.218	0.249	0.27	0.32	0.38	0.53	0.65	0.76	0.80	0.97	1.13	1.07	1.29	1.51	738	0.29
10	3500	359	0.054	0.078	0.093	0.10	0.12	0.15	0.20	0.25	0.30	0.29	0.37	0.45	0.39	0.50	0.60	412	0.10
	4000	411	0.069	0.099	0.116	0.12	0.15	0.18	0.25	0.31	0.37	0.37	0.46	0.55	0.49	0.62	0.73	471	0.13
	4500	462	0.086	0.121	0.142	0.15	0.19	0.22	0.30	0.37	0.44	0.45	0.56	0.66	0.60	0.75	0.88	529	0.16
	5000	513	0.105	0.146	0.169	0.18	0.22	0.26	0.36	0.44	0.52	0.54	0.66	0.78	0.72	0.88	1.04	588	0.19
	5500	565	0.126	0.172	0.198	0.21	0.26	0.30	0.42	0.52	0.61	0.64	0.78	0.91	0.85	1.03	1.22	647	0.23
	6000	616	0.148	0.201	0.230	0.25	0.30	0.35	0.49	0.60	0.70	0.74	0.90	1.05	0.99	1.20	1.40	706	0.27
12	4200	339	0.048	0.070	0.085	0.09	0.11	0.14	0.18	0.23	0.27	0.27	0.34	0.41	0.36	0.46	0.54	359	0.08
	4800	387	0.062	0.089	0.106	0.11	0.14	0.17	0.22	0.28	0.33	0.33	0.42	0.50	0.44	0.56	0.67	411	0.10
	5400	436	0.077	0.109	0.128	0.14	0.17	0.20	0.27	0.34	0.40	0.41	0.51	0.60	0.54	0.68	0.80	462	0.12
	6000	484	0.094	0.131	0.153	0.16	0.20	0.24	0.32	0.40	0.47	0.49	0.60	0.71	0.65	0.80	0.95	513	0.15
	6600	532	0.113	0.155	0.180	0.19	0.23	0.28	0.38	0.47	0.55	0.57	0.70	0.83	0.77	0.94	1.11	565	0.18
	7200	581	0.133	0.181	0.208	0.22	0.27	0.32	0.44	0.54	0.64	0.67	0.81	0.96	0.89	1.08	1.27	616	0.21
14	4900	342	0.049	0.071	0.086	0.09	0.12	0.14	0.18	0.23	0.28	0.27	0.35	0.41	0.36	0.46	0.55	362	0.08
	5600	391	0.063	0.090	0.107	0.11	0.14	0.17	0.23	0.28	0.34	0.34	0.43	0.51	0.45	0.57	0.68	414	0.10
	6300	439	0.078	0.111	0.130	0.14	0.17	0.20	0.28	0.34	0.41	0.41	0.52	0.61	0.55	0.69	0.81	466	0.13
	7000	488	0.096	0.133	0.155	0.16	0.20	0.24	0.33	0.41	0.48	0.49	0.61	0.72	0.66	0.81	0.96	518	0.15
	7700	537	0.115	0.158	0.182	0.19	0.24	0.28	0.39	0.48	0.56	0.58	0.71	0.84	0.78	0.95	1.12	569	0.18
	8400	586	0.135	0.184	0.211	0.23	0.27	0.32	0.45	0.55	0.65	0.68	0.82	0.97	0.90	1.10	1.29	621	0.21
17	5950	353	0.052	0.075	0.091	0.09	0.12	0.14	0.19	0.24	0.29	0.28	0.36	0.43	0.38	0.49	0.58	378	0.09
	6800	403	0.067	0.095	0.113	0.12	0.15	0.18	0.24	0.30	0.36	0.36	0.45	0.53	0.48	0.60	0.71	432	0.11
	7650	453	0.083	0.117	0.137	0.15	0.18	0.21	0.29	0.36	0.43	0.44	0.54	0.64	0.58	0.72	0.85	486	0.14
	8500	504	0.102	0.141	0.164	0.17	0.21	0.25	0.35	0.43	0.51	0.52	0.64	0.76	0.70	0.86	1.01	540	0.16
	9350	554	0.122	0.167	0.192	0.20	0.25	0.29	0.41	0.50	0.59	0.61	0.75	0.88	0.82	1.00	1.18	594	0.19
	10200	604	0.143	0.194	0.223	0.24	0.29	0.34	0.48	0.58	0.68	0.72	0.87	1.02	0.95	1.16	1.36	648	0.23
21	7350	356	0.053	0.077	0.092	0.10	0.12	0.15	0.19	0.25	0.29	0.29	0.37	0.44	0.39	0.49	0.59	382	0.09
	8400	407	0.068	0.097	0.115	0.12	0.15	0.18	0.24	0.30	0.36	0.36	0.46	0.54	0.48	0.61	0.72	436	0.11
	9450	458	0.085	0.119	0.140	0.15	0.18	0.22	0.30	0.37	0.43	0.44	0.55	0.65	0.59	0.74	0.87	491	0.14
	10500	509	0.104	0.144	0.167	0.18	0.22	0.26	0.35	0.44	0.51	0.53	0.65	0.77	0.71	0.87	1.03	545	0.17
	11550	560	0.124	0.170	0.196	0.21	0.26	0.30	0.42	0.51	0.60	0.63	0.77	0.90	0.84	1.02	1.20	600	0.20
	12600	611	0.146	0.198	0.227	0.24	0.30	0.35	0.49	0.59	0.69	0.73	0.89	1.04	0.97	1.18	1.38	655	0.23
25	8750	362	0.054	0.079	0.094	0.10	0.13	0.15	0.20	0.25	0.30	0.30	0.38	0.45	0.40	0.50	0.60	398	0.10
	10000	413	0.070	0.100	0.118	0.12	0.16	0.18	0.25	0.31	0.37	0.37	0.47	0.55	0.50	0.62	0.74	455	0.12
	11250	465	0.087	0.122	0.143	0.15	0.19	0.22	0.30	0.38	0.44	0.45	0.56	0.67	0.61	0.75	0.89	511	0.15
	12500	517	0.107	0.147	0.171	0.18	0.22	0.26	0.36	0.45	0.53	0.54	0.67	0.79	0.73	0.89	1.05	568	0.18
	13750	568	0.127	0.174	0.200	0.21	0.26	0.31	0.43	0.52	0.61	0.64	0.78	0.92	0.86	1.05	1.23	625	0.21
	15000	620	0.150	0.203	0.232	0.25	0.30	0.35	0.50	0.60	0.71	0.75	0.91	1.06	1.00	1.21	1.42	682	0.25
30	10500	364	0.055	0.080	0.095	0.10	0.13	0.15	0.20	0.26	0.30	0.30	0.38	0.46	0.40	0.51	0.61	399	0.10
	12000	416	0.071	0.101	0.119	0.13	0.16	0.19	0.25	0.32	0.37	0.38	0.47	0.56	0.50	0.63	0.75	456	0.12
	13500	468	0.089	0.124	0.145	0.15	0.19	0.22	0.31	0.38	0.45	0.46	0.57	0.67	0.61	0.76	0.90	513	0.15
	15000	520	0.108	0.149	0.173	0.18	0.23	0.27	0.37	0.45	0.53	0.55	0.68	0.80	0.74	0.90	1.07	570	0.18
	16500	572	0.129	0.177	0.203	0.22	0.26	0.31	0.43	0.53	0.62	0.65	0.79	0.93	0.87	1.06	1.24	627	0.21
	18000	624	0.152	0.206	0.235	0.25	0.31	0.36	0.50	0.61	0.72	0.76	0.92	1.08	1.01	1.22	1.43	684	0.25

Notes:
1. APD = air pressure drop at standard conditions (in. wg).
2. Cooling coil APD is for wet fin surface.
3. Heating coil APD is for dry fin surface.
4. Four, six, & eight-row heating APD is equal to 2, 3, or 4 times two-row heating APD.

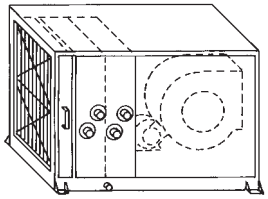
Table 7. Accessory section air pressure drop

		Flat Filters				Angle Filter		Mixing Section		Electric Heat		Face & Bypass Section			
			ΔP		4"										
	Air	Filter	MERV7	MERV7	MERV11	Filter	ΔP	Filter	ΔP	Filter	ΔP	Face	ΔP	Bypass	ΔP
Unit Size	Flow (cfm)	Velocity (ft/min)	(in. wg)	(in. wg)	(in. wg)	Velocity (ft/min)	(in. wg)	Velocity (ft/min)	(in. wg)	Velocity (ft/min)	(in. wg)	Damper (ft/min)	(in. wg)	Damper (ft/min)	(in. wg)
3	1050	303	0.12	0.10	0.20	189	0.05	677	0.06	1553	0.12	401	0.01	676	0.08
	1200	346	0.15	0.13	0.25	216	0.06	774	0.08	1775	0.13	458	0.11	773	0.11
	1350	389	0.19	0.16	0.30	243	0.08	871	0.10	1997	0.15	515	0.01	870	0.14
	1500	432	0.24	0.20	0.36	270	0.10	968	0.12	2219	0.17	573	0.17	966	0.18
	1650	476	0.28	0.24	0.41	297	0.12	1065	0.15	2441	0.18	630	0.21	1063	0.21
	1800	519	0.33	0.28	0.48	324	0.14	1161	0.18	2663	0.20	687	0.26	1160	0.26
6	2100	303	0.12	0.10	0.20	189	0.05	747	0.07	1789	0.13	383	0.08	746	0.11
	2400	346	0.15	0.13	0.25	216	0.06	854	0.09	2044	0.15	438	0.11	853	0.15
	2700	389	0.19	0.16	0.30	243	0.08	961	0.12	2300	0.17	493	0.13	960	0.19
	3000	432	0.24	0.20	0.36	270	0.10	1068	0.15	2555	0.19	548	0.17	1066	0.24
	3300	476	0.28	0.24	0.41	297	0.12	1174	0.19	2811	0.21	602	0.20	1173	0.29
	3600	519	0.33	0.28	0.48	324	0.14	1281	0.23	3066	0.23	657	0.25	1280	0.35
8	2800	403	0.21	0.18	0.32	252	0.08	787	0.08	1852	0.14	360	0.03	786	0.14
	3200	461	0.27	0.23	0.40	288	0.11	899	0.10	2116	0.16	411	0.05	899	0.19
	3600	519	0.33	0.28	0.48	324	0.14	1011	0.14	2381	0.18	463	0.06	1011	0.24
	4000	576	0.41	0.34	0.56	360	0.17	1124	0.17	2646	0.20	514	0.07	1123	0.30
	4400	634	0.49	0.41	0.65	396	0.20	1236	0.21	2910	0.22	565	0.09	1236	0.36
	4800	692	0.58	0.48	0.74	432	0.24	1348	0.25	3175	0.24	617	0.11	1348	0.43
10	3500	360	0.17	0.14	0.27	225	0.07	785	0.06	1663	0.12	353	0.03	784	0.14
	4000	412	0.22	0.18	0.33	257	0.09	897	0.08	1900	0.14	404	0.04	896	0.18
	4500	463	0.27	0.23	0.40	289	0.11	1009	0.10	2138	0.16	454	0.05	1008	0.23
	5000	514	0.33	0.28	0.47	321	0.13	1121	0.12	2375	0.18	505	0.06	1120	0.29
	5500	566	0.39	0.33	0.54	353	0.16	1233	0.15	2613	0.20	555	0.08	1232	0.35
	6000	617	0.47	0.39	0.62	386	0.19	1420	0.19	2850	0.21	606	0.09	1344	0.42
12	4200	258	0.09	0.08	0.16	202	0.06	828	0.06	1652	0.13	303	0.02	829	0.15
	4800	295	0.11	0.10	0.20	230	0.07	947	0.08	1888	0.14	346	0.02	947	0.20
	5400	332	0.14	0.12	0.24	259	0.09	1065	0.11	2123	0.16	389	0.03	1066	0.25
	6000	369	0.18	0.15	0.28	288	0.11	1183	0.13	2359	0.18	432	0.04	1184	0.31
	6600	406	0.21	0.18	0.32	317	0.13	1302	0.16	2595	0.20	476	0.05	1303	0.38
	7200	443	0.25	0.21	0.37	346	0.15	1420	0.19	2831	0.21	519	0.06	1421	0.46
14	4900	302	0.12	0.10	0.20	196	0.05	813	0.05	1667	0.13	353	0.02	813	0.18
	5600	345	0.15	0.13	0.25	224	0.07	929	0.06	1905	0.15	404	0.03	929	0.23
	6300	388	0.19	0.16	0.30	252	0.08	1045	0.08	2143	0.16	454	0.04	1046	0.30
	7000	431	0.23	0.20	0.36	280	0.10	1161	0.09	2381	0.18	504	0.05	1162	0.37
	7700	474	0.28	0.24	0.41	308	0.12	1277	0.10	2619	0.20	555	0.06	1278	0.45
	8400	517	0.33	0.28	0.47	336	0.15	1393	0.12	2857	0.21	605	0.08	1394	0.54
17	5950	264	0.09	0.08	0.17	204	0.06	820	0.05	1711	0.13	279	0.01	820	0.16
	6800	302	0.12	0.10	0.20	233	0.07	937	0.06	1955	0.15	318	0.01	937	0.21
	7650	340	0.15	0.13	0.25	262	0.09	1054	0.07	2200	0.16	358	0.01	1054	0.27
	8500	378	0.18	0.15	0.29	291	0.11	1171	0.08	2444	0.18	398	0.02	1171	0.34
	9350	416	0.22	0.19	0.34	321	0.13	1288	0.10	2688	0.20	438	0.02	1288	0.41
	10200	453	0.26	0.22	0.39	350	0.16	1405	0.11	2933	0.22	478	0.03	1405	0.49
21	7350	327	0.14	0.12	0.23	196	0.05	784	0.10	1692	0.13	344	0.01	784	0.23
	8400	373	0.18	0.15	0.28	224	0.07	896	0.13	1933	0.14	393	0.02	896	0.31
	9450	420	0.22	0.19	0.34	252	0.08	1009	0.17	2175	0.16	440	0.02	1008	0.39
	10500	467	0.27	0.23	0.40	280	0.10	1121	0.21	2417	0.18	492	0.03	1120	0.49
	11550	513	0.33	0.28	0.47	308	0.12	1233	0.26	2658	0.20	541	0.03	1232	0.59
	12600	560	0.39	0.33	0.54	336	0.15	1345	0.31	2900	0.22	590	0.04	1344	0.71
25	8750	332	0.14	0.12	0.24	207	0.06	853	0.10	2146	0.16	351	0.01	853	0.29
	10000	379	0.18	0.16	0.29	237	0.08	975	0.13	2453	0.18	401	0.02	975	0.38
	11250	426	0.23	0.19	0.35	266	0.09	1096	0.17	2760	0.21	452	0.02	1097	0.48
	12500	474	0.28	0.24	0.41	296	0.12	121	0.21	3066	0.23	502	0.03	1218	0.60
	13750	521	0.34	0.28	0.48	326	0.14	1340	0.26	3373	0.25	552	0.03	1340	0.73
	15000	568	0.40	0.33	0.55	355	0.16	1462	0.31	3679	0.28	602	0.04	1462	0.88
30	10500	344	0.15	0.13	0.25	215	0.06	873	0.10	2027	0.15	359	0.01	873	0.30
	12000	393	0.20	0.17	0.31	245	0.08	998	0.14	2316	0.17	410	0.02	998	0.40
	13500	442	0.25	0.21	0.37	276	0.10	1122	0.18	2606	0.20	461	0.02	1122	0.51
	15000	491	0.30	0.25	0.44	307	0.12	1247	0.22	2895	0.22	512	0.03	1247	0.63
	16500	540	0.36	0.30	0.51	337	0.15	1372	0.27	3185	0.24	563	0.03	1372	0.77
	18000	589	0.43	0.36	0.58	368	0.17	1496	0.33	3474	0.26	615	0.04	1497	0.92

Fan Curves

Size 3 Horizontal Units

Horizontal unit, front top discharge



Horizontal unit, top front discharge

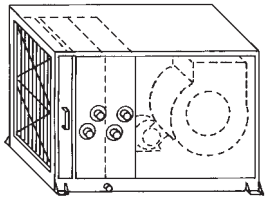


Figure 4. Fan performance for size 3 horizontal units

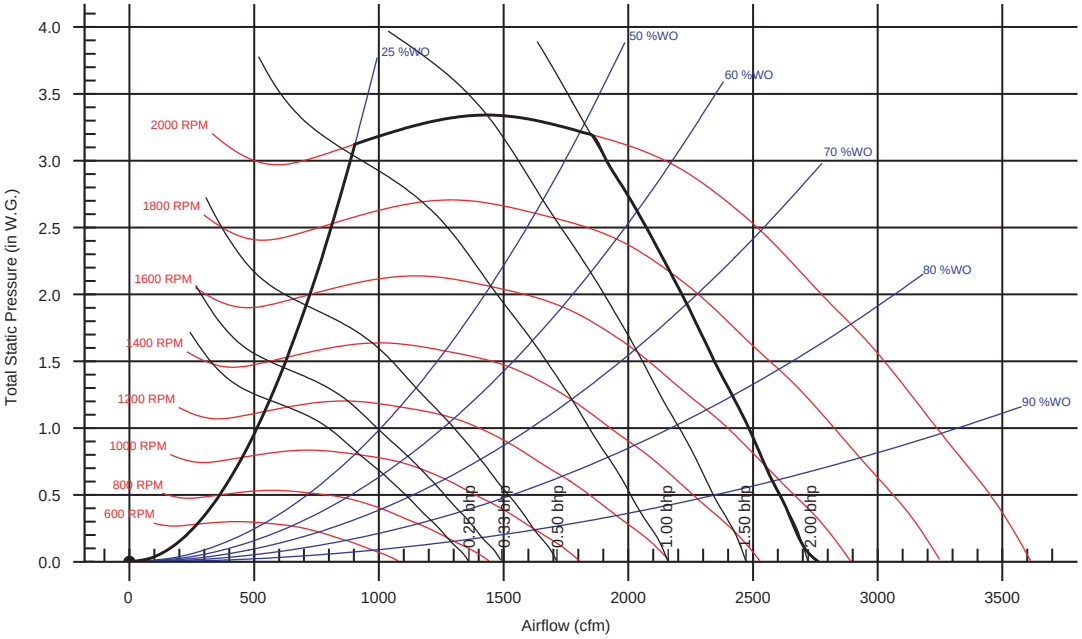


Table 8. Size 3 horizontal units

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3	1050	1553	866	0.23	1118	0.36	1341	0.50	1548	0.66	1746	0.86	1931	1.07	2101	1.30	2261	1.54
	1200	1775	922	0.30	1144	0.44	1356	0.60	1548	0.76	1729	0.94	1906	1.16	2072	1.39	2232	1.64
	1350	1997	983	0.38	1182	0.53	1377	0.70	1563	0.89	1730	1.07	1892	1.27	2050	1.50	2203	1.75
	1500	2219	1045	0.49	1230	0.65	1406	0.83	1582	1.03	1744	1.22	1896	1.43	2042	1.65	2189	1.90
	1650	2441	1110	0.61	1285	0.79	1446	0.98	1608	1.19	1766	1.40	1913	1.62	2054	1.85	2183	2.07
	1800	2663	1178	0.76	1345	0.95	1495	1.15	1641	1.36	1788	1.59	1934	1.83	2068	2.07	2197	2.31

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 3 Vertical Unit, Front Top Discharge

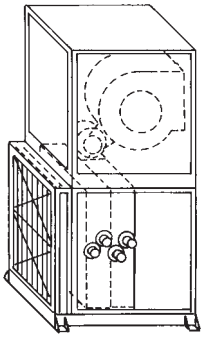


Figure 5. Fan performance for size 3 vertical unit, front top discharge

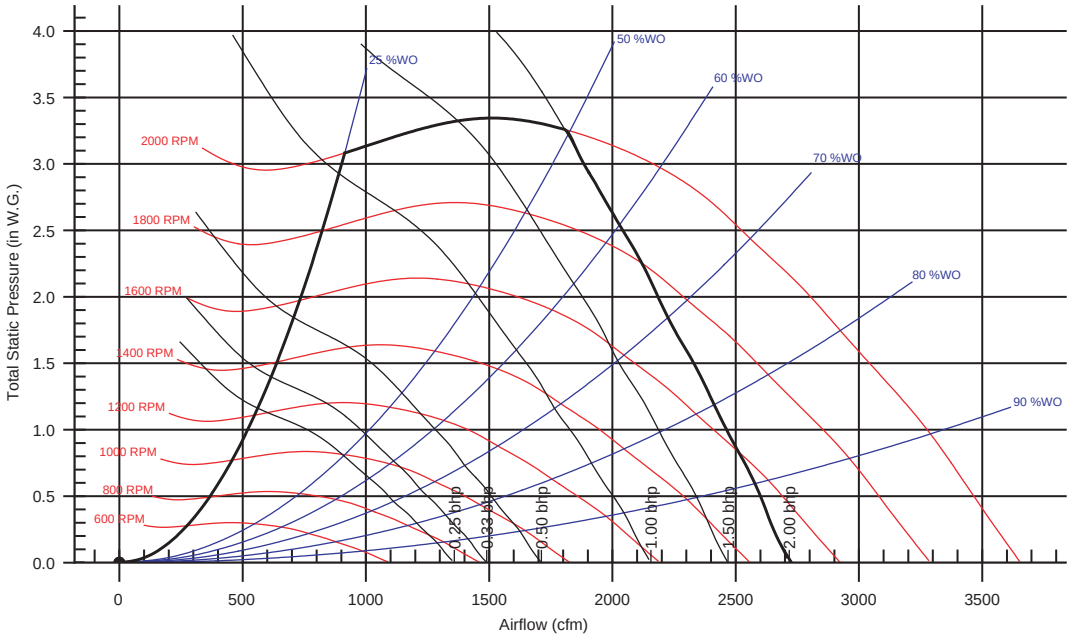


Table 9. Size 3 vertical unit, front top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3	1050	1553	864	0.23	1112	0.36	1337	0.51	1552	0.69	1756	0.90	1941	1.12	2116	1.36	2275	1.60
	1200	1775	920	0.30	1141	0.45	1350	0.61	1543	0.78	1732	0.99	1915	1.22	2084	1.46	2244	1.72
	1350	1997	978	0.39	1179	0.55	1372	0.72	1556	0.91	1726	1.10	1895	1.33	2058	1.57	2218	1.85
	1500	2219	1041	0.50	1227	0.67	1403	0.85	1576	1.05	1738	1.25	1892	1.47	2042	1.71	2194	1.98
	1650	2441	1106	0.62	1284	0.81	1443	1.00	1602	1.21	1757	1.43	1906	1.66	2045	1.90	2180	2.14
	1800	2663	1172	0.77	1340	0.97	1489	1.18	1637	1.40	1781	1.63	1924	1.87	2058	2.11	2187	2.37

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 3 Vertical Unit, Top Front Discharge

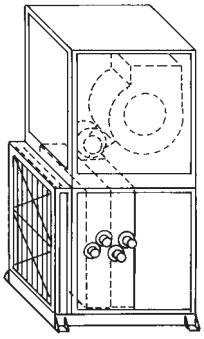


Figure 6. Fan performance for size 3 vertical unit, top front discharge

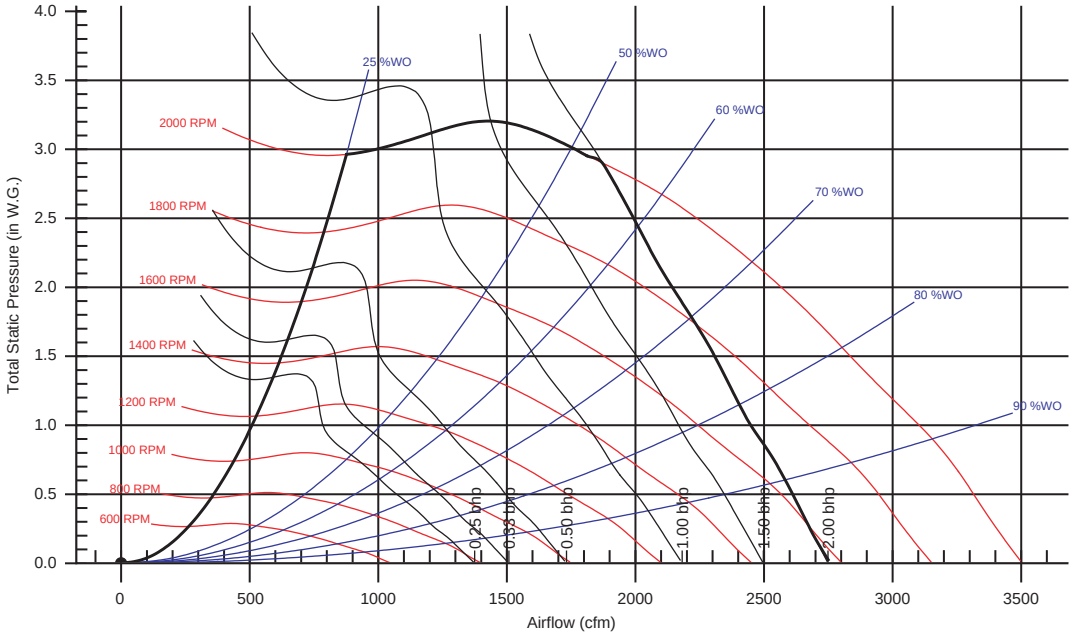


Table 10. Size 3 vertical unit, top front discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3	1050	1553	910	0.24	1160	0.38	1372	0.52	1583	0.69	1794	0.89	1979	1.07	2152	1.26	2311	1.45
	1200	1775	966	0.31	1196	0.47	1399	0.62	1583	0.79	1766	0.98	1953	1.20	2128	1.43	2291	1.64
	1350	1997	1026	0.40	1241	0.57	1435	0.75	1606	0.92	1768	1.11	1933	1.32	2100	1.56	2260	1.81
	1500	2219	1091	0.51	1292	0.70	1473	0.89	1644	1.09	1796	1.28	1941	1.48	2087	1.70	2236	1.96
	1650	2441	1159	0.63	1347	0.83	1518	1.05	1679	1.26	1829	1.48	1967	1.69	2100	1.91	2231	2.15
	1800	2663	1228	0.78	1406	0.99	1570	1.23	1721	1.46	1868	1.70	2003	1.93	2129	2.16	2252	2.40

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 3 Vertical Unit, Back Top Discharge

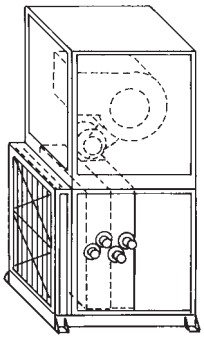


Figure 7. Fan performance for size 3 vertical unit, back top discharge

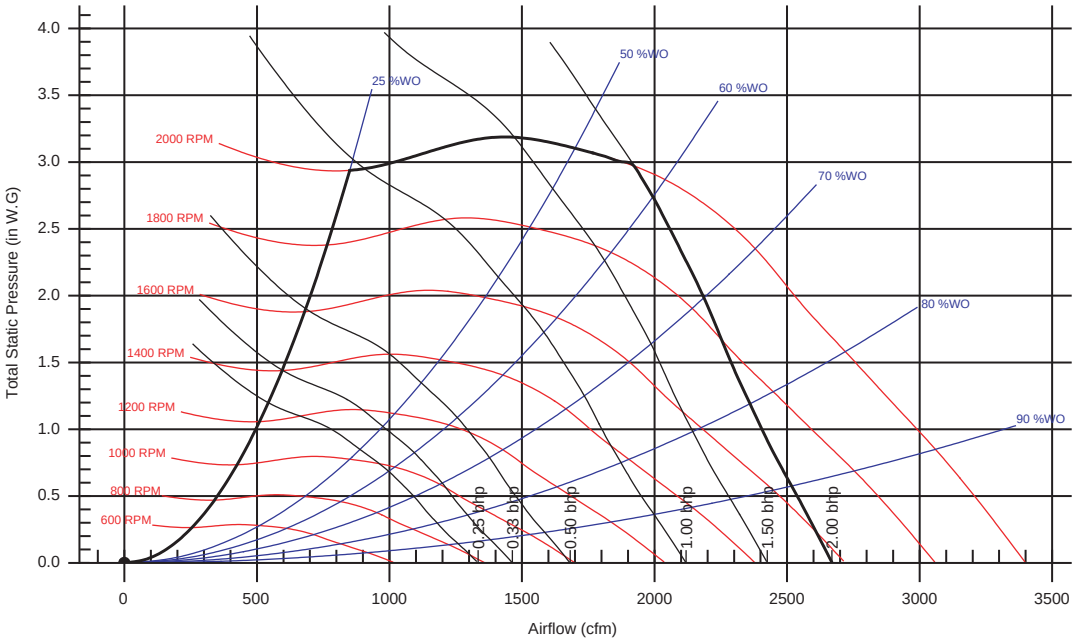


Table 11. Size 3 vertical unit, back top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3	1050	1553	901	0.23	1146	0.36	1372	0.51	1585	0.68	1797	0.88	1989	1.10	2162	1.33	2321	1.57
	1200	1775	968	0.31	1177	0.44	1390	0.60	1585	0.77	1771	0.97	1959	1.19	2132	1.43	2298	1.69
	1350	1997	1039	0.41	1223	0.54	1414	0.70	1601	0.89	1771	1.09	1936	1.30	2106	1.54	2265	1.80
	1500	2219	1110	0.52	1281	0.67	1450	0.84	1622	1.03	1787	1.24	1943	1.45	2091	1.68	2242	1.94
	1650	2441	1182	0.66	1347	0.82	1497	0.99	1654	1.19	1810	1.40	1960	1.64	2101	1.87	2238	2.12
	1800	2663	1256	0.82	1418	1.00	1553	1.18	1694	1.38	1838	1.59	1980	1.83	2117	2.08	2249	2.34

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 3 Vertical Unit, Top Back Discharge

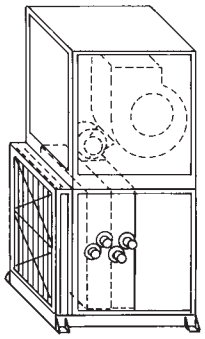


Figure 8. Fan performance for size 3 vertical unit, top back discharge

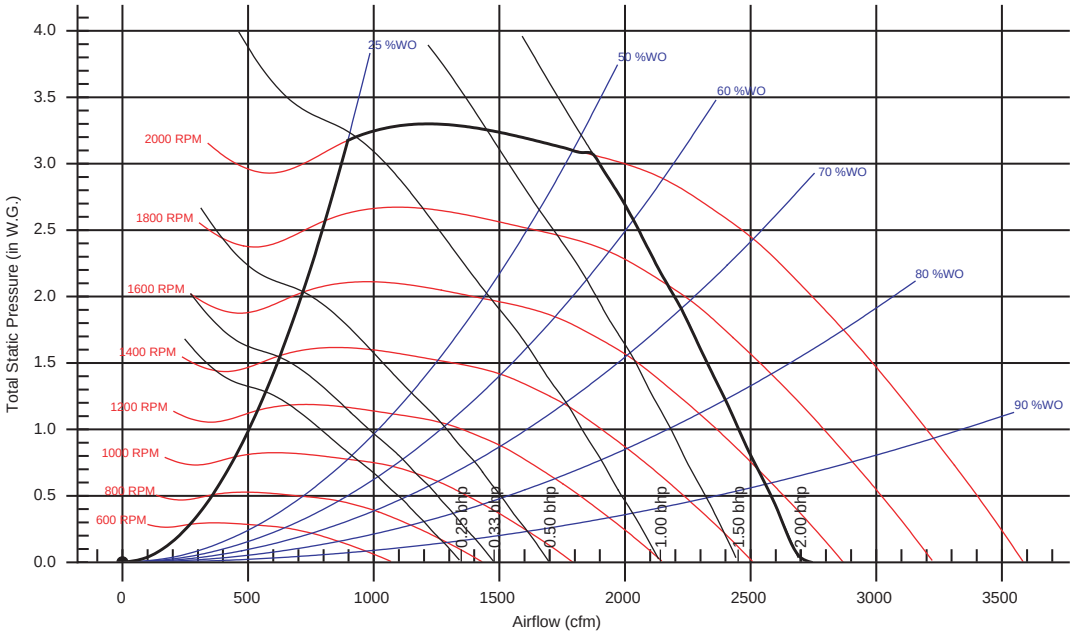


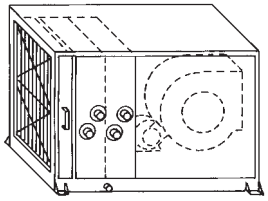
Table 12. Size 3 vertical unit, top back discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3	1050	1553	875	0.23	1138	0.36	1359	0.51	1557	0.66	1743	0.83	1915	1.01	2078	1.20	2233	1.41
	1200	1775	928	0.30	1161	0.44	1380	0.60	1568	0.77	1743	0.95	1908	1.13	2064	1.33	2214	1.54
	1350	1997	989	0.39	1197	0.54	1401	0.72	1589	0.90	1756	1.09	1913	1.28	2061	1.49	2202	1.70
	1500	2219	1053	0.50	1243	0.66	1427	0.84	1610	1.04	1773	1.24	1924	1.45	2069	1.67	2204	1.89
	1650	2441	1120	0.63	1295	0.80	1465	1.00	1633	1.20	1794	1.42	1944	1.64	2084	1.87	2214	2.11
	1800	2663	1189	0.78	1354	0.97	1511	1.17	1663	1.38	1817	1.61	1965	1.86	2102	2.10	2229	2.34

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 6 Horizontal Units

Horizontal unit, front top discharge



Horizontal unit, top front discharge

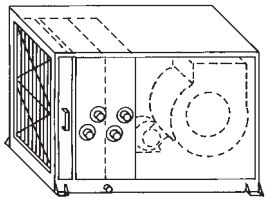


Figure 9. Fan performance for size 6 horizontal units

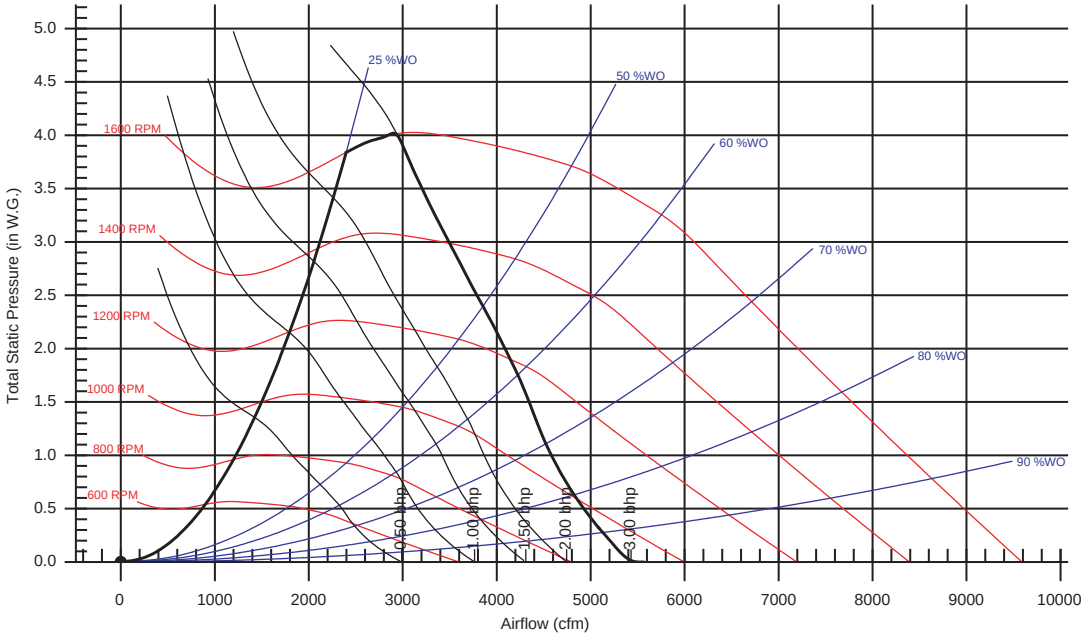


Table 13. Size 6 horizontal units

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
6	2100	1792	612	0.40	811	0.62	977	0.84	1128	1.08	1265	1.33	1393	1.60	1517	1.89	1630	2.20
	2400	2048	641	0.52	825	0.76	987	1.02	1129	1.28	1261	1.55	1382	1.82	1499	2.12	1611	2.44
	2700	2304	679	0.69	843	0.93	998	1.22	1136	1.51	1263	1.81	1381	2.10	1492	2.41	1598	2.73
	3000	2560	717	0.88	868	1.14	1013	1.45	1149	1.77	1270	2.09	1385	2.42	1492	2.75	1594	3.08
	3300	2816	756	1.10	896	1.39	1032	1.71	1161	2.06	1281	2.40	1392	2.76	1495	3.12	1597	3.49
	3600	3072	795	1.36	932	1.70	1056	2.02	1176	2.38	1294	2.77	1404	3.15	1503	3.53	1601	3.93

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 6 Vertical Unit, Front Top Discharge

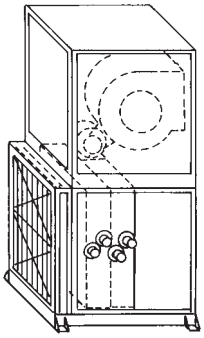


Figure 10. Fan performance for size 6 vertical unit, front top discharge

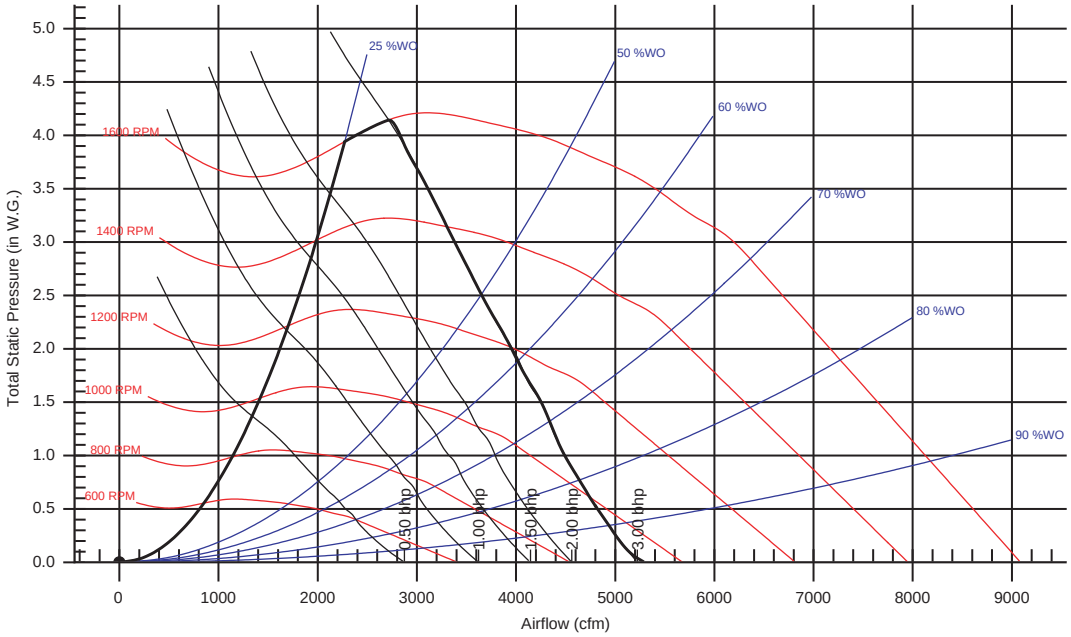


Table 14. Size 6 vertical unit, front top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
6	2100	1792	610	0.42	797	0.65	958	0.88	1100	1.13	1241	1.40	1379	1.70	1508	2.01	1632	2.33
	2400	2048	638	0.55	816	0.81	968	1.07	1106	1.34	1233	1.62	1352	1.92	1477	2.25	1596	2.60
	2700	2304	675	0.72	838	1.00	983	1.29	1116	1.58	1237	1.88	1350	2.20	1457	2.53	1567	2.88
	3000	2560	716	0.93	865	1.22	1003	1.54	1129	1.86	1246	2.19	1355	2.52	1460	2.87	1558	3.23
	3300	2816	758	1.17	895	1.48	1025	1.82	1148	2.19	1260	2.54	1367	2.90	1467	3.26	1561	3.64
	3600	3072	802	1.44	926	1.78	1052	2.14	1167	2.54	1277	2.93	1379	3.31	1478	3.71	1571	4.10

Size 6 Vertical Unit, Top Front Discharge

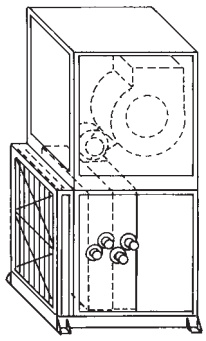


Figure 11. Fan performance for size 6 vertical unit, top front discharge

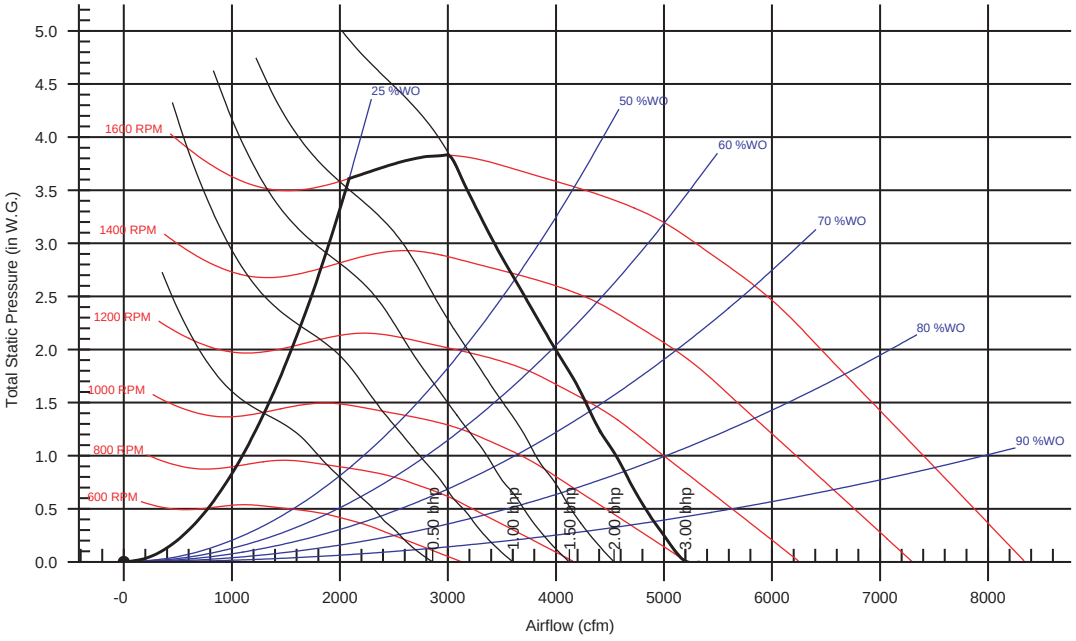


Table 15. Size 6 vertical unit, top front discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
6	2100	1792	645	0.41	842	0.63	1007	0.85	1155	1.09	1301	1.37	1439	1.68	1568	2.01	1687	2.36
	2400	2048	2048	0.54	862	0.79	1022	1.05	1162	1.30	1289	1.56	1419	1.87	1545	2.21	1665	2.57
	2700	2304	2304	0.71	884	0.98	1040	1.26	1176	1.54	1299	1.83	1414	2.12	1528	2.44	1644	2.81
	3000	2560	2560	0.90	915	1.19	1059	1.51	1192	1.82	1315	2.14	1426	2.46	1530	2.77	1632	3.11
	3300	2816	2816	1.13	951	1.45	1082	1.79	1211	2.13	1331	2.48	1440	2.83	1543	3.18	1640	3.53
	3600	3072	3072	1.40	989	1.76	1113	2.10	1232	2.48	1349	2.86	1456	3.24	1557	3.62	1652	4.00

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 6 Vertical Unit, Back Top Discharge

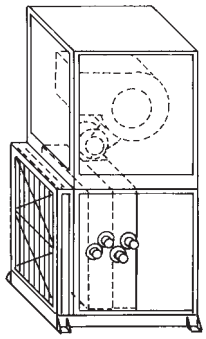


Figure 12. Fan performance for size 6 vertical unit, back top discharge

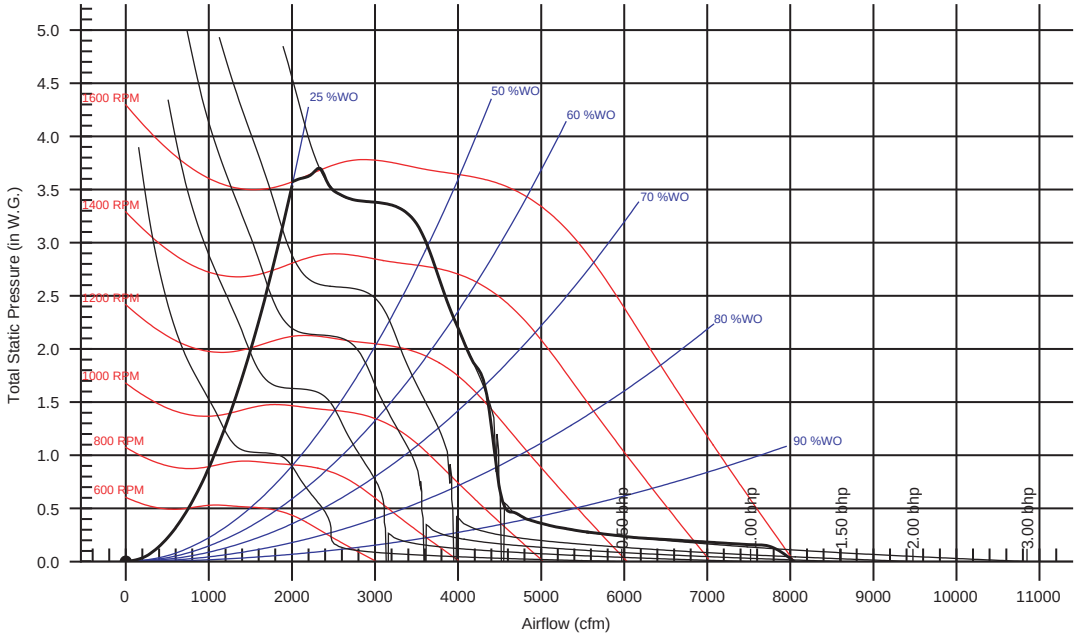


Table 16. Size 6 vertical unit, back top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
6	2100	1792	637	0.39	835	0.60	1011	0.86	1162	1.29	1303	1.75	1444	2.09	1572	2.42	1690	2.77
	2400	2048	678	0.53	848	0.74	1019	0.99	1167	1.33	1299	1.81	1424	2.43	1549	2.79	1667	3.17
	2700	2304	724	0.70	871	0.91	1027	1.19	1174	1.47	1306	1.86	1424	2.37	1537	3.02	1648	3.62
	3000	2560	773	0.92	903	1.13	1042	1.41	1181	1.72	1313	2.04	1430	2.46	1540	3.01	1644	3.66
	3300	2816	823	1.17	945	1.40	1066	1.67	1193	2.00	1320	2.35	1438	2.69	1548	3.14	1648	3.71
	3600	3072	873	1.46	990	1.72	1099	1.99	1213	2.32	1330	2.69	1445	3.07	1556	3.45	1658	3.91

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 6 Vertical Unit, Top Back Discharge

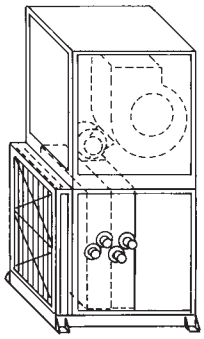


Figure 13. Fan performance for size 6 vertical unit, top back discharge

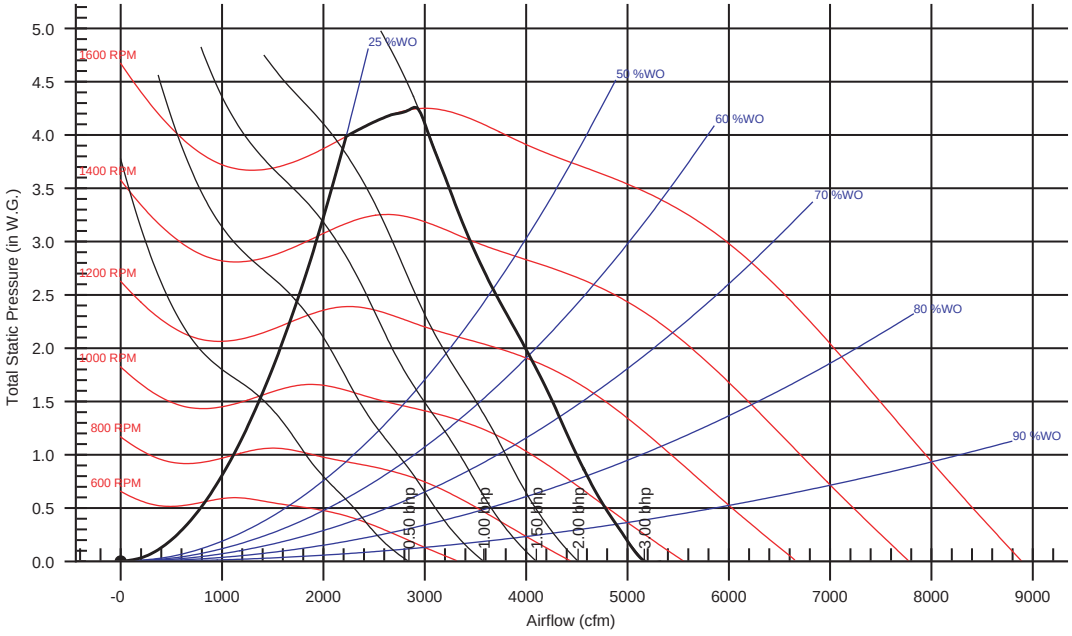


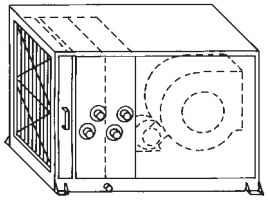
Table 17. Size 6 vertical unit, top back discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
6	2100	1792	618	0.42	811	0.63	962	0.83	1096	1.03	1234	1.25	1369	1.49	1497	1.75	1615	2.02
	2400	2048	647	0.55	830	0.79	983	1.03	1109	1.26	1226	1.48	1344	1.72	1466	1.99	1585	2.28
	2700	2304	684	0.72	852	0.98	1001	1.25	1130	1.52	1240	1.77	1346	2.02	1448	2.28	1557	2.57
	3000	2560	724	0.92	877	1.20	1022	1.51	1149	1.81	1262	2.11	1361	2.38	1458	2.66	1550	2.94
	3300	2816	767	1.17	906	1.46	1043	1.79	1168	2.13	1283	2.47	1383	2.79	1476	3.09	1563	3.39
	3600	3072	811	1.45	941	1.77	1068	2.12	1189	2.48	1300	2.85	1402	3.22	1497	3.57	1583	3.91

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 8 Horizontal Units

Horizontal unit, front top discharge



Horizontal unit, top front discharge

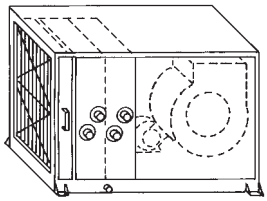


Figure 14. Fan performance for size 8 horizontal units

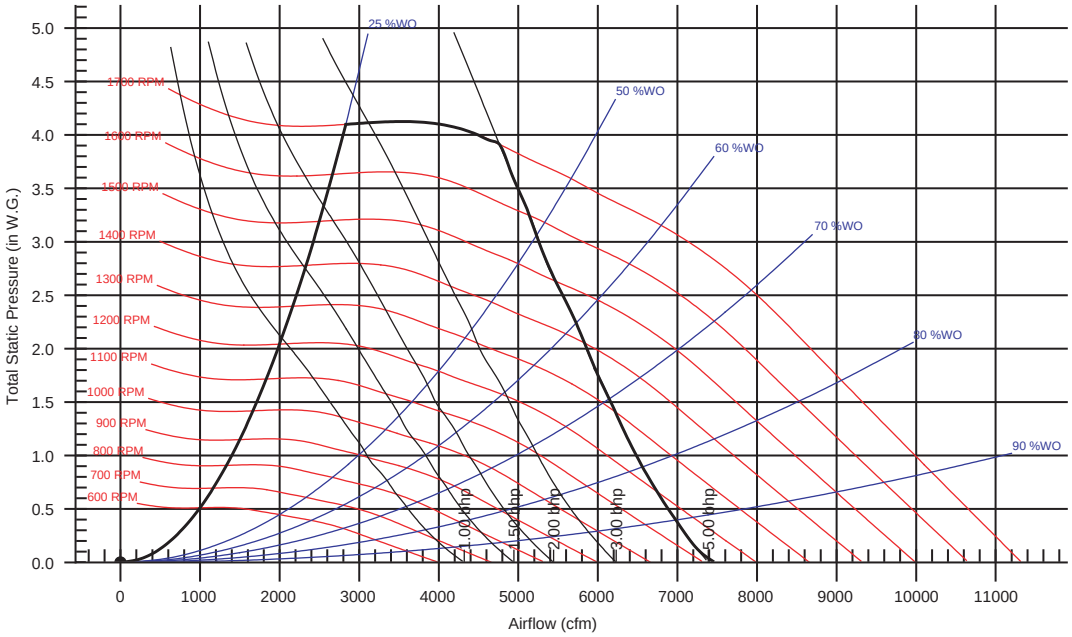


Table 18. Size 8 horizontal units

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
8	2800	1856	692	0.67	873	0.97	1031	1.29	1170	1.63	1311	2.03	1450	2.50	1581	3.01	1704	3.55
	3200	2121	738	0.90	908	1.24	1054	1.59	1188	1.95	1310	2.33	1429	2.76	1556	3.27	1677	3.83
	3600	2386	790	1.19	945	1.56	1084	1.95	1212	2.35	1331	2.76	1440	3.18	1545	3.63	1654	4.15
	4000	2651	843	1.53	984	1.93	1119	2.38	1239	2.80	1353	3.25	1460	3.71	1561	4.17	1656	4.66
	4400	2916	898	1.95	1028	2.38	1156	2.85	1273	3.34	1379	3.81	1483	4.30	1581	4.80	1674	5.31
	4800	3181	955	2.44	1079	2.91	1194	3.40	1309	3.94	1412	4.45	1510	4.97	1605	5.51	1696	6.05

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 8 Vertical Unit, Front Top Discharge

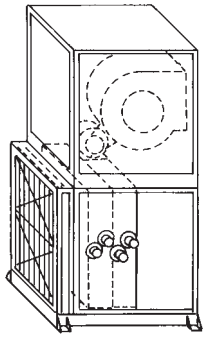


Figure 15. Fan performance for size 8 vertical unit, front top discharge

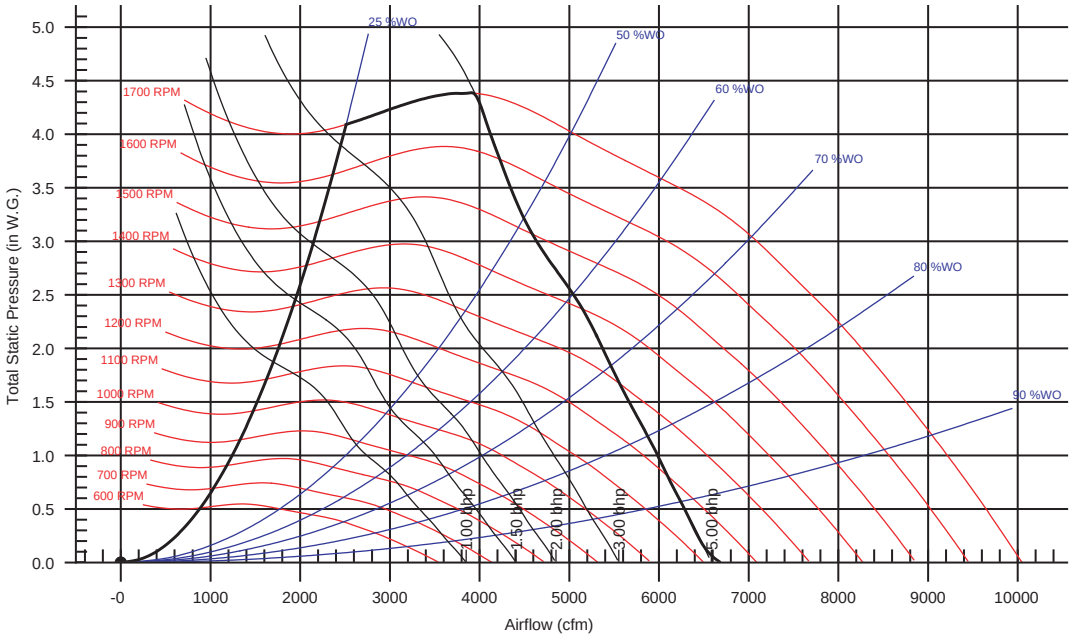


Table 19. Size 8 vertical unit, front top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
8	2800	1856	682	0.69	868	1.03	1018	1.37	1151	1.67	1283	2.02	1414	2.44	1540	2.90	1658	3.39
	3200	2121	729	0.92	897	1.27	1046	1.70	1173	2.07	1289	2.41	1403	2.77	1523	3.24	1635	3.72
	3600	2386	779	1.20	929	1.59	1075	2.03	1202	2.52	1313	2.93	1417	3.31	1517	3.68	1622	4.15
	4000	2651	831	1.54	969	1.98	1105	2.42	1229	2.95	1340	3.49	1444	3.94	1538	4.37	1630	4.79
	4400	2916	887	1.96	1016	2.44	1138	2.90	1260	3.43	1368	4.02	1470	4.62	1564	5.12	1652	5.59
	4800	3181	944	2.45	1065	2.97	1176	3.48	1289	4.00	1399	4.60	1498	5.25	1591	5.91	1678	6.47

Size 8 Vertical Unit, Top Front Discharge

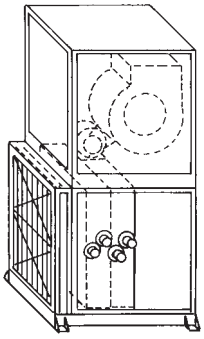


Figure 16. Fan performance for size 8 vertical unit, top front discharge

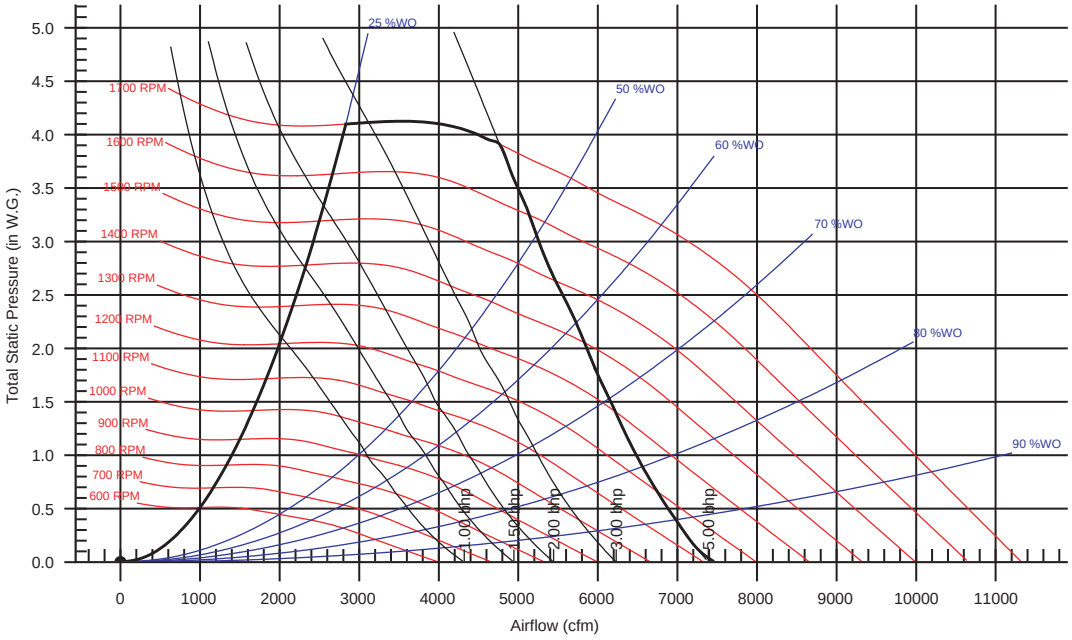


Table 20. Size 8 vertical unit, top front discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
8	2800	1856	756	0.70	943	1.02	1105	1.37	1252	1.72	1387	2.10	1510	2.51	1626	2.95	1736	3.42
	3200	2121	809	0.95	982	1.29	1135	1.68	1273	2.07	1403	2.48	1524	2.90	1637	3.35	1743	3.83
	3600	2386	863	1.25	1026	1.62	1170	2.04	1303	2.48	1427	2.93	1542	3.38	1652	3.84	1756	4.32
	4000	2651	920	1.60	1074	2.04	1213	2.46	1336	2.94	1454	3.43	1566	3.93	1671	4.42	1774	4.95
	4400	2916	980	2.02	1127	2.53	1255	2.96	1377	3.47	1488	4.00	1594	4.53	1695	5.07	1795	5.64
	4800	3181	1043	2.51	1181	3.09	1304	3.58	1419	4.07	1527	4.64	1629	5.22	1725	5.80	1820	6.40

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 8 Vertical Unit, Back Top Discharge

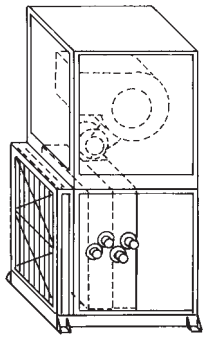


Figure 17. Fan performance for size 8 vertical unit, back top discharge

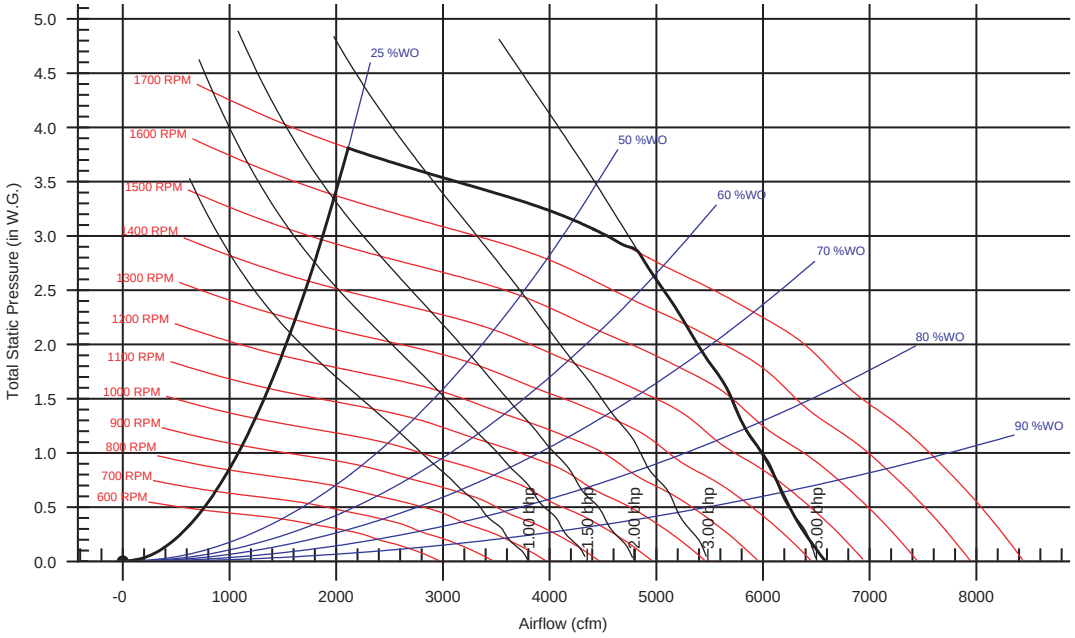


Table 21. Size 8 vertical unit, back top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
8	2800	1856	797	0.68	998	1.00	1162	1.34	1310	1.70	1442	2.08	1564	2.48	1672	2.87	1778	3.30
	3200	2121	850	0.90	1042	1.27	1199	1.64	1340	2.04	1469	2.45	1589	2.87	1700	3.32	1802	3.77
	3600	2386	915	1.20	1085	1.58	1241	2.00	1375	2.42	1499	2.87	1616	3.33	1725	3.80	1827	4.28
	4000	2651	980	1.55	1132	1.96	1284	2.41	1416	2.88	1535	3.36	1647	3.85	1754	4.36	1856	4.89
	4400	2916	1042	1.95	1184	2.39	1327	2.89	1460	3.40	1577	3.92	1682	4.44	1785	4.97	1885	5.54
	4800	3181	1108	2.45	1246	2.93	1374	3.45	1501	3.98	1619	4.55	1725	5.12	1822	5.68	1917	6.27

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 8 Vertical Unit, Top Back Discharge

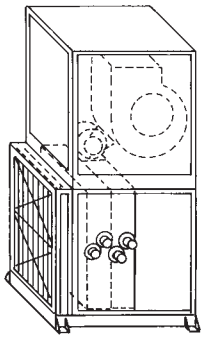


Figure 18. Fan performance for size 8 vertical unit, top back discharge

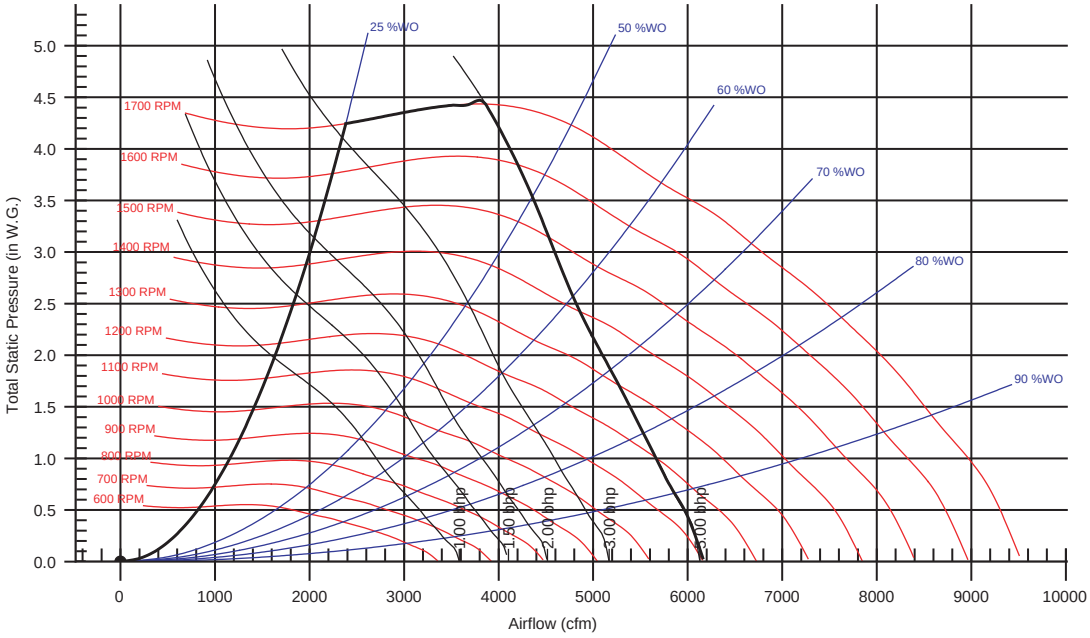
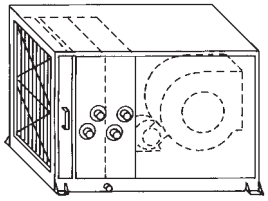


Table 22. Size 8 vertical unit, top back discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
8	2800	1856	697	0.76	867	1.07	1008	1.36	1144	1.68	1272	2.03	1397	2.43	1515	2.86	1626	3.30
	3200	2121	742	1.03	905	1.40	1041	1.72	1162	2.05	1281	2.42	1395	2.81	1506	3.24	1614	3.71
	3600	2386	793	1.37	944	1.77	1079	2.17	1193	2.53	1302	2.90	1408	3.31	1511	3.74	1611	4.20
	4000	2651	846	1.77	989	2.21	1115	2.67	1231	3.09	1332	3.49	1429	3.90	1525	4.34	1620	4.82
	4400	2916	903	2.25	1034	2.73	1154	3.23	1267	3.73	1369	4.19	1461	4.62	1548	5.07	1636	5.55
	4800	3181	963	2.82	1083	3.35	1201	3.88	1304	4.44	1407	4.97	1498	5.46	1582	5.94	1662	6.41

Size 10 Horizontal Units

Horizontal unit, front top discharge



Horizontal unit, top front discharge

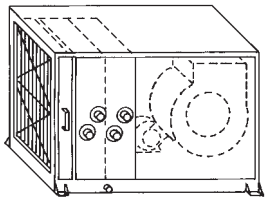


Figure 19. Fan performance for size 10 horizontal units

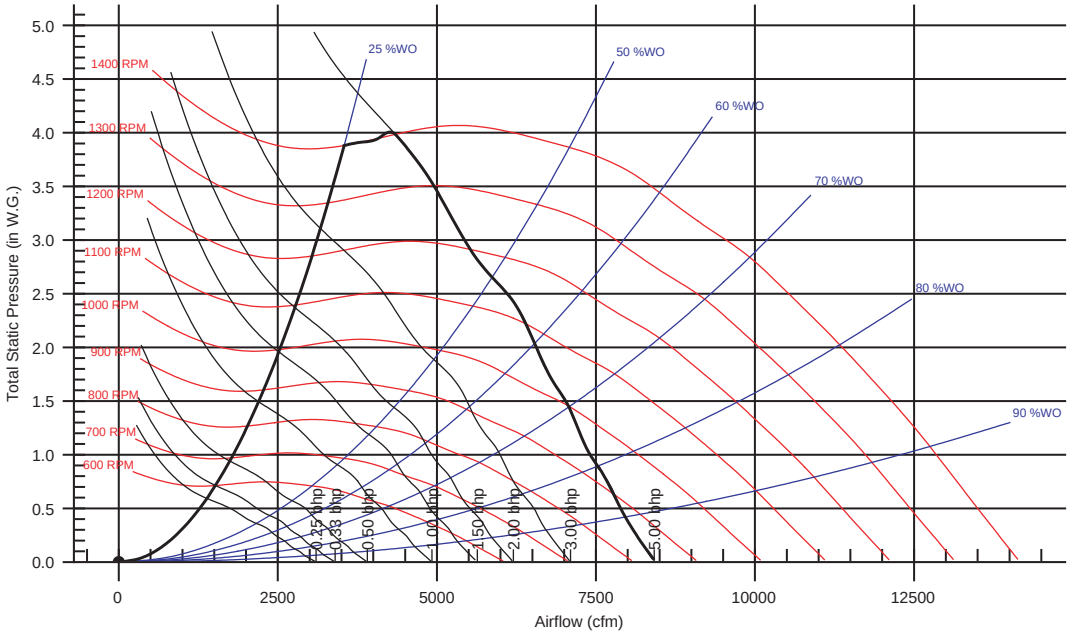


Table 23. Size 10 horizontal units

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
10	3500	1656	534	0.66	704	1.06	844	1.46	965	1.95	1073	2.49	1170	3.04	1260	3.62	1344	4.20
	4000	1892	561	0.88	719	1.31	855	1.76	974	2.22	1081	2.79	1179	3.40	1268	4.02	1351	4.65
	4500	2129	590	1.14	736	1.61	868	2.10	984	2.61	1089	3.12	1185	3.75	1276	4.43	1359	5.12
	5000	2365	623	1.45	758	1.91	884	2.49	997	3.05	1100	3.62	1194	4.18	1283	4.84	1367	5.59
	5500	2602	658	1.82	784	2.34	902	2.94	1012	3.54	1113	4.16	1205	4.78	1291	5.40	1373	6.06
	6000	2838	697	2.25	813	2.83	923	3.39	1027	4.09	1126	4.75	1219	5.44	1302	6.11	1384	6.80

Size 10 Vertical Unit, Front Top Discharge

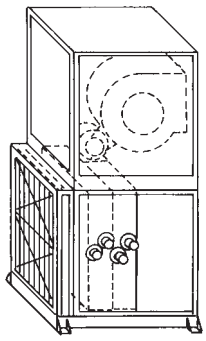


Figure 20. Fan performance for size 10 vertical unit, front top discharge

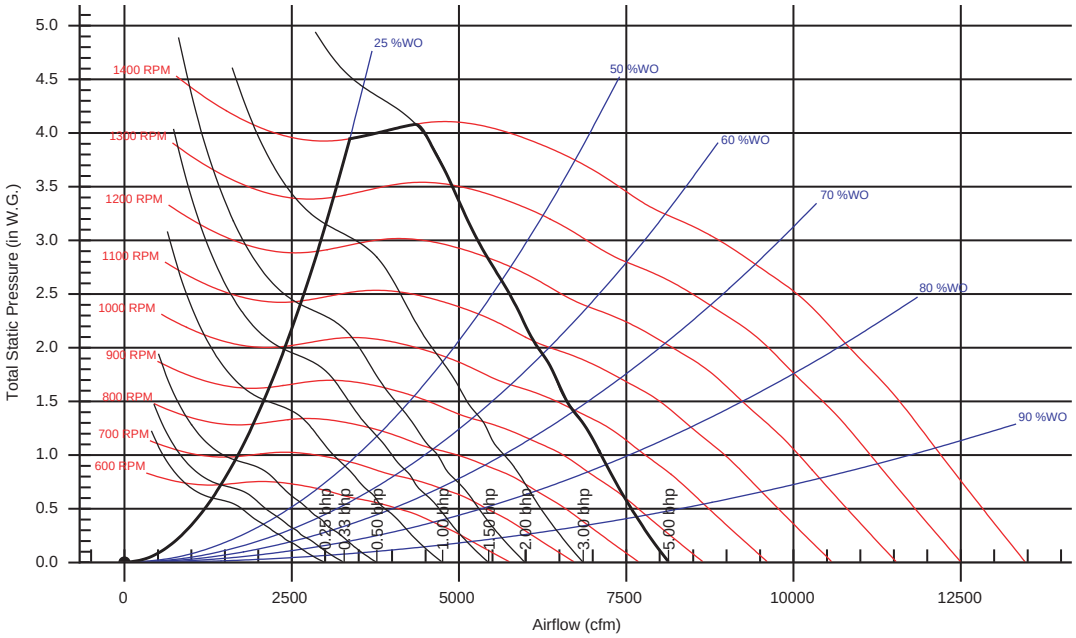


Table 24. Size 10 vertical unit, front top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
10	3500	1656	563	0.80	723	1.19	854	1.60	976	2.00	1091	2.45	1201	3.03	1305	3.66	1400	4.33
	4000	1892	593	1.06	749	1.50	872	1.96	985	2.43	1093	2.88	1194	3.37	1294	3.97	1389	4.64
	4500	2129	626	1.36	776	1.87	896	2.37	1003	2.91	1103	3.43	1199	3.93	1291	4.46	1380	5.05
	5000	2365	664	1.74	800	2.32	924	2.87	1025	3.42	1120	4.02	1211	4.60	1298	5.17	1382	5.74
	5500	2602	706	2.20	829	2.83	950	3.42	1051	4.03	1141	4.65	1227	5.32	1311	5.97	1390	6.58
	6000	2838	748	2.74	861	3.37	973	4.06	1080	4.76	1167	5.39	1249	6.08	1327	6.79	1405	7.52

Size 10 Vertical Unit, Top Front Discharge

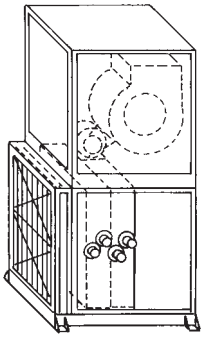


Figure 21. Fan performance for size 10 vertical unit, top front discharge

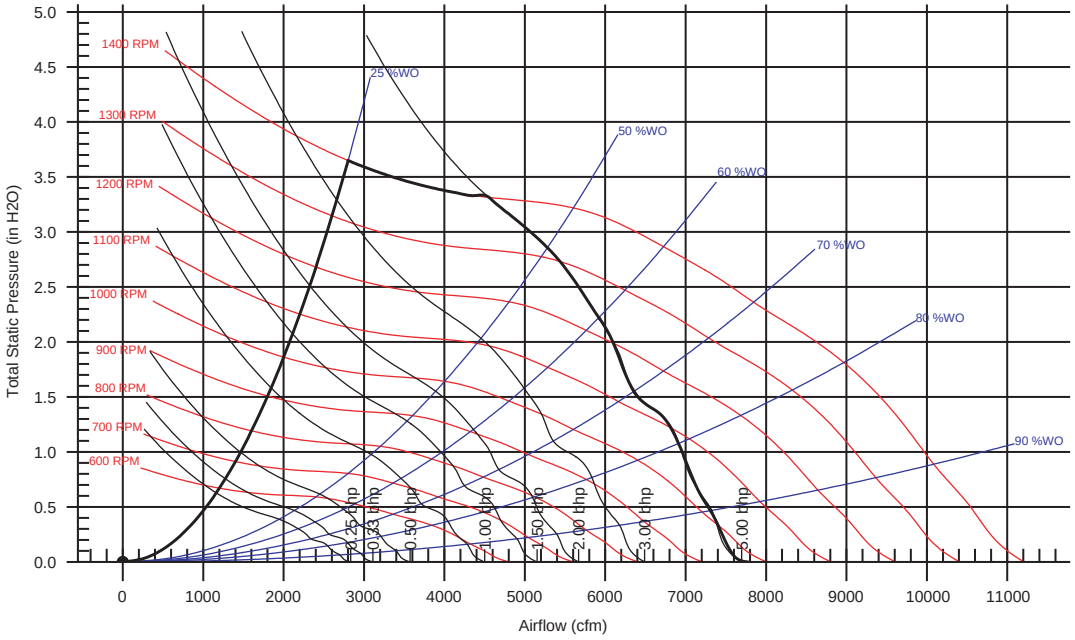


Table 25. Size 10 vertical unit, top front discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
10	3500	1656	635	0.86	796	1.22	946	1.72	1083	2.32	1201	2.91	1304	3.49	1398	4.08	1487	4.70
	4000	1892	674	1.10	827	1.53	959	2.01	1091	2.62	1213	3.30	1321	3.99	1417	4.65	1504	5.32
	4500	2129	716	1.42	862	1.95	987	2.42	1104	3.00	1221	3.70	1332	4.46	1431	5.23	1522	5.98
	5000	2365	763	1.85	902	2.49	1019	2.93	1128	3.50	1234	4.16	1340	4.93	1440	5.76	1533	6.61
	5500	2602	815	2.39	940	2.97	1055	3.56	1159	4.12	1256	4.75	1352	5.50	1448	6.33	1542	7.23
	6000	2838	869	3.01	980	3.50	1094	4.36	1193	4.86	1287	5.51	1375	6.22	1462	7.02	1551	7.91

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 10 Vertical Unit, Back Top Discharge

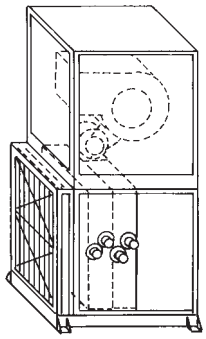


Figure 22. Fan performance for size 10 vertical unit, back top discharge

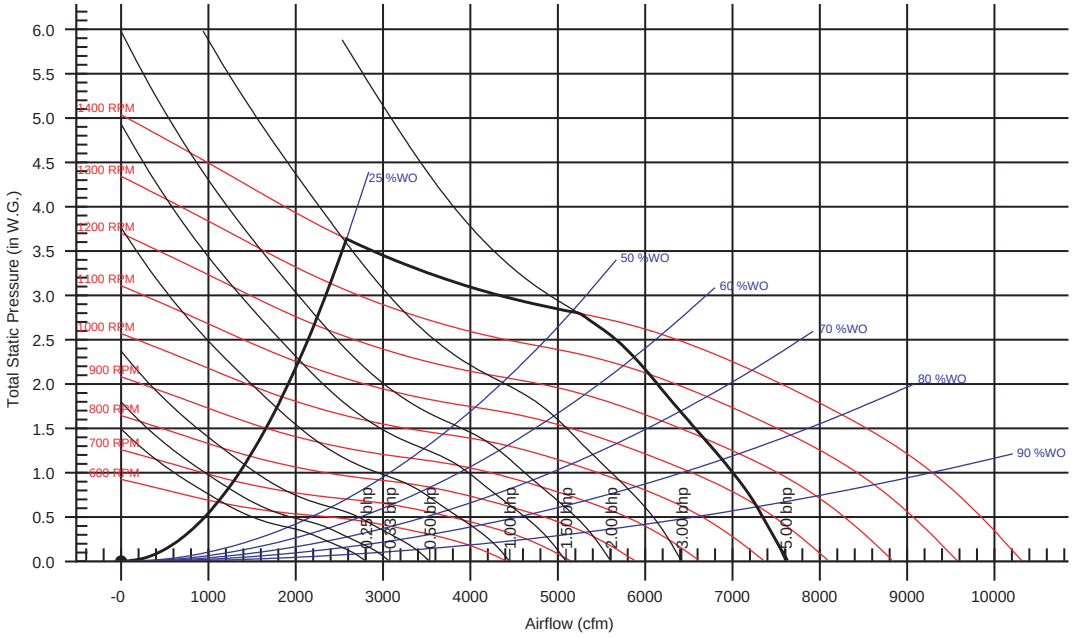


Table 26. Size 10 vertical unit, back top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
10	3500	1656	674	0.81	851	1.22	1009	1.79	1139	2.35	1250	2.91	1349	3.46	1438	4.01	1522	4.56
	4000	1892	718	1.08	882	1.52	1030	2.06	1162	2.72	1277	3.37	1379	4.01	1470	4.63	1556	5.28
	4500	2129	765	1.41	918	1.90	1056	2.42	1184	3.08	1301	3.82	1405	4.55	1499	5.28	1584	5.99
	5000	2365	815	1.82	958	2.35	1088	2.90	1208	3.52	1323	4.28	1429	5.11	1523	5.91	1611	6.72
	5500	2602	868	2.31	1001	2.87	1123	3.47	1238	4.10	1345	4.80	1450	5.65	1546	6.54	1636	7.46
	6000	2838	923	2.89	1047	3.48	1164	4.14	1272	4.80	1374	5.49	1472	6.28	1568	7.20	1658	8.17

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 10 Vertical Unit, Top Back Discharge

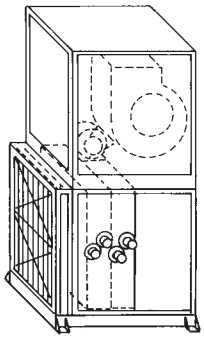


Figure 23. Fan performance for size 10 vertical unit, top back discharge

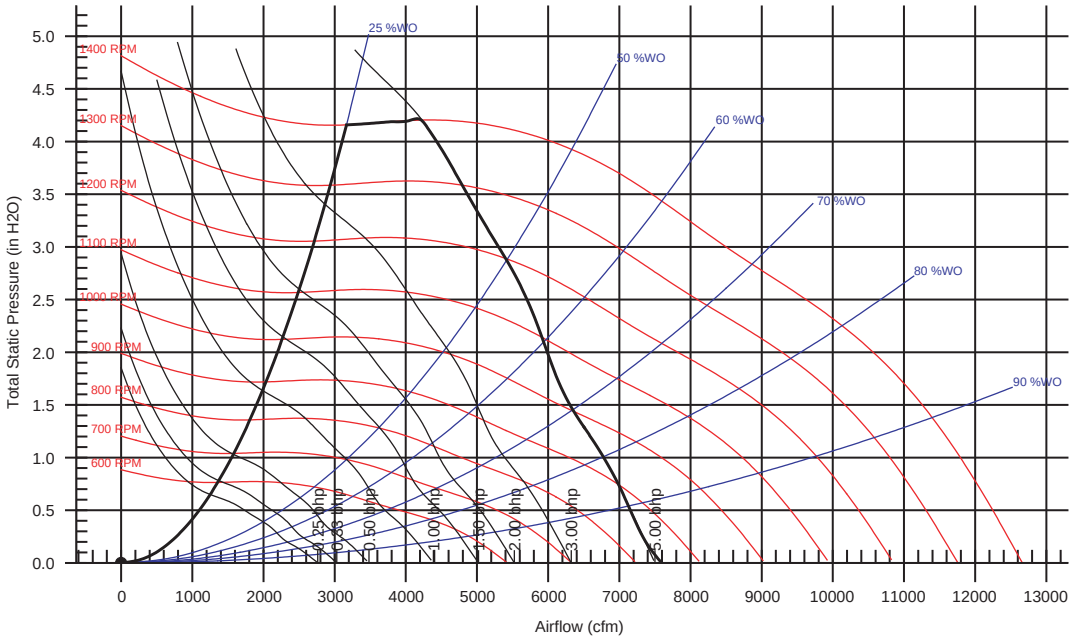
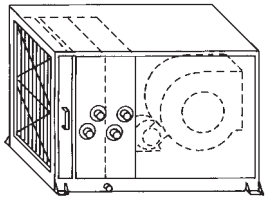


Table 27. Size 10 vertical unit, top back discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
10	3500	1656	573	0.89	719	1.20	848	1.60	968	2.02	1077	2.47	1179	2.96	1276	3.52	1366	4.11
	4000	1892	604	1.18	747	1.57	867	1.96	978	2.43	1083	2.91	1182	3.41	1274	3.94	1362	4.52
	4500	2129	639	1.53	780	2.03	892	2.41	997	2.90	1096	3.43	1189	3.96	1278	4.52	1364	5.10
	5000	2365	677	1.97	813	2.56	922	3.01	1020	3.46	1113	4.01	1202	4.59	1286	5.19	1370	5.81
	5500	2602	718	2.50	844	3.13	954	3.71	1048	4.18	1136	4.70	1221	5.30	1301	5.94	1381	6.61
	6000	2838	762	3.13	878	3.79	987	4.50	1079	5.04	1163	5.54	1244	6.14	1321	6.79	1395	7.47

Size 12 Horizontal Units

Horizontal unit, front top discharge



Horizontal unit, top front discharge

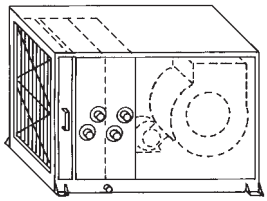


Figure 24. Fan performance for size 12 horizontal units

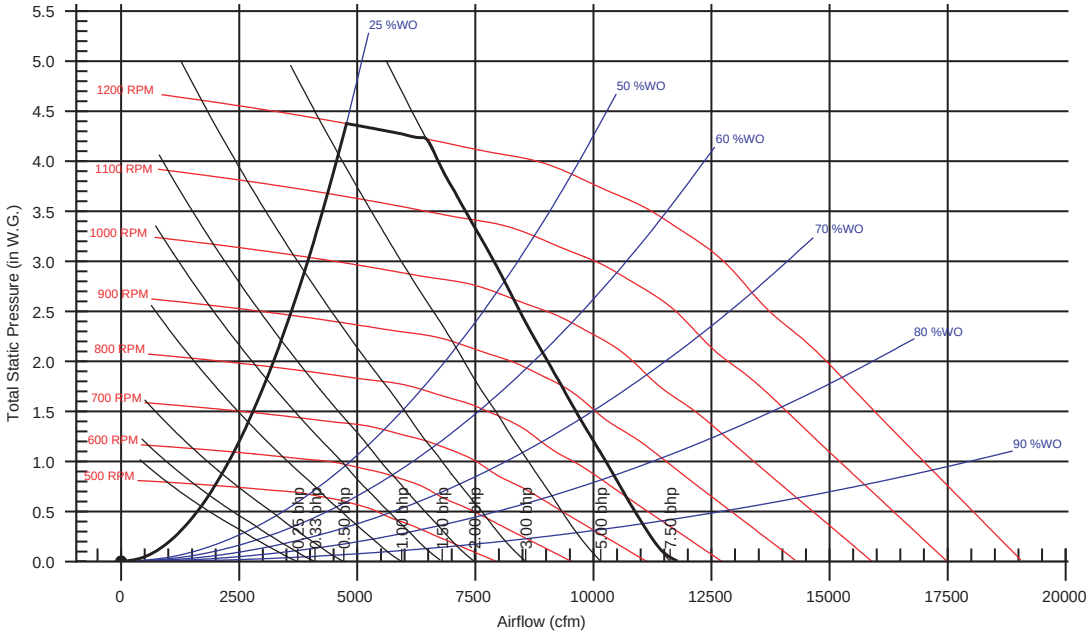


Table 28. Size 12 horizontal units

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
12	4200	1654	462	0.74	606	1.14	727	1.58	829	2.10	919	2.62	1001	3.16	1075	3.70	1147	4.26
	4800	1891	483	0.96	620	1.42	735	1.88	838	2.40	928	2.99	1010	3.59	1085	4.20	1155	4.81
	5400	2127	507	1.24	635	1.74	748	2.27	846	2.79	938	3.38	1019	4.04	1094	4.71	1165	5.39
	6000	2363	532	1.57	656	2.13	762	2.70	858	3.28	946	3.87	1029	4.52	1104	5.24	1173	5.97
	6600	2599	559	1.94	676	2.58	778	3.18	872	3.83	957	4.46	1037	5.12	1113	5.83	1183	6.59
	7200	2836	588	2.39	698	3.08	797	3.75	887	4.43	971	5.15	1048	5.83	1120	6.53	1191	7.30

Size 12 Vertical Unit, Front Top Discharge

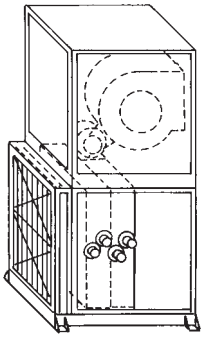


Figure 25. Fan performance for size 12 vertical unit, front top discharge

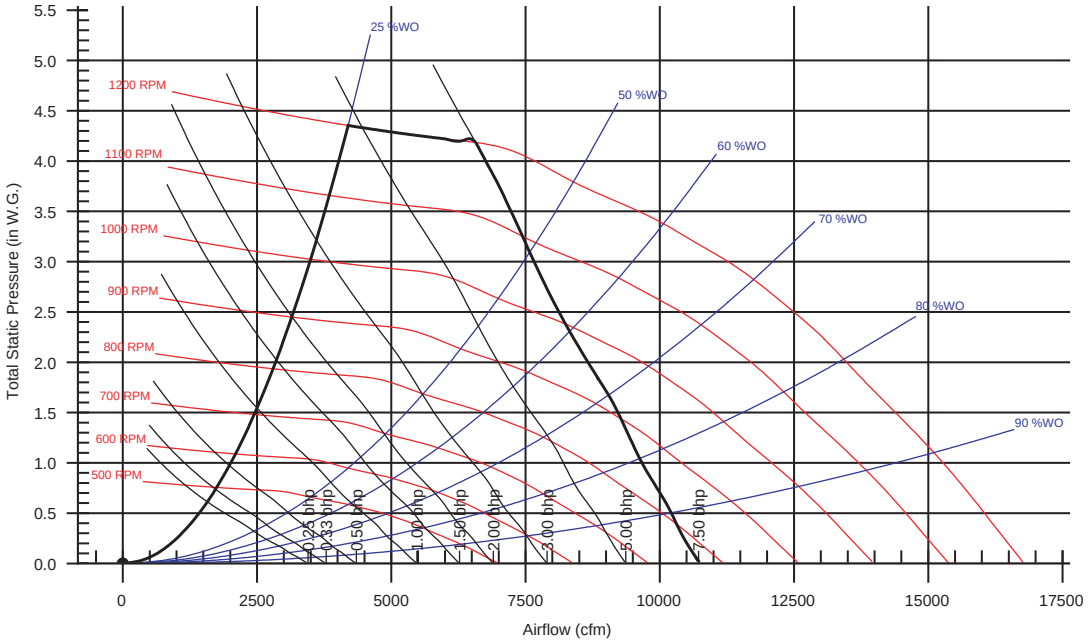


Table 29. Size 12 vertical unit, front top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
12	4200	1654	473	0.88	611	1.32	720	1.76	824	2.26	915	2.84	998	3.44	1073	4.04	1145	4.66
	4800	1891	498	1.16	630	1.68	737	2.16	831	2.67	922	3.23	1005	3.89	1081	4.56	1152	5.24
	5400	2127	526	1.49	649	2.09	757	2.64	846	3.18	930	3.77	1011	4.38	1089	5.10	1159	5.84
	6000	2363	557	1.93	672	2.55	775	3.20	866	3.80	945	4.41	1019	5.04	1094	5.72	1167	6.46
	6600	2599	591	2.44	695	3.08	795	3.82	885	4.51	964	5.16	1036	5.83	1103	6.52	1173	7.27
	7200	2836	626	3.03	723	3.70	817	4.51	903	5.28	983	6.02	1056	6.75	1121	7.47	1183	8.21

Size 12 Vertical Unit, Top Front Discharge

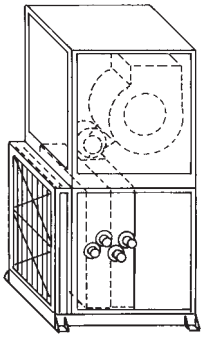


Figure 26. Fan performance for size 12 vertical unit, top front discharge

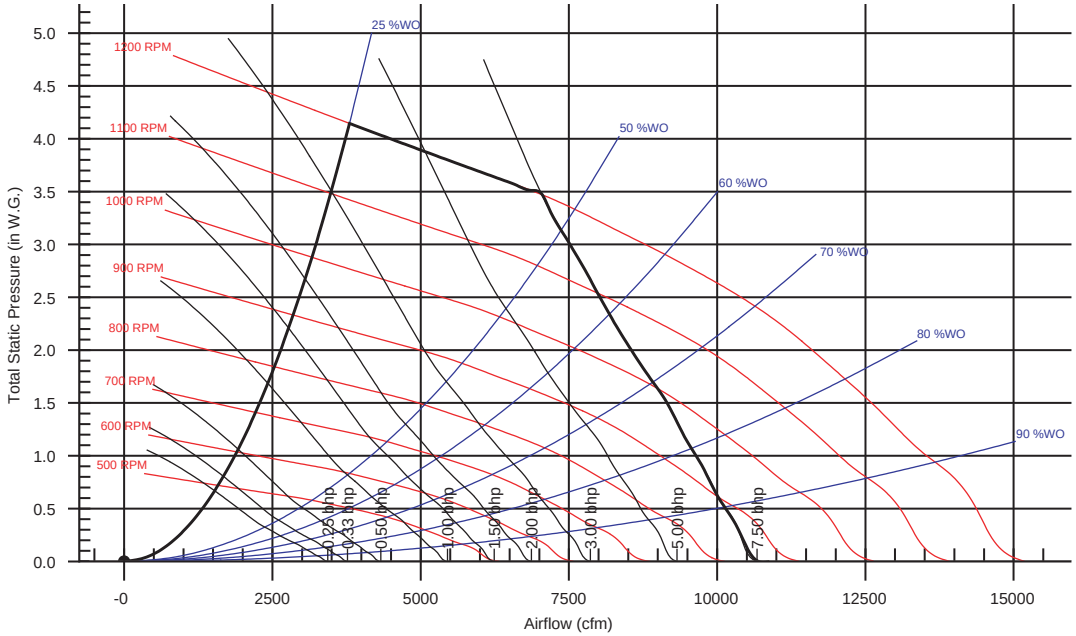


Table 30. Size 12 vertical unit, top front discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
12	4200	1654	514	0.91	657	1.37	773	1.82	875	2.37	965	2.96	1045	3.57	1119	4.19	1187	4.82
	4800	1891	543	1.18	681	1.72	793	2.26	892	2.76	981	3.38	1062	4.05	1135	4.73	1205	5.44
	5400	2127	576	1.52	705	2.14	814	2.72	910	3.34	999	3.90	1079	4.57	1153	5.33	1221	6.08
	6000	2363	611	1.95	731	2.62	838	3.27	932	3.94	1017	4.62	1096	5.24	1170	5.93	1239	6.76
	6600	2599	649	2.46	759	3.16	862	3.91	955	4.61	1038	5.37	1114	6.10	1188	6.81	1257	7.48
	7200	2836	687	3.05	790	3.78	889	4.62	978	5.41	1060	6.18	1136	7.01	1206	7.82	1274	8.58

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 12 Vertical Unit, Back Top Discharge

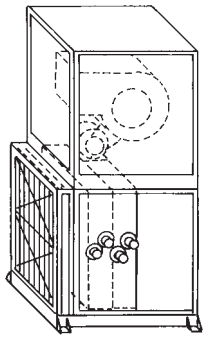


Figure 27. Fan performance for size 12 vertical unit, back top discharge

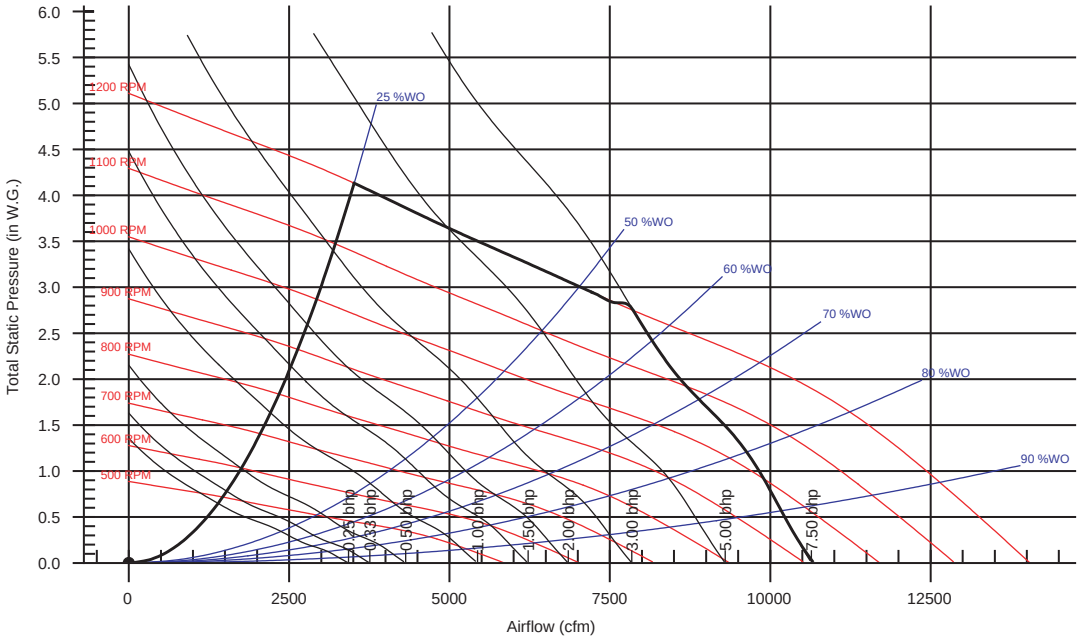


Table 31. Size 12 vertical unit, back top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
12	4200	1654	549	0.90	697	1.33	812	1.79	909	2.33	995	2.89	1072	3.47	1144	4.04	1210	4.61
	4800	1891	579	1.16	725	1.69	838	2.18	935	2.72	1020	3.32	1099	3.97	1169	4.62	1236	5.29
	5400	2127	612	1.47	752	2.11	866	2.66	962	3.22	1047	3.83	1124	4.51	1195	5.22	1263	5.95
	6000	2363	648	1.86	779	2.58	894	3.22	989	3.83	1073	4.46	1151	5.13	1222	5.87	1288	6.64
	6600	2599	688	2.34	808	3.11	920	3.85	1016	4.53	1101	5.21	1178	5.91	1248	6.62	1315	7.44
	7200	2836	730	2.92	841	3.69	947	4.56	1044	5.33	1128	6.06	1204	6.79	1275	7.55	1340	8.32

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 12 Vertical Unit, Top Back Discharge

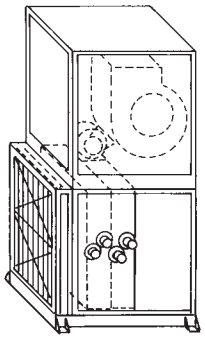


Figure 28. Fan performance for size 12 vertical unit, top back discharge

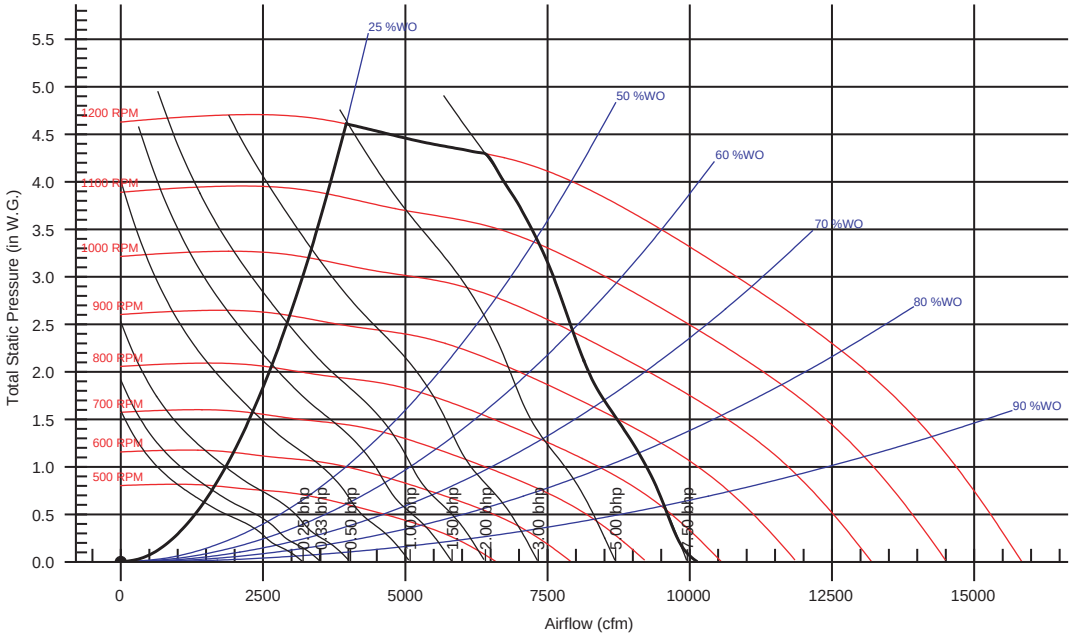
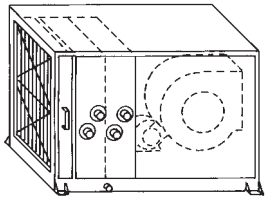


Table 32. Size 12 vertical unit, top back discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
12	4200	1654	479	0.98	607	1.34	714	1.76	814	2.28	902	2.82	984	3.39	1056	3.95	1125	4.53
	4800	1891	507	1.30	629	1.74	731	2.17	824	2.67	911	3.26	992	3.87	1067	4.53	1135	5.17
	5400	2127	536	1.69	653	2.25	752	2.69	841	3.21	923	3.77	1001	4.42	1074	5.10	1144	5.82
	6000	2363	568	2.16	680	2.85	775	3.34	860	3.85	938	4.43	1012	5.05	1085	5.77	1152	6.50
	6600	2599	602	2.74	708	3.48	800	4.12	883	4.64	958	5.22	1029	5.86	1096	6.54	1162	7.29
	7200	2836	638	3.43	737	4.19	826	5.00	907	5.60	980	6.16	1048	6.81	1114	7.51	1176	8.24

Size 14 Horizontal Units

Horizontal unit, front top discharge



Horizontal unit, top front discharge

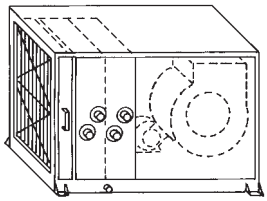


Figure 29. Fan performance for size 14 horizontal units

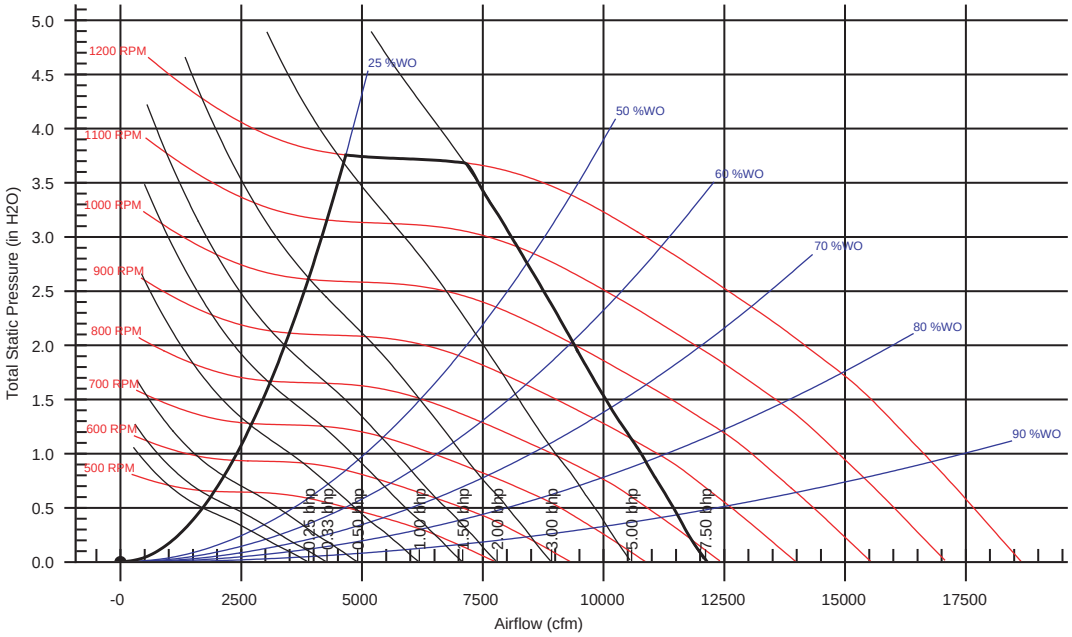


Table 33. Size 14 horizontal units

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
14	4900	1668	501	0.97	644	1.48	763	2.05	872	2.68	972	3.35	1062	4.05	1145	4.77	1222	5.51
	5600	1907	525	1.26	665	1.84	779	2.46	881	3.12	976	3.83	1066	4.59	1149	5.37	1227	6.18
	6300	2145	554	1.63	687	2.27	797	2.94	895	3.65	986	4.40	1071	5.19	1152	6.02	1230	6.90
	7000	2383	582	2.04	711	2.80	818	3.50	913	4.27	1000	5.05	1082	5.89	1159	6.75	1233	7.65
	7700	2622	613	2.55	735	3.36	840	4.16	933	4.97	1018	5.82	1096	6.68	1170	7.58	1242	8.53
	8400	2860	648	3.16	762	4.03	864	4.93	955	5.77	1037	6.66	1113	7.59	1185	8.53	1256	9.53

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 14 Vertical Unit, Front Top Discharge

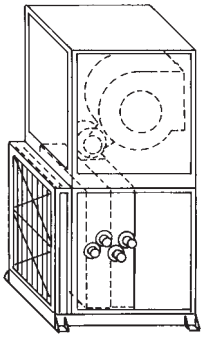


Figure 30. Fan performance for size 14 vertical unit, front top discharge

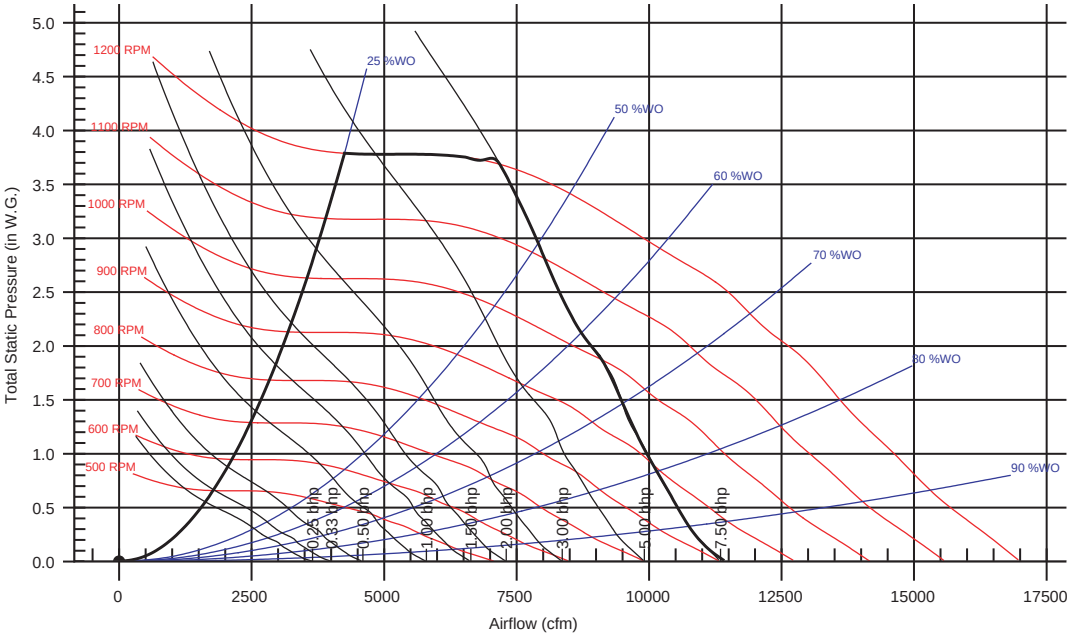


Table 34. Size 14 vertical unit, front top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
14	4900	1668	524	1.13	659	1.67	772	2.16	876	2.72	975	3.40	1066	4.10	1149	4.81	1225	5.50
	5600	1907	562	1.54	687	2.15	793	2.69	890	3.28	981	3.90	1070	4.67	1153	5.45	1230	6.25
	6300	2145	599	2.04	716	2.66	819	3.36	909	3.95	996	4.62	1077	5.32	1158	6.12	1233	6.99
	7000	2383	639	2.62	745	3.25	847	4.10	935	4.81	1015	5.47	1093	6.21	1168	6.97	1240	7.78
	7700	2622	683	3.32	781	4.05	875	4.87	962	5.76	1040	6.51	1113	7.23	1185	8.05	1253	8.87
	8400	2860	726	4.15	820	5.02	904	5.73	991	6.76	1068	7.69	1139	8.50	1205	9.28	1271	10.15

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 14 Vertical Unit, Top Front Discharge

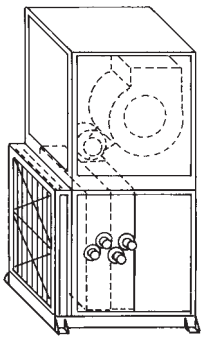


Figure 31. Fan performance for size 14 vertical unit, top front discharge

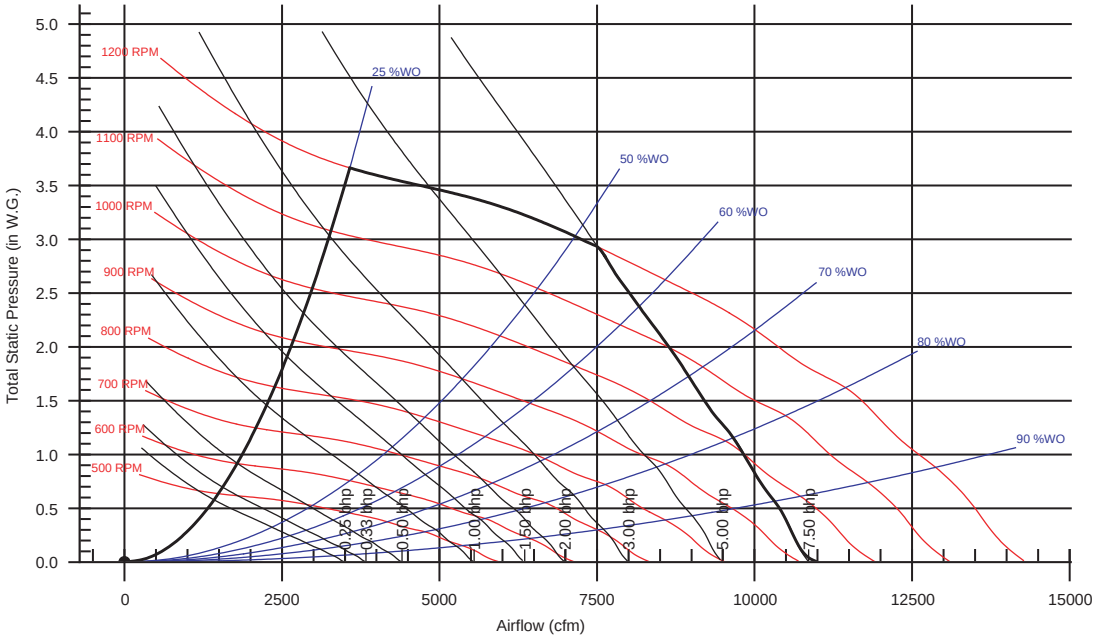


Table 35. Size 14 vertical unit, top front discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
14	4900	1668	581	1.21	722	1.80	838	2.40	939	3.02	1033	3.68	1119	4.36	1201	5.07	1275	5.79
	5600	1907	624	1.62	753	2.26	867	2.94	966	3.64	1055	4.35	1137	5.08	1218	5.86	1293	6.66
	6300	2145	663	2.10	787	2.82	897	3.58	993	4.34	1080	5.12	1161	5.92	1238	6.76	1310	7.60
	7000	2383	710	2.71	826	3.51	929	4.31	1023	5.16	1109	6.01	1188	6.88	1262	7.76	1332	8.66
	7700	2622	761	3.46	869	4.32	963	5.16	1055	6.09	1138	7.01	1216	7.95	1289	8.91	1358	9.88
	8400	2860	811	4.32	909	5.21	1002	6.17	1087	7.12	1169	8.14	1246	9.16	1317	10.17	1385	11.22

Size 14 Vertical Unit, Back Top Discharge

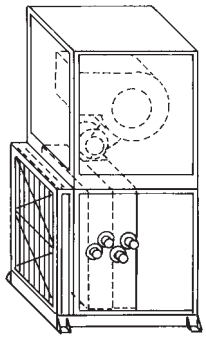


Figure 32. Fan performance for size 14 vertical unit, back top discharge

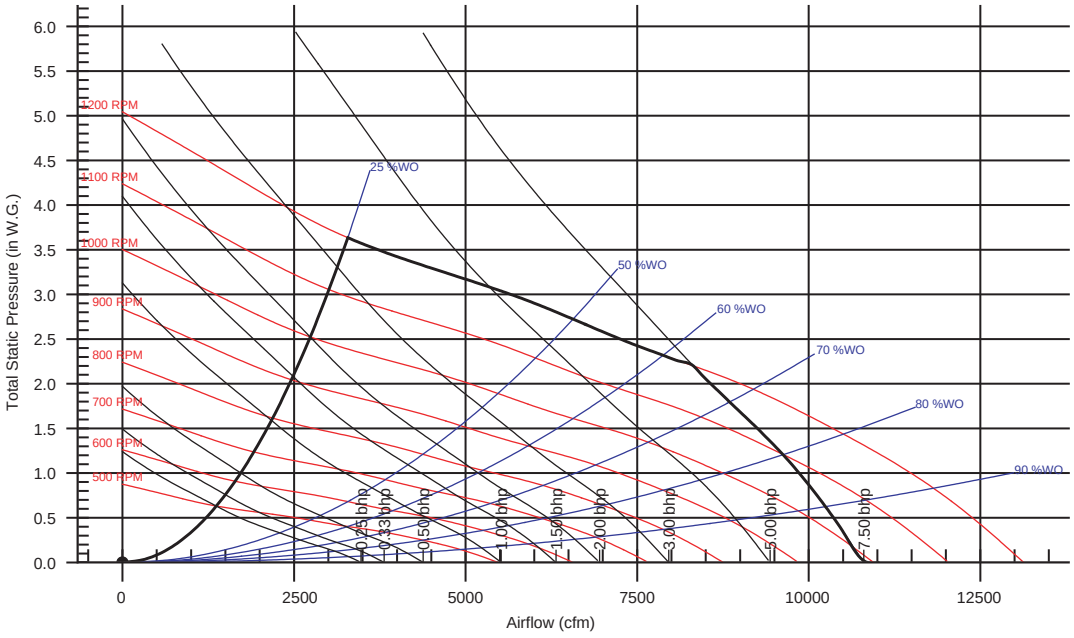


Table 36. Size 14 vertical unit, back top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
14	4900	1668	622	1.21	773	1.82	890	2.44	990	3.07	1082	3.73	1166	4.38	1244	5.05	1317	5.74
	5600	1907	667	1.60	807	2.30	926	2.98	1025	3.70	1112	4.42	1196	5.17	1273	5.92	1345	6.67
	6300	2145	714	2.09	843	2.86	962	3.63	1061	4.41	1148	5.21	1228	6.03	1303	6.86	1374	7.70
	7000	2383	764	2.69	885	3.51	995	4.37	1097	5.23	1184	6.10	1262	6.98	1335	7.89	1404	8.81
	7700	2622	815	3.42	928	4.26	1032	5.23	1131	6.18	1220	7.11	1298	8.06	1371	9.05	1438	10.03
	8400	2860	869	4.28	975	5.16	1073	6.18	1166	7.23	1253	8.25	1334	9.28	1407	10.33	1474	11.40

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 14 Vertical Unit, Top Back Discharge

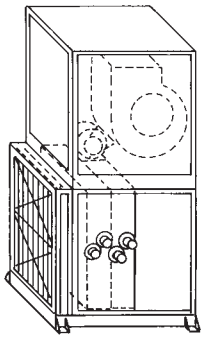


Figure 33. Fan performance for size 14 vertical unit, top back discharge

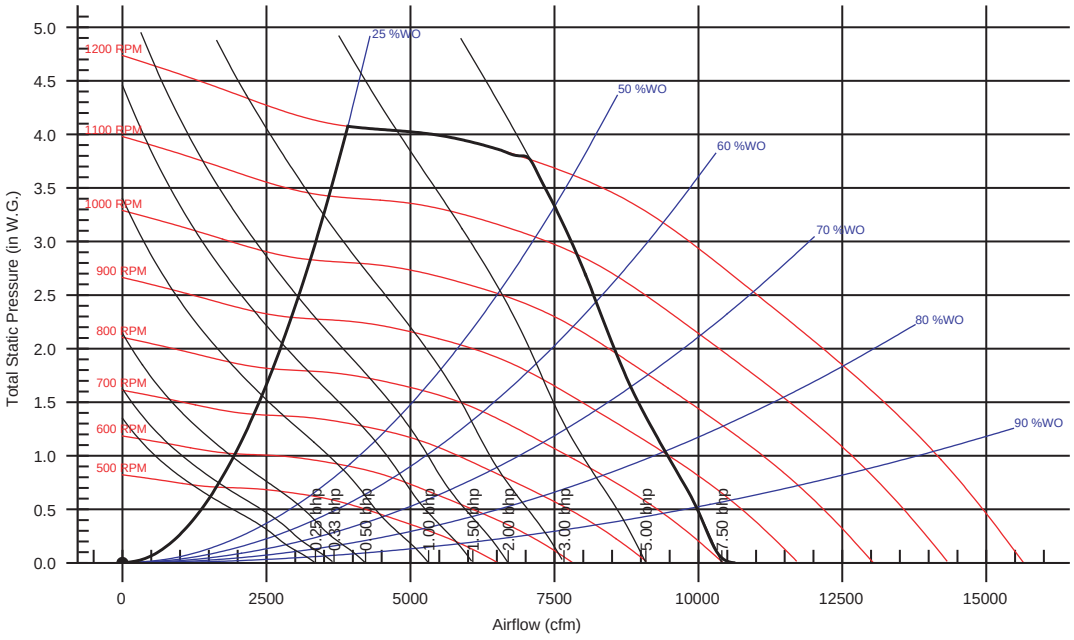


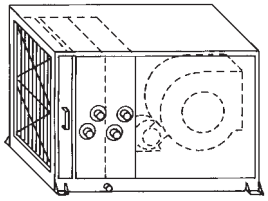
Table 37. Size 14 vertical unit, top back discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
14	4900	1668	534	1.28	657	1.70	766	2.17	866	2.70	957	3.27	1040	3.85	1118	4.47	1193	5.10
	5600	1907	572	1.74	688	2.25	789	2.75	884	3.29	971	3.88	1052	4.52	1127	5.18	1200	5.86
	6300	2145	611	2.29	723	2.92	816	3.45	906	4.03	989	4.65	1068	5.31	1142	6.02	1212	6.74
	7000	2383	653	2.97	759	3.70	849	4.33	932	4.92	1010	5.56	1086	6.26	1159	6.99	1227	7.74
	7700	2622	697	3.78	797	4.60	884	5.34	963	6.00	1036	6.65	1108	7.37	1178	8.14	1244	8.91
	8400	2860	741	4.74	836	5.64	920	6.50	996	7.25	1066	7.96	1133	8.67	1199	9.45	1263	10.27

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 17 Horizontal Units

Horizontal unit, front top discharge



Horizontal unit, top front discharge

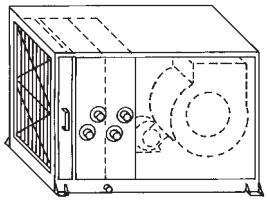


Figure 34. Fan performance for size 17 horizontal units

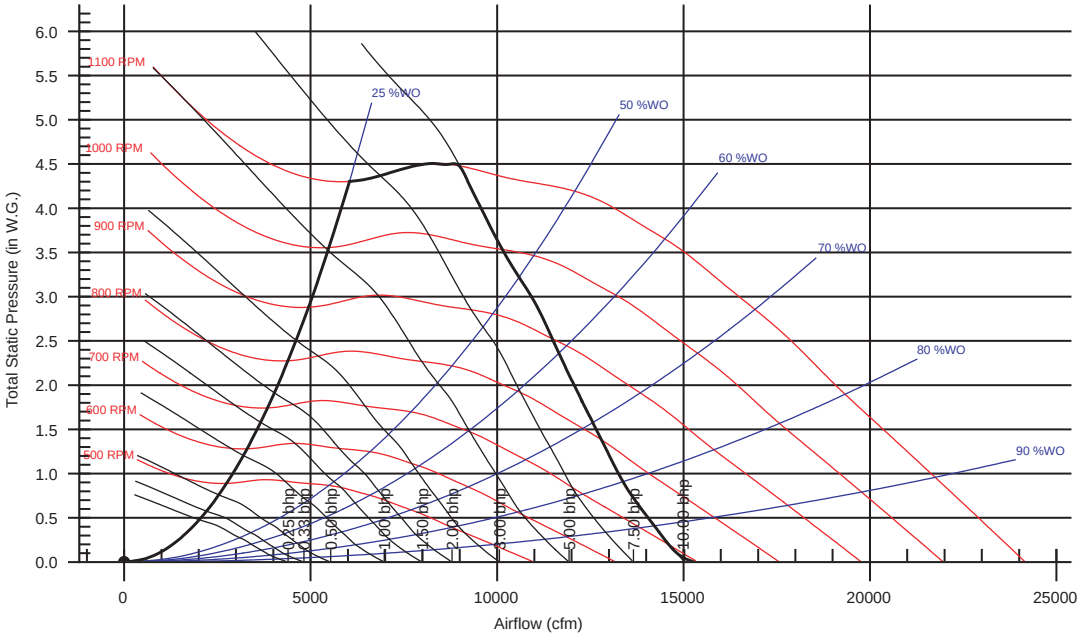


Table 38. Size 17 horizontal units

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
17	5950	1714	423	1.22	536	1.75	643	2.35	734	2.96	818	3.62	903	4.40	983	5.24	1054	6.21
	6800	1959	451	1.64	555	2.22	651	2.89	742	3.56	821	4.25	895	4.98	971	5.81	1044	6.72
	7650	2203	479	2.15	576	2.81	664	3.49	750	4.27	831	5.03	901	5.79	969	6.59	1033	7.44
	8500	2448	510	2.78	601	3.52	684	4.24	760	5.04	837	5.91	912	6.76	976	7.59	1037	8.45
	9350	2693	542	3.53	629	4.34	705	5.14	777	5.93	848	6.87	917	7.82	986	8.76	1047	9.69
	10200	2938	575	4.39	657	5.30	730	6.19	799	7.04	863	7.92	928	8.98	992	10.01	1055	11.03

Size 17 Vertical Unit, Front Top Discharge

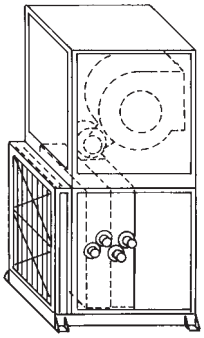


Figure 35. Fan performance for size 17 vertical unit, front top discharge

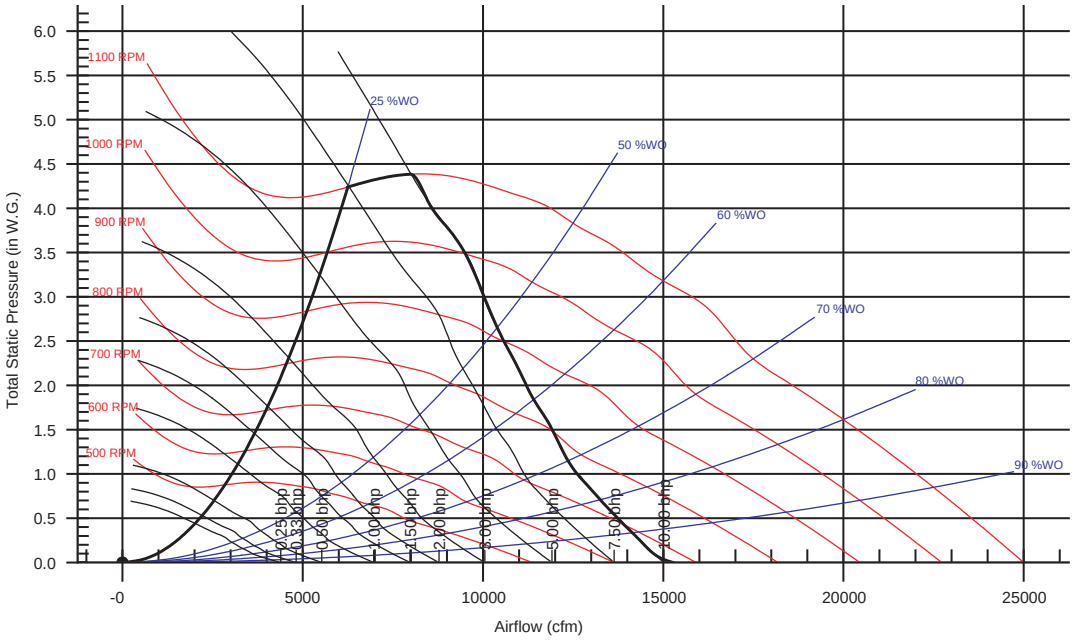


Table 39. Size 17 vertical unit, front top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
17	5950	1714	435	1.42	549	2.04	651	2.65	744	3.44	831	4.22	912	5.02	985	5.81	1055	6.62
	6800	1959	459	1.88	570	2.61	663	3.27	750	4.02	831	4.93	910	5.83	985	6.75	1053	7.64
	7650	2203	493	2.48	594	3.30	682	4.10	762	4.79	839	5.66	912	6.70	985	7.72	1051	8.70
	8500	2448	524	3.17	618	4.10	703	4.98	779	5.88	852	6.63	920	7.58	987	8.72	1052	9.85
	9350	2693	552	3.96	641	5.00	727	6.03	801	7.01	867	7.96	934	8.77	997	9.80	1057	10.99
	10200	2938	582	4.86	672	6.10	751	7.23	822	8.27	890	9.36	948	10.39	1010	11.26	1069	12.33

Size 17 Vertical Unit, Top Front Discharge

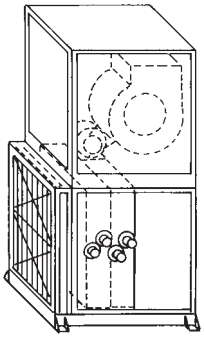


Figure 36. Fan performance for size 17 vertical unit, top front discharge

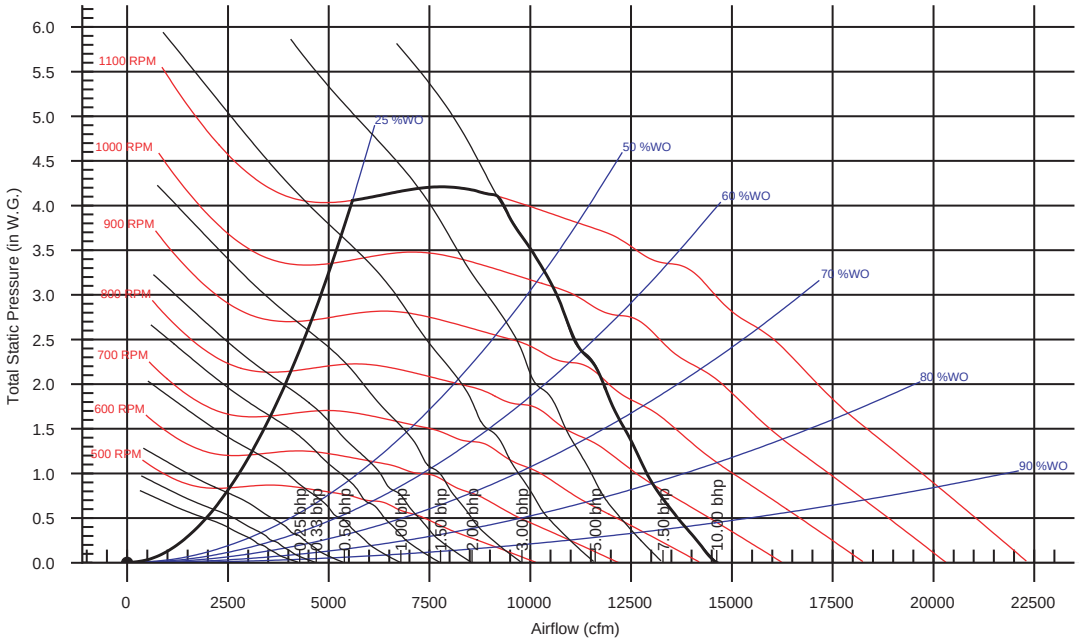


Table 40. Size 17 vertical unit, top front discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
17	5950	1714	448	1.28	567	1.81	669	2.43	761	3.07	844	3.70	922	4.39	994	5.10	1063	5.87
	6800	1959	478	1.73	588	2.38	684	2.96	772	3.69	852	4.42	927	5.13	997	5.88	1064	6.67
	7650	2203	511	2.29	605	2.93	701	3.66	787	4.38	864	5.21	935	6.02	1004	6.82	1069	7.64
	8500	2448	547	2.97	637	3.69	725	4.57	803	5.23	878	6.05	947	6.97	1015	7.92	1077	8.80
	9350	2693	583	3.79	667	4.60	740	5.35	824	6.34	895	7.09	963	8.02	1026	9.01	1088	10.07
	10200	2938	618	4.73	697	5.62	772	6.48	847	7.58	913	8.39	979	9.24	1042	10.26	1100	11.33

Size 17 Vertical Unit, Back Top Discharge

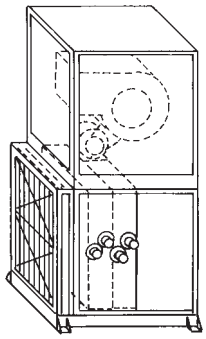


Figure 37. Fan performance for size 17 vertical unit, back top discharge

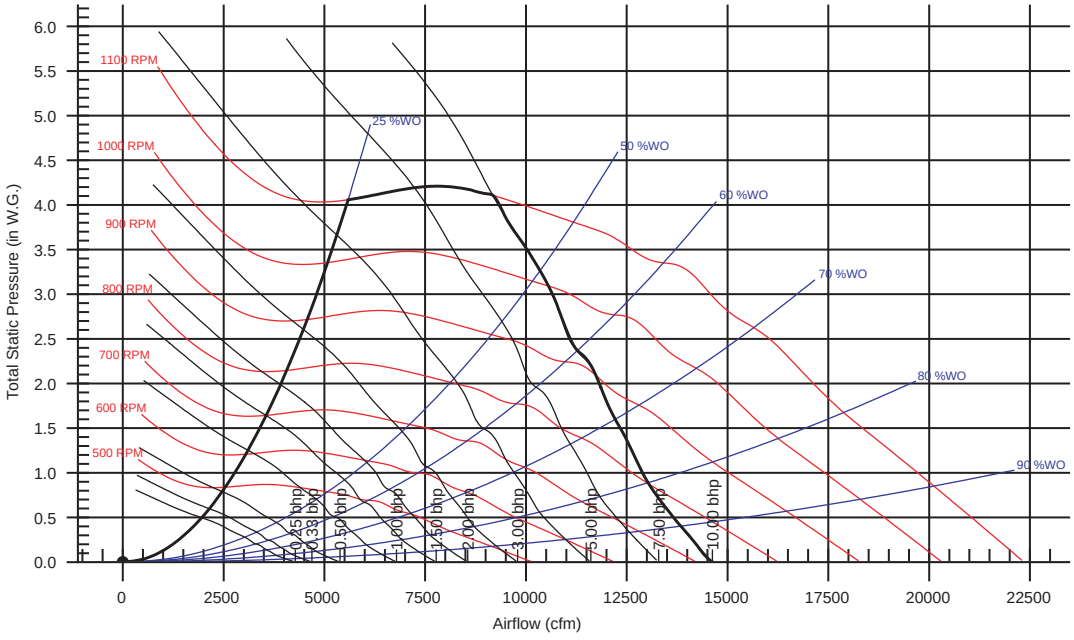


Table 41. Size 17 vertical unit, back top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
17	5950	1714	448	1.28	567	1.81	669	2.43	761	3.07	844	3.70	922	4.39	994	5.10	1063	5.87
	6800	1959	478	1.73	588	2.38	684	2.96	772	3.69	852	4.42	927	5.13	997	5.88	1064	6.67
	7650	2203	511	2.29	605	2.93	701	3.66	787	4.38	864	5.21	935	6.02	1004	6.82	1069	7.64
	8500	2448	547	2.97	637	3.69	725	4.57	803	5.23	878	6.05	947	6.97	1015	7.92	1077	8.80
	9350	2693	583	3.79	667	4.60	740	5.35	824	6.34	895	7.09	963	8.02	1026	9.01	1088	10.07
	10200	2938	618	4.73	697	5.62	772	6.48	847	7.58	913	8.39	979	9.24	1042	10.26	1100	11.33

Size 17 Vertical Unit, Top Back Discharge

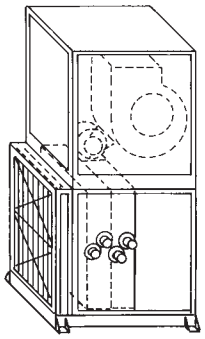


Figure 38. Fan performance for size 17 vertical unit, top back discharge

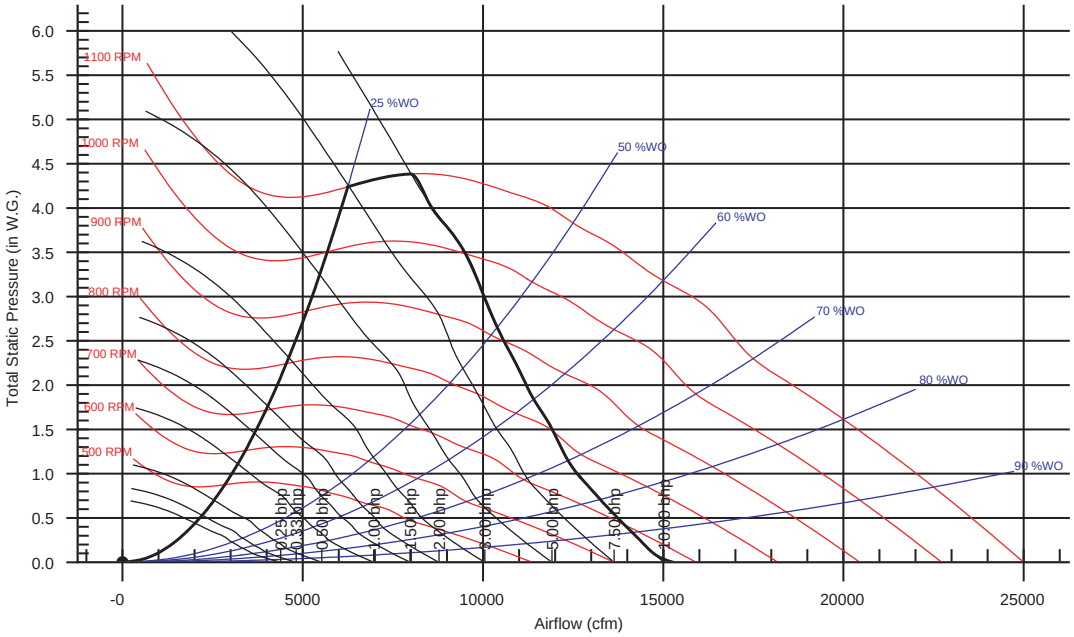
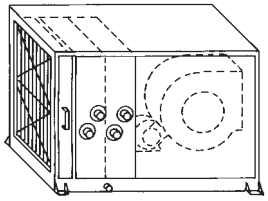


Table 42. Size 17 vertical unit, top back discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
17	5950	1714	435	1.42	549	2.04	651	2.65	744	3.44	831	4.22	912	5.02	985	5.81	1055	6.62
	6800	1959	459	1.88	570	2.61	663	3.27	750	4.02	831	4.93	910	5.83	985	6.75	1053	7.64
	7650	2203	493	2.48	594	3.30	682	4.10	762	4.79	839	5.66	912	6.70	985	7.72	1051	8.70
	8500	2448	524	3.17	618	4.10	703	4.98	779	5.88	852	6.63	920	7.58	987	8.72	1052	9.85
	9350	2693	552	3.96	641	5.00	727	6.03	801	7.01	867	7.96	934	8.77	997	9.80	1057	10.99
	10200	2938	582	4.86	672	6.10	751	7.23	822	8.27	890	9.36	948	10.39	1010	11.26	1069	12.33

Size 21 Horizontal Units

Horizontal unit, front top discharge



Horizontal unit, top front discharge

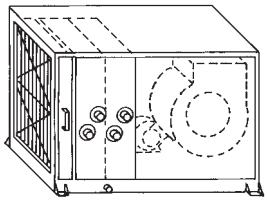


Figure 39. Fan performance for size 21 horizontal units

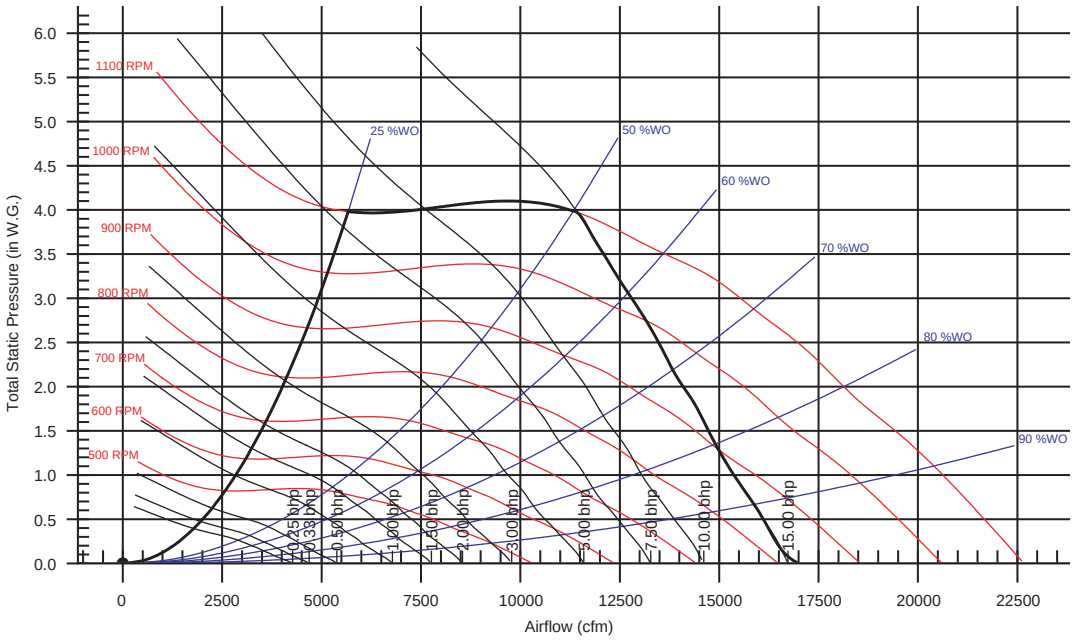


Table 43. Size 21 horizontal units

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
21	7350	1694	483	2.06	588	2.87	681	3.74	772	4.74	857	5.84	936	6.98	1010	8.16	1079	9.38
	8400	1935	523	2.81	616	3.69	706	4.66	784	5.65	864	6.80	941	8.04	1013	9.32	1081	10.64
	9450	2177	565	3.77	650	4.75	731	5.75	808	6.85	878	7.98	948	9.23	1018	10.60	1084	12.01
	10500	2419	606	4.88	686	5.95	760	7.08	835	8.26	903	9.48	965	10.72	1027	12.05	1091	13.55
	11550	2661	648	6.20	726	7.42	796	8.69	860	9.86	929	11.21	989	12.54	1047	13.91	1104	15.35
	12600	2903	692	7.78	768	9.19	832	10.46	894	11.82	954	13.14	1016	14.64	1072	16.09	1126	17.59

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 21 Vertical Unit, Front Top Discharge

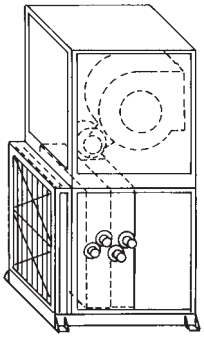


Figure 40. Fan performance for size 21 vertical unit, front top discharge

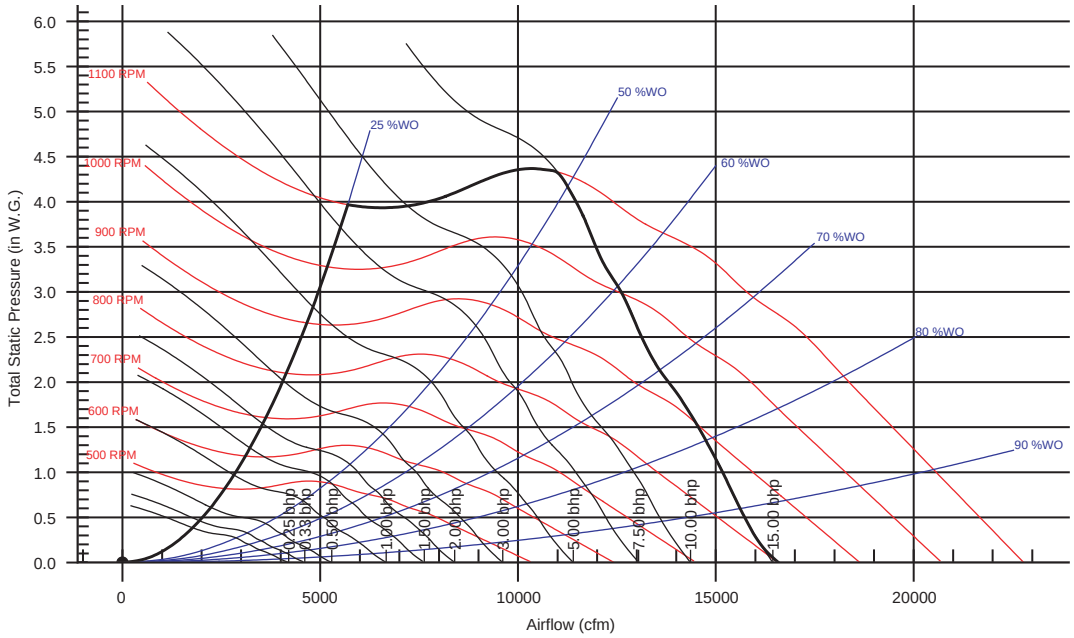


Table 44. Size 21 vertical unit, front top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
21	7350	1694	477	2.13	579	2.84	665	3.74	746	4.64	833	5.81	932	7.27	1021	8.78	1098	10.26
	8400	1935	518	2.96	609	4.01	694	4.72	766	5.65	836	6.67	911	7.92	993	9.43	1078	11.14
	9450	2177	560	3.88	645	4.96	720	5.94	796	7.03	857	7.97	920	9.08	984	10.40	1052	11.91
	10500	2419	604	5.02	679	6.17	753	7.65	821	8.20	889	9.75	944	10.77	999	11.93	1057	13.31
	11550	2661	648	6.46	719	7.80	790	9.09	850	10.69	913	11.13	974	12.88	1025	14.05	1075	15.24
	12600	2903	693	8.19	761	9.61	823	10.84	887	12.59	941	14.01	1000	14.54	1056	16.46	1104	17.88

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 21 Vertical Unit, Top Front Discharge

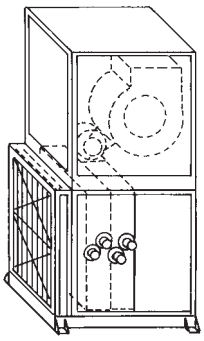


Figure 41. Fan performance for size 21 vertical unit, top front discharge

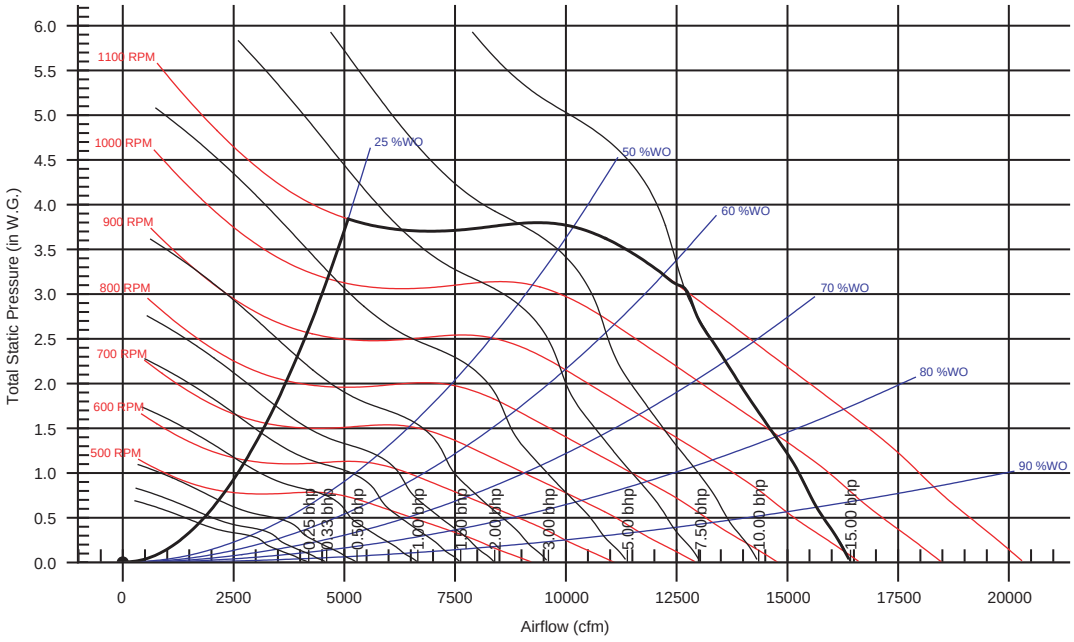


Table 45. Size 21 vertical unit, top front discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
21	7350	1694	539	2.14	632	2.89	734	3.60	804	4.32	898	5.47	985	6.71	1062	7.95	1137	9.26
	8400	1935	587	2.86	673	3.81	761	4.63	845	5.43	907	6.27	981	7.41	1063	8.81	1137	10.24
	9450	2177	622	3.70	714	4.91	790	5.86	873	6.75	946	7.67	1003	8.62	1057	9.63	1135	11.19
	10500	2419	670	4.95	767	6.18	832	7.29	897	8.34	977	9.33	1042	10.35	1095	11.39	1142	12.45
	11550	2661	720	6.48	818	7.63	874	8.99	938	10.14	998	11.30	1070	12.36	1132	13.46	1183	14.63
	12600	2903	772	7.97	853	9.09	926	10.86	978	12.18	1036	13.48	1090	14.70	1159	15.90	1217	17.06

Size 21 Vertical Unit, Back Top Discharge

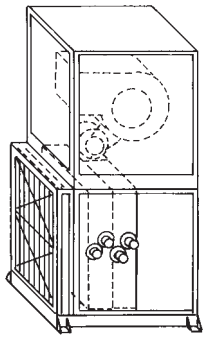


Figure 42. Fan performance for size 21 vertical unit, back top discharge

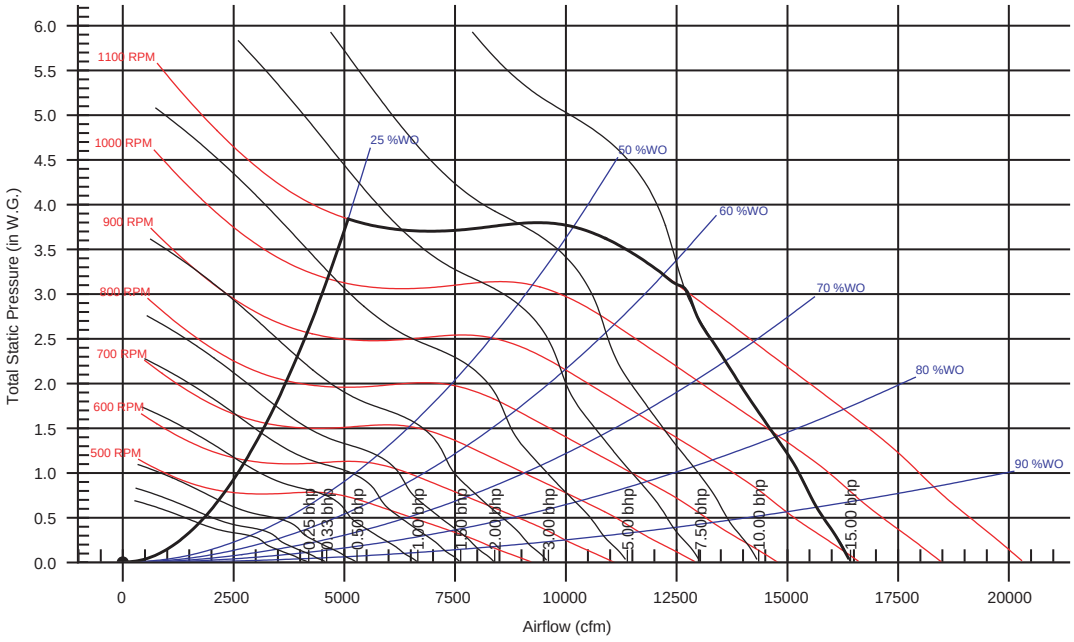


Table 46. Size 21 vertical unit, back top discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
21	7350	1694	539	2.14	632	2.89	734	3.60	804	4.32	898	5.47	985	6.71	1062	7.95	1137	9.26
	8400	1935	587	2.86	673	3.81	761	4.63	845	5.43	907	6.27	981	7.41	1063	8.81	1137	10.24
	9450	2177	622	3.70	714	4.91	790	5.86	873	6.75	946	7.67	1003	8.62	1057	9.63	1135	11.19
	10500	2419	670	4.95	767	6.18	832	7.29	897	8.34	977	9.33	1042	10.35	1095	11.39	1142	12.45
	11550	2661	720	6.48	818	7.63	874	8.99	938	10.14	998	11.30	1070	12.36	1132	13.46	1183	14.63
	12600	2903	772	7.97	853	9.09	926	10.86	978	12.18	1036	13.48	1090	14.70	1159	15.90	1217	17.06

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 21 Vertical Unit, Top Back Discharge

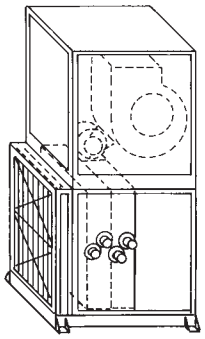


Figure 43. Fan performance for size 21 vertical unit, top back discharge

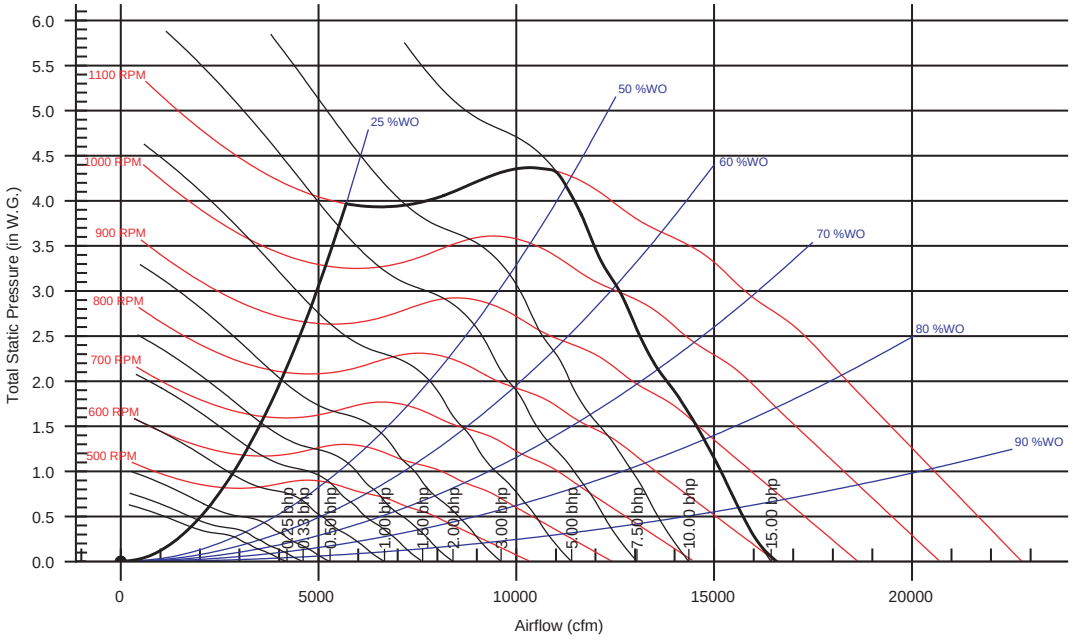


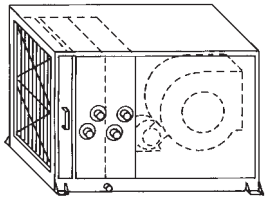
Table 47. Size 21 vertical unit, top back discharge

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg)															
			0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
21	7350	1694	477	2.13	579	2.84	665	3.74	746	4.64	833	5.81	932	7.27	1021	8.78	1098	10.26
	8400	1935	518	2.96	609	4.01	694	4.72	766	5.65	836	6.67	911	7.92	993	9.43	1078	11.14
	9450	2177	560	3.88	645	4.96	720	5.94	796	7.03	857	7.97	920	9.08	984	10.40	1052	11.91
	10500	2419	604	5.02	679	6.17	753	7.65	821	8.20	889	9.75	944	10.77	999	11.93	1057	13.31
	11550	2661	648	6.46	719	7.80	790	9.09	850	10.69	913	11.13	974	12.88	1025	14.05	1075	15.24
	12600	2903	693	8.19	761	9.61	823	10.84	887	12.59	941	14.01	1000	14.54	1056	16.46	1104	17.88

Note: Shaded area denotes data that exceeds rpm curve. It is shown for interpolation purposes only.

Size 25 Horizontal Units

Horizontal unit, front top discharge



Horizontal unit, top front discharge

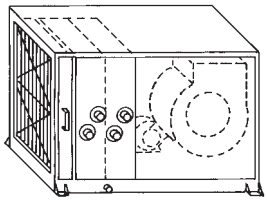


Figure 44. Fan performance for size 25 horizontal units

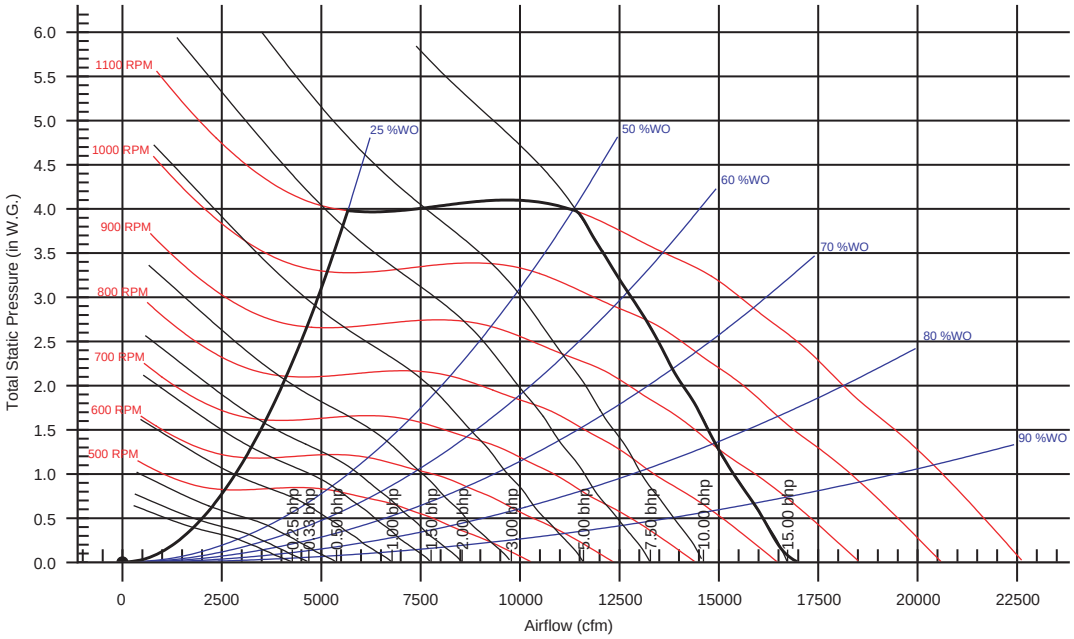
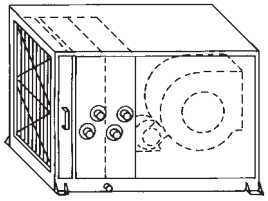


Table 48. Size 25 horizontal units

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg) 0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
25	8750	2121	454	2.46	566	3.43	660	4.39	747	5.54	828	6.78	903	7.99	976	9.25	1043	10.53	1108	11.84	1171	13.22
	10000	2424	487	3.35	591	4.45	680	5.52	761	6.66	837	7.96	909	9.36	977	10.76	1043	12.16	1105	13.59	1165	15.04
	11250	2727	523	4.42	615	5.64	703	6.91	780	8.11	851	9.38	920	10.84	985	12.38	1048	13.99	1108	15.54	1167	17.14
	12500	3030	564	5.82	645	7.12	728	8.52	803	9.89	871	11.22	935	12.60	998	14.21	1057	15.84	1115	17.61	1172	19.41
	13750	3333	607	7.52	680	8.90	753	10.32	827	11.91	894	13.41	954	14.84	1013	16.36	1071	18.07	1126	19.82	1180	21.73
	15000	3636	648	9.49	713	10.85	781	12.47	852	14.17	918	15.87	977	17.45	1034	19.06	1088	20.67	1141	22.47	1193	24.36

Size 30 Horizontal Units

Horizontal unit, front top discharge



Horizontal unit, top front discharge

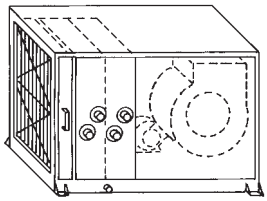


Figure 45. Fan performance for size 30 horizontal units

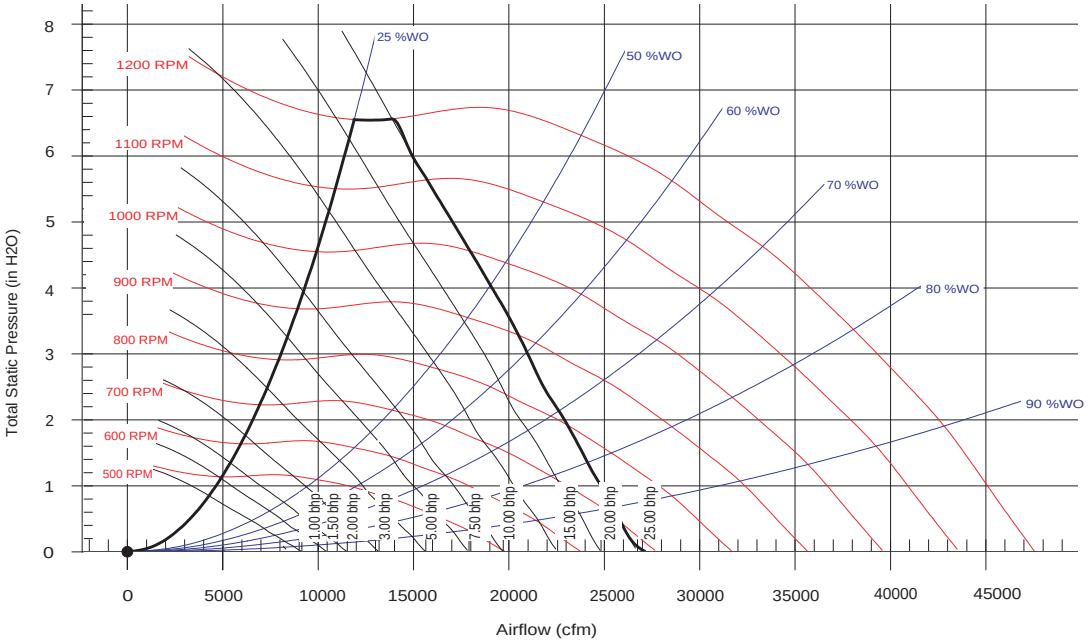
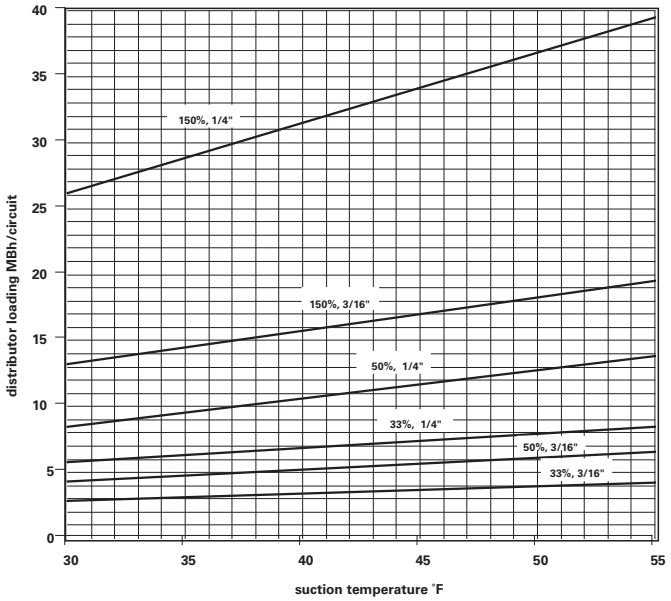


Table 49. Size 30 horizontal units

Unit Size	Std. Air Flow (cfm)	Outlet Velocity (ft/min)	Total Static Pressure (in. wg) 0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0	
			rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
30	10500	2006	387	2.61	486	3.68	574	4.85	654	6.12	731	7.43	804	8.76	872	10.13	935	11.56	990	13.31	1043	15.18
	12000	2293	412	3.48	505	4.73	587	5.99	662	7.36	731	8.79	799	10.27	866	11.80	928	13.32	987	14.86	1044	16.44
	13500	2580	439	4.60	527	6.06	603	7.38	674	8.83	740	10.37	803	12.00	863	13.65	923	15.30	982	17.05	1038	18.76
	15000	2866	469	5.97	550	7.53	622	9.07	689	10.58	754	12.22	813	13.93	870	15.70	925	17.54	978	19.37	1033	21.27
	16500	3153	498	7.58	574	9.24	645	11.08	707	12.66	768	14.36	826	16.17	881	18.04	933	19.97	983	21.95	1032	23.96
	18000	3440	530	9.47	601	11.29	667	13.24	729	15.13	785	16.87	841	18.75	894	20.72	945	22.77	993	24.85	1040	26.97

Distributor Selection Curve

Figure 46. Distributor selection curve, LPC units with DX coils



Cooling Capacities - DX Coil, R-22

Table 50. Unit size 3 DX cooling capacities, R-22

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	1200	40	32.6	26.4	55.0	53.7	42.2	30.2	57.1	55.8	—	—	—	—
			45	23.9	22.9	57.7	56.4	32.7	26.6	59.9	58.5	43.0	30.4	62.1	60.6
			50	—	—	—	—	23.7	23.2	62.4	61.0	32.7	26.8	64.8	63.3
		1500	40	36.8	30.9	56.2	54.7	46.9	35.1	58.8	57.1	—	—	—	—
			45	27.4	27.2	58.5	56.9	37.0	31.3	61.1	59.4	47.7	35.3	63.7	61.9
			50	20.5	20.5	62.6	58.5	27.2	27.2	63.6	61.5	37.0	31.6	65.9	64.1
		1800	40	40.3	35.0	57.3	55.5	—	—	—	—	—	—	—	—
			45	30.4	30.4	59.7	57.4	40.5	35.5	62.1	60.1	—	—	—	—
			50	23.1	23.1	63.3	58.8	30.3	30.3	64.8	61.9	40.5	36.0	66.9	64.7
	12	1200	40	36.8	28.9	53.0	52.4	46.7	32.9	55.0	54.4	—	—	—	—
			45	27.2	25.0	56.0	55.4	37.1	29.1	57.9	57.3	47.8	33.1	60.0	59.3
			50	19.7	19.7	60.1	57.6	27.0	25.4	60.8	60.1	37.3	29.4	62.9	62.1
		1500	40	41.6	34.1	54.3	53.5	—	—	—	—	—	—	—	—
			45	31.3	29.9	56.9	56.0	42.0	34.4	59.2	58.3	—	—	—	—
			50	23.2	23.2	60.9	57.9	31.1	30.5	61.6	60.7	42.2	34.8	64.0	63.0
		1800	40	45.4	38.7	55.4	54.4	—	—	—	—	—	—	—	—
			45	34.9	34.5	57.6	56.6	45.8	39.2	60.2	59.1	—	—	—	—
			50	26.3	26.3	61.7	58.2	34.8	34.7	62.5	61.1	46.0	39.8	65.0	63.8
	14	1200	40	38.9	30.2	52.1	51.7	—	—	—	—	—	—	—	—
			45	28.9	26.0	55.3	54.9	39.4	30.4	57.0	56.6	50.2	34.3	59.1	58.6
			50	20.8	20.8	59.2	57.3	28.7	26.4	60.1	59.6	39.7	30.6	61.9	61.5
		1500	40	44.0	35.5	53.4	52.9	—	—	—	—	—	—	—	—
			45	33.4	31.2	56.1	55.5	44.5	35.9	58.3	57.7	—	—	—	—
			50	24.6	24.6	60.1	57.6	33.2	31.8	60.8	60.2	44.8	36.3	63.1	62.5
		1800	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	37.2	36.1	56.8	56.1	48.5	41.0	59.3	58.6	—	—	—	—
			50	28.0	28.0	60.9	57.9	37.1	36.8	61.5	60.7	48.8	41.6	64.1	63.3
6															
	9	1200	40	41.6	31.4	51.2	50.8	51.1	35.1	53.4	53.0	60.9	38.5	55.8	55.5
			45	—	—	—	—	42.7	31.7	56.0	55.6	52.9	35.4	58.2	57.8
			50	—	—	—	—	—	—	—	—	43.6	32.0	60.8	60.4
		1500	40	46.7	36.8	52.7	52.2	56.7	40.8	55.3	54.8	67.2	44.4	58.1	57.6
			45	37.2	32.9	55.1	54.6	47.8	37.3	57.4	56.9	58.6	41.3	60.0	59.5
			50	—	—	—	—	—	—	—	—	48.8	37.8	62.2	61.6
		1800	40	50.8	41.7	53.9	53.3	61.0	45.9	56.8	56.2	71.9	49.9	59.9	59.2
			45	41.0	37.8	55.9	55.3	51.9	42.4	58.6	58.0	63.0	46.7	61.5	60.8
			50	—	—	—	—	41.3	38.6	60.6	59.9	52.9	43.2	63.3	62.6
	12	1200	40	44.3	32.8	50.0	49.9	53.9	36.6	52.2	52.1	63.9	40.0	54.7	54.6
			45	35.1	29.0	53.0	52.9	45.6	33.2	54.9	54.7	56.0	36.9	57.0	56.9
			50	—	—	—	—	—	—	—	—	46.7	33.5	59.7	59.6
		1500	40	49.9	38.6	51.6	51.4	60.0	42.6	54.2	54.0	70.5	46.2	57.0	56.8
			45	40.3	34.6	54.0	53.8	51.2	39.1	56.3	56.1	62.3	43.2	58.9	58.7
			50	—	—	—	—	40.7	35.2	58.7	58.5	52.4	39.7	61.0	60.9
		1800	40	54.3	43.8	52.8	52.6	64.8	48.1	55.7	55.5	75.6	52.0	58.8	58.5
			45	44.4	39.8	54.9	54.6	55.7	44.6	57.5	57.2	67.1	48.9	60.4	60.1
			50	—	—	—	—	44.9	40.6	59.5	59.3	57.0	45.4	62.2	61.9
	14	1200	40	45.6	33.4	49.6	49.5	55.3	37.1	51.8	51.7	65.2	40.5	54.3	54.2
			45	36.4	29.5	52.6	52.5	47.0	33.7	54.4	54.3	57.5	37.5	56.6	56.5
			50	—	—	—	—	—	—	—	—	48.2	34.1	59.3	59.2
		1500	40	51.3	39.3	51.1	51.0	61.6	43.3	53.7	53.6	72.1	47.0	56.6	56.5
			45	41.7	35.3	53.6	53.5	52.8	39.9	55.8	55.7	64.0	43.9	58.4	58.3
			50	—	—	—	—	42.2	35.9	58.3	58.2	54.2	40.4	60.6	60.5
		1800	40	55.9	44.7	52.4	52.3	66.6	49.0	55.2	55.1	77.4	52.9	58.3	58.2
			45	46.1	40.7	54.4	54.3	57.5	45.5	57.0	56.9	69.1	49.9	59.9	59.7
			50	—	—	—	—	46.6	41.5	59.1	59.0	58.9	46.3	61.7	61.6

Notes:
1. Blank spaces in the data, designated by a dash (—) indicate coil data is not available at that condition due to the distributor loading.
2. TC = Total capacity (MBh)
3. SC = Sensible capacity (MBh)
4. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
5. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)
6. Subcooled refrigerant liquid temperature entering thermostatic expansion valve = 110°F
7. **Do not manifold two independent refrigeration circuits into a single-circuited DX (evaporator) coil.** Instead, use a single-circuited condensing unit.

Table 51. Unit size 6 DX cooling capacities, R-22

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	2400	40	67.3	53.6	54.6	53.4	—	—	—	—	—	—	—	—
			45	50.5	46.8	57.3	56.0	67.9	54.1	59.5	58.2	—	—	—	—
			50	37.2	37.2	60.9	57.9	50.2	47.5	62.0	60.6	68.4	54.6	64.4	62.9
		3000	40	74.9	62.4	56.1	54.5	—	—	—	—	—	—	—	—
			45	57.4	55.4	58.2	56.6	75.6	63.2	60.9	59.2	—	—	—	—
			50	43.4	43.4	61.9	58.3	57.2	56.5	62.9	61.2	76.1	64.0	65.7	63.8
		3600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	63.4	63.3	59.0	57.2	81.7	71.4	62.0	60.0	—	—	—	—
			50	48.7	48.7	62.7	58.6	63.3	63.0	64.1	61.7	82.2	72.6	66.8	64.6
	12	2400	40	74.8	58.4	52.8	52.2	—	—	—	—	—	—	—	—
			45	57.2	51.2	55.6	54.9	75.9	58.9	57.7	57.0	—	—	—	—
			50	41.6	41.6	59.3	57.3	57.0	51.9	60.4	59.7	76.6	59.4	62.6	61.8
		3000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	65.3	60.9	56.5	55.7	84.5	69.1	59.1	58.2	—	—	—	—
			50	48.8	48.8	60.2	57.6	65.2	62.1	61.2	60.3	85.3	70.0	63.9	62.9
		3600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	71.9	69.8	57.4	56.3	—	—	—	—	—	—	—	—
			50	55.2	55.2	61.1	58.0	72.0	71.4	62.0	60.9	—	—	—	—
	14	2400	40	78.5	60.6	52.0	51.6	—	—	—	—	—	—	—	—
			45	60.7	53.2	54.8	54.4	79.8	61.1	56.9	56.4	—	—	—	—
			50	43.8	42.6	58.4	56.9	60.6	53.9	59.6	59.2	80.8	61.6	61.7	61.3
		3000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	69.2	63.5	55.8	55.2	—	—	—	—	—	—	—	—
			50	51.6	51.6	59.4	57.3	69.3	64.6	60.5	59.9	90.1	72.8	63.0	62.4
		3600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	76.1	72.8	56.6	55.9	—	—	—	—	—	—	—	—
			50	58.5	58.5	60.2	57.6	76.3	74.4	61.3	60.5	—	—	—	—
6															
	9	2400	40	78.9	60.7	52.0	51.5	95.7	67.3	54.5	54.1	112.9	73.2	57.3	56.8
			45	63.5	54.3	54.4	54.0	81.1	61.5	56.7	56.2	99.3	68.1	59.2	58.8
			50	—	—	—	—	64.1	55.1	59.2	58.7	83.1	62.3	61.5	61.0
		3000	40	87.5	70.7	53.5	53.0	105.0	77.8	56.4	55.8	123.3	84.4	59.5	58.9
			45	71.6	64.3	55.5	54.9	89.9	72.0	58.2	57.6	108.7	79.1	61.1	60.4
			50	—	—	—	—	72.4	65.5	60.2	59.5	92.1	73.3	62.9	62.2
		3600	40	94.3	79.9	54.8	54.1	112.0	87.4	57.9	57.2	130.9	94.4	61.2	60.4
			45	78.1	73.5	56.4	55.7	96.9	81.7	59.4	58.6	116.0	89.2	62.6	61.7
			50	—	—	—	—	79.1	75.2	61.1	60.3	99.1	83.4	64.0	63.2
	12	2400	40	83.7	63.4	50.9	50.8	100.5	70.0	53.5	53.3	118.1	76.0	56.2	56.1
			45	68.3	57.0	53.4	53.2	86.4	64.4	55.6	55.5	104.6	70.9	58.2	58.0
			50	—	—	—	—	69.3	57.8	58.1	58.0	88.8	65.2	60.4	60.2
		3000	40	93.1	74.2	52.5	52.3	110.7	81.3	55.4	55.1	129.0	87.8	58.4	58.2
			45	77.1	67.6	54.5	54.3	95.9	75.6	57.1	56.9	115.1	82.7	60.0	59.8
			50	—	—	—	—	78.2	69.0	59.1	58.9	98.5	76.9	61.8	61.5
		3600	40	100.4	84.1	53.7	53.4	118.5	91.6	56.9	56.6	137.1	98.6	60.2	59.8
			45	84.2	77.5	55.4	55.1	103.5	86.0	58.3	58.0	123.1	93.6	61.4	61.1
			50	66.1	66.1	58.3	56.9	85.5	79.4	60.0	59.7	106.3	87.8	62.9	62.6
	14	2400	40	86.0	64.5	50.5	50.4	102.9	71.1	53.0	52.9	120.3	77.0	55.8	55.7
			45	70.6	58.0	53.0	52.9	88.8	65.4	55.2	55.1	107.2	72.1	57.7	57.6
			50	—	—	—	—	71.7	58.9	57.7	57.6	91.5	66.4	59.9	59.8
		3000	40	95.6	75.6	52.0	51.9	113.4	82.7	54.9	54.8	131.5	89.1	58.0	57.9
			45	79.6	69.0	54.1	54.0	98.7	77.1	56.7	56.6	118.1	84.2	59.6	59.4
			50	—	—	—	—	81.0	70.4	58.7	58.6	101.6	78.4	61.3	61.2
		3600	40	103.3	85.8	53.3	53.2	121.5	93.4	56.4	56.3	140.1	100.3	59.7	59.6
			45	87.0	79.2	55.0	54.8	106.7	87.7	57.9	57.7	126.5	95.4	61.0	60.8
			50	—	—	—	—	88.6	81.1	59.6	59.4	109.7	89.6	62.5	62.3

Notes:
1. Blank spaces in the data, designated by a dash (—) indicate coil data is not available at that condition due to the distributor loading.
2. TC = Total capacity (MBh)
3. SC = Sensible capacity (MBh)
4. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (ºF)
5. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (ºF)
6. Subcooled refrigerant liquid temperature entering thermostatic expansion valve = 110ºF
7. **Do not manifold two independent refrigeration circuits into a single-circuited DX (evaporator) coil.** Instead, use a single-circuited condensing unit.

Table 52. Unit size 8 DX cooling capacities, R-22

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	3200	40	97.3	75.4	53.5	52.5	—	—	—	—	—	—	—	—
			45	73.7	65.7	56.3	55.2	98.8	76.0	58.4	57.3	—	—	—	—
			50	53.3	53.3	59.9	57.5	73.4	66.5	61.2	59.9	99.9	76.6	63.3	62.1
		4000	40	108.8	87.8	55.0	53.7	—	—	—	—	—	—	—	—
			45	84.0	77.8	57.3	56.0	110.4	88.9	59.8	58.4	—	—	—	—
			50	62.4	62.4	60.8	57.9	83.8	79.1	62.1	60.6	111.4	89.9	64.7	63.1
		4800	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	92.7	88.9	58.2	56.6	—	—	—	—	—	—	—	—
			50	70.6	70.6	61.7	58.2	92.7	90.7	62.9	61.1	120.6	101.9	65.8	63.9
	12	3200	40	106.8	81.3	51.8	51.4	—	—	—	—	—	—	—	—
			45	82.5	71.2	54.7	54.2	108.8	82.0	56.7	56.2	—	—	—	—
			50	59.2	57.6	58.2	56.8	82.5	72.1	59.6	59.0	110.5	82.7	61.6	61.0
		4000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	94.4	84.9	55.7	55.0	—	—	—	—	—	—	—	—
			50	69.6	69.6	59.2	57.2	94.5	86.2	60.4	59.7	123.5	97.5	62.9	62.2
		4800	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	103.9	97.2	56.6	55.7	—	—	—	—	—	—	—	—
			50	79.0	79.0	60.0	57.6	104.1	99.2	61.3	60.3	—	—	—	—
	14	3200	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	87.0	73.7	54.0	53.7	113.8	84.7	55.9	55.6	—	—	—	—
			50	62.2	60.6	57.3	56.5	87.2	74.6	58.8	58.5	115.8	85.4	60.8	60.5
		4000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	99.3	87.9	55.0	54.6	—	—	—	—	—	—	—	—
			50	73.2	71.2	58.4	56.9	99.7	89.3	59.7	59.3	—	—	—	—
		4800	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	109.4	100.9	55.9	55.3	—	—	—	—	—	—	—	—
			50	83.3	83.3	59.2	57.3	109.8	102.9	60.6	60.0	—	—	—	—
6															
	9	3200	40	111.2	83.8	51.1	50.8	134.8	93.0	53.5	53.2	159.1	101.3	56.2	55.9
			45	89.6	74.7	53.7	53.4	114.4	84.8	55.9	55.5	140.1	94.1	58.3	58.0
			50	—	—	—	—	90.6	75.7	58.5	58.1	117.5	85.9	60.7	60.3
		4000	40	123.8	97.8	52.7	52.3	148.8	107.7	55.5	55.0	174.6	116.8	58.5	58.0
			45	101.4	88.6	54.9	54.4	127.4	99.5	57.4	56.9	154.3	109.4	60.2	59.7
			50	—	—	—	—	102.6	90.2	59.5	59.0	130.6	101.1	62.1	61.6
		4800	40	133.8	110.6	54.0	53.5	159.3	121.1	57.1	56.5	186.3	130.9	60.3	59.6
			45	110.9	101.3	55.8	55.2	137.6	112.9	58.6	58.0	165.0	123.4	61.7	61.0
			50	—	—	—	—	112.3	103.6	60.4	59.8	141.1	115.1	63.3	62.6
	12	3200	40	117.4	87.2	50.1	50.0	141.0	96.3	52.6	52.5	165.8	104.8	55.2	55.1
			45	95.9	78.1	52.8	52.7	121.3	88.4	54.9	54.8	147.0	97.6	57.3	57.2
			50	—	—	—	—	97.3	79.1	57.5	57.4	124.9	89.4	59.7	59.5
		4000	40	131.1	102.1	51.7	51.6	156.0	112.0	54.5	54.4	182.1	121.1	57.5	57.3
			45	108.5	92.7	53.9	53.7	135.3	103.9	56.4	56.2	162.4	113.8	59.2	59.0
			50	—	—	—	—	110.3	94.4	58.6	58.4	139.2	105.5	61.1	60.9
		4800	40	141.9	115.7	53.0	52.8	167.6	126.3	56.1	55.8	194.3	136.0	59.3	59.0
			45	118.8	106.4	54.8	54.6	146.4	118.2	57.6	57.4	174.4	128.9	60.7	60.4
			50	92.5	90.1	57.5	56.6	120.8	108.8	59.4	59.2	150.5	120.6	62.3	62.0
	14	3200	40	120.2	88.4	49.8	49.7	144.0	97.6	52.2	52.1	168.6	105.9	54.9	54.8
			45	98.7	79.3	52.4	52.3	124.4	89.6	54.5	54.4	150.4	98.8	56.9	56.8
			50	—	—	—	—	100.4	80.4	57.2	57.1	128.3	90.7	59.3	59.2
		4000	40	134.4	103.7	51.4	51.3	159.5	113.6	54.1	54.0	185.3	122.6	57.2	57.1
			45	111.8	94.4	53.5	53.4	138.9	105.6	56.0	55.9	166.4	115.6	58.8	58.7
			50	—	—	—	—	113.8	96.1	58.2	58.1	143.2	107.3	60.7	60.6
		4800	40	145.7	117.9	52.6	52.5	171.6	128.5	55.7	55.5	198.1	138.0	58.9	58.8
			45	122.5	108.5	54.4	54.3	150.6	120.4	57.2	57.1	178.8	131.1	60.2	60.1
			50	95.8	93.4	56.9	56.3	124.8	110.8	59.1	58.9	155.1	122.8	61.8	61.7

Notes:

1. Blank spaces in the data, designated by a dash (—) indicate coil data is not available at that condition due to the distributor loading.
2. TC = Total capacity (MBh)
3. SC = Sensible capacity (MBh)
4. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (ºF)
5. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (ºF)
6. Subcooled refrigerant liquid temperature entering thermostatic expansion valve = 110ºF
7. The DX coil in size 8 and 10 units can be equipped with one or two distributors.
8. **Do not manifold two, independent refrigeration circuits into a single-circuited DX (evaporator) coil.** Instead, either use a single-circuited condensing unit or configure the DX coil to have two distributors.

Table 53. Unit size 10 DX cooling capacities, R-22

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	4000	40	121.1	93.3	53.8	52.6	154.1	106.4	55.8	54.6	—	—	—	—
			45	89.5	80.3	56.7	55.5	122.4	93.8	58.7	57.4	157.8	106.7	60.8	59.4
			50	64.3	64.3	60.4	57.7	88.8	81.2	61.6	60.2	123.2	94.3	63.7	62.2
		5000	40	136.9	109.2	55.1	53.6	—	—	—	—	—	—	—	—
			45	102.6	95.2	57.7	56.1	138.2	110.1	60.0	58.4	—	—	—	—
			50	75.5	75.5	61.3	58.0	101.9	96.7	62.5	60.8	139.1	111.1	64.9	63.1
		6000	40	149.4	123.3	56.3	54.6	—	—	—	—	—	—	—	—
			45	113.8	108.9	58.5	56.7	150.7	124.6	61.1	59.2	—	—	—	—
			50	85.5	85.5	62.1	58.3	113.1	110.9	63.2	61.3	151.5	126.1	66.0	63.9
	12	4000	40	135.2	101.9	51.8	51.2	—	—	—	—	—	—	—	—
			45	101.5	87.9	55.0	54.4	137.3	102.5	56.7	56.1	—	—	—	—
			50	72.0	70.0	58.7	57.0	100.9	88.8	59.9	59.2	138.7	103.0	61.7	61.0
		5000	40	153.0	119.7	53.2	52.4	—	—	—	—	—	—	—	—
			45	116.9	104.9	55.9	55.1	155.1	120.7	58.1	57.2	—	—	—	—
			50	85.0	85.0	59.6	57.4	116.4	106.3	60.7	59.8	156.4	121.8	63.0	62.0
		6000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	130.0	120.6	56.7	55.7	169.2	137.2	59.2	58.2	—	—	—	—
			50	96.7	96.7	60.4	57.7	129.7	122.7	61.5	60.4	170.7	138.9	64.1	62.9
	14	4000	40	142.1	105.9	50.9	50.5	—	—	—	—	—	—	—	—
			45	107.7	91.4	54.2	53.8	144.6	106.4	55.8	55.4	—	—	—	—
			50	76.0	74.0	57.7	56.7	107.2	92.2	59.1	58.7	146.4	106.9	60.8	60.3
		5000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	124.3	109.4	55.1	54.6	163.5	125.6	57.2	56.6	—	—	—	—
			50	89.8	87.3	58.7	57.0	124.1	110.9	59.9	59.3	165.5	126.7	62.1	61.5
		6000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	138.2	126.1	55.9	55.2	—	—	—	—	—	—	—	—
			50	102.5	102.5	59.5	57.3	138.2	128.2	60.6	59.9	180.6	144.8	63.2	62.4
6															
	9	4000	40	144.7	106.8	50.6	50.3	178.0	119.8	52.7	52.3	212.0	131.5	55.1	54.7
			45	—	—	—	—	148.3	107.8	55.5	55.1	184.4	120.7	57.6	57.2
			50	—	—	—	—	—	—	—	—	151.6	108.6	60.4	59.9
		5000	40	163.0	125.2	52.2	51.7	198.8	139.3	54.6	54.1	235.4	152.0	57.4	56.8
			45	129.9	111.4	54.7	54.2	166.9	126.7	57.0	56.4	205.5	140.7	59.5	58.9
			50	—	—	—	—	130.6	113.0	59.5	58.9	170.4	128.1	61.8	61.1
		6000	40	177.5	141.7	53.5	52.8	214.9	156.7	56.2	55.5	253.5	170.4	59.2	58.5
			45	143.3	127.7	55.6	54.9	181.7	143.9	58.2	57.5	221.6	158.8	61.0	60.2
			50	—	—	—	—	144.3	130.0	60.3	59.6	185.3	146.0	63.0	62.2
	12	4000	40	154.6	112.2	49.4	49.3	188.3	125.3	51.4	51.3	223.5	137.4	53.7	53.6
			45	123.0	98.7	52.5	52.4	158.9	113.2	54.2	54.1	195.6	126.2	56.3	56.2
			50	—	—	—	—	—	—	—	—	163.1	114.1	59.1	59.0
		5000	40	174.5	131.9	50.9	50.8	210.7	146.0	53.4	53.2	248.4	159.0	56.1	55.9
			45	141.1	117.9	53.5	53.3	179.4	133.5	55.7	55.5	218.5	147.6	58.2	58.0
			50	—	—	—	—	142.6	119.5	58.3	58.1	183.7	135.0	60.5	60.3
		6000	40	190.5	149.8	52.3	52.0	228.3	164.8	55.0	54.7	267.9	178.7	58.0	57.7
			45	155.8	135.5	54.5	54.2	195.7	152.1	57.0	56.7	236.6	167.2	59.7	59.4
			50	—	—	—	—	157.5	137.8	59.2	58.8	200.2	154.4	61.7	61.4
	14	4000	40	159.2	114.4	48.9	48.8	192.9	127.4	51.0	50.9	228.5	139.4	53.3	53.2
			45	127.6	100.8	52.0	51.9	163.9	115.4	53.7	53.6	200.9	128.5	55.8	55.7
			50	—	—	—	—	129.1	101.8	56.9	56.8	168.4	116.3	58.6	58.5
		5000	40	180.0	134.7	50.4	50.3	216.4	148.9	52.9	52.8	254.4	161.9	55.6	55.5
			45	146.4	120.6	53.0	52.9	185.3	136.5	55.2	55.1	224.8	150.7	57.6	57.5
			50	—	—	—	—	148.2	122.2	57.8	57.7	190.1	138.1	60.0	59.9
		6000	40	196.7	153.2	51.7	51.6	234.8	168.3	54.5	54.3	274.3	182.1	57.4	57.3
			45	161.7	138.7	54.0	53.8	202.3	155.6	56.4	56.3	243.7	170.8	59.2	59.0
			50	—	—	—	—	163.8	141.1	58.7	58.5	207.4	157.9	61.2	61.0

Notes:

1. Blank spaces in the data, designated by a dash (—) indicate coil data is not available at that condition due to the distributor loading.
2. TC = Total capacity (MBh)
3. SC = Sensible capacity (MBh)
4. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (ºF)
5. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (ºF)
6. Subcooled refrigerant liquid temperature entering thermostatic expansion valve = 110ºF
7. The DX coil in size 8 and 10 units can be equipped with one or two distributors.
8. **Do not manifold two, independent refrigeration circuits into a single-circuited DX (evaporator) coil.** Instead, either use a single-circuited condensing unit or configure the DX coil to have two distributors.

Table 54. Unit size 12 DX cooling capacities, R-22

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	4800	40	150.1	114.2	53.3	52.2	191.8	130.8	55.2	54.0	—	—	—	—
			45	110.6	97.9	56.4	55.2	151.8	114.7	58.3	57.0	196.7	131.1	60.2	58.9
			50	—	—	—	—	109.6	98.9	61.3	60.0	152.9	115.3	63.2	61.9
		6000	40	170.9	134.2	54.6	53.2	—	—	—	—	—	—	—	—
			45	127.2	116.4	57.4	55.9	172.7	135.2	59.5	58.0	220.5	152.8	61.9	60.3
			50	92.7	92.7	61.0	57.9	126.1	118.0	62.2	60.6	173.8	136.2	64.4	62.8
		7200	40	187.2	151.8	55.8	54.2	—	—	—	—	—	—	—	—
			45	141.5	133.3	58.2	56.5	189.0	153.3	60.7	58.9	—	—	—	—
			50	105.2	105.2	61.7	58.2	140.6	135.6	62.9	61.1	190.0	154.9	65.5	63.5
	12	4800	40	167.5	124.7	51.3	50.8	—	—	—	—	—	—	—	—
			45	125.1	107.0	54.7	54.1	170.0	125.3	56.3	55.7	216.8	142.2	58.1	57.5
			50	87.9	85.5	58.4	56.9	124.3	107.9	59.6	59.0	172.1	125.8	61.2	60.6
		6000	40	190.7	146.9	52.7	52.0	—	—	—	—	—	—	—	—
			45	144.6	127.9	55.6	54.9	193.4	148.0	57.6	56.8	—	—	—	—
			50	104.0	101.0	59.2	57.3	143.8	129.5	60.4	59.6	195.2	149.1	62.5	61.6
		7200	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	161.4	147.4	56.4	55.5	212.0	168.6	58.7	57.8	—	—	—	—
			50	118.8	118.8	60.0	57.6	160.9	149.7	61.1	60.1	213.8	170.3	63.6	62.5
	14	4800	40	175.9	129.5	50.4	50.1	—	—	—	—	—	—	—	—
			45	132.6	111.2	53.9	53.6	179.1	130.0	55.4	55.0	—	—	—	—
			50	92.8	90.4	57.4	56.5	132.0	112.1	58.8	58.4	181.5	130.6	60.3	59.9
		6000	40	200.6	152.8	51.8	51.3	—	—	—	—	—	—	—	—
			45	153.7	133.4	54.8	54.3	203.8	153.9	56.7	56.2	—	—	—	—
			50	110.0	107.0	58.3	56.9	153.3	134.9	59.6	59.1	206.4	155.0	61.6	61.0
		7200	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	171.9	154.1	55.5	54.9	—	—	—	—	—	—	—	—
			50	125.7	125.7	59.1	57.2	171.7	156.3	60.3	59.6	226.3	177.4	62.7	62.0
6															
	9	4800	40	179.4	130.9	50.1	49.8	221.6	147.3	52.0	51.7	264.5	162.0	54.3	53.9
			45	—	—	—	—	184.1	131.9	55.0	54.6	229.7	148.2	56.9	56.5
			50	—	—	—	—	—	—	—	—	188.4	132.8	59.9	59.5
		6000	40	203.4	153.8	51.6	51.2	248.9	171.6	54.0	53.5	295.4	187.7	56.6	56.1
			45	161.0	136.1	54.4	53.8	208.4	155.5	56.4	55.9	257.5	173.2	58.8	58.2
			50	—	—	—	—	—	—	—	—	212.9	157.0	61.3	60.7
		7200	40	222.5	174.4	52.9	52.3	270.4	193.5	55.6	54.9	319.5	210.7	58.4	57.7
			45	178.7	156.4	55.2	54.6	227.9	176.9	57.7	57.0	279.4	195.8	60.3	59.6
			50	—	—	—	—	179.9	158.9	60.0	59.3	232.5	179.2	62.5	61.7
	12	4800	40	191.6	137.4	48.9	48.7	234.2	153.9	50.8	50.6	278.5	169.0	52.9	52.8
			45	—	—	—	—	197.3	138.5	53.7	53.6	243.5	154.9	55.7	55.5
			50	—	—	—	—	—	—	—	—	202.3	139.4	58.6	58.5
		6000	40	217.8	161.9	50.4	50.2	263.7	179.8	52.7	52.5	311.7	196.8	55.2	55.1
			45	175.2	144.0	53.1	53.0	223.7	163.7	55.2	55.0	273.5	181.5	57.5	57.3
			50	—	—	—	—	177.0	145.7	57.9	57.7	229.3	165.3	60.0	59.8
		7200	40	238.6	184.1	51.7	51.4	286.8	203.1	54.3	54.1	337.4	220.7	57.1	56.9
			45	194.1	165.7	54.1	53.8	245.1	186.8	56.4	56.2	297.4	205.8	59.1	58.8
			50	—	—	—	—	196.2	168.3	58.8	58.5	251.0	189.3	61.2	60.9
	14	4800	40	197.1	140.0	48.4	48.3	240.0	156.4	50.3	50.2	284.8	171.6	52.4	52.3
			45	157.1	122.6	51.7	51.6	203.3	141.1	53.2	53.1	249.6	157.5	55.1	55.0
			50	—	—	—	—	—	—	—	—	208.9	142.1	58.1	58.0
		6000	40	224.2	165.2	49.9	49.8	270.5	183.2	52.2	52.1	318.9	199.6	54.7	54.6
			45	181.5	147.1	52.7	52.6	230.9	167.1	54.7	54.6	281.3	185.1	57.0	56.9
			50	—	—	—	—	183.8	149.0	57.5	57.4	237.1	168.9	59.5	59.4
		7200	40	246.2	188.5	51.1	51.0	294.9	207.6	53.7	53.6	345.5	224.8	56.6	56.5
			45	201.5	169.6	53.6	53.4	253.4	190.9	55.9	55.7	306.2	210.1	58.5	58.4
			50	—	—	—	—	204.0	172.2	58.3	58.1	259.9	193.5	60.7	60.5

Notes:
1. Blank spaces in the data, designated by a dash (—) indicate coil data is not available at that condition due to the distributor loading.
2. TC = Total capacity (MBh)
3. SC = Sensible capacity (MBh)
4. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (ºF)
5. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (ºF)
6. Subcooled refrigerant liquid temperature entering thermostatic expansion valve = 110ºF

Table 55. Unit size 14 DX cooling capacities, R-22

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	5600	40	175.3	133.4	53.3	52.2	—	—	—	—	—	—	—	—
			45	131.8	115.3	56.3	55.1	177.8	134.1	58.2	57.0	—	—	—	—
			50	94.1	94.1	59.7	57.4	131.2	116.5	61.1	59.8	179.9	135.0	63.2	61.8
		7000	40	196.9	155.5	54.8	53.4	—	—	—	—	—	—	—	—
			45	150.7	136.6	57.3	55.8	199.6	156.9	59.6	58.1	—	—	—	—
			50	110.5	110.5	60.7	57.8	150.1	138.6	62.0	60.4	201.6	158.5	64.5	62.8
		8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	166.6	156.1	58.1	56.4	216.9	177.4	60.8	59.0	—	—	—	—
			50	125.1	125.1	61.5	58.1	166.3	158.9	62.9	61.0	219.0	179.7	65.6	63.6
	12	5600	40	192.9	144.4	51.5	50.9	—	—	—	—	—	—	—	—
			45	148.1	125.7	54.6	54.0	196.6	145.4	56.4	55.8	—	—	—	—
			50	105.2	105.2	57.9	56.7	148.0	126.9	59.4	58.8	199.8	146.4	61.3	60.6
		7000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	170.1	149.8	55.5	54.8	221.1	170.9	57.8	57.0	—	—	—	—
			50	123.7	120.2	58.9	57.1	170.1	151.9	60.3	59.5	224.2	172.6	62.7	61.8
		8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	187.9	171.7	56.4	55.5	—	—	—	—	—	—	—	—
			50	140.6	140.6	59.8	57.5	188.1	174.7	61.1	60.1	—	—	—	—
	14	5600	40	201.6	149.5	50.7	50.3	—	—	—	—	—	—	—	—
			45	156.4	130.4	53.8	53.4	205.9	150.5	55.6	55.2	—	—	—	—
			50	110.9	108.1	57.0	56.4	156.6	131.7	58.7	58.3	209.6	151.5	60.5	60.1
		7000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	179.6	155.7	54.8	54.3	—	—	—	—	—	—	—	—
			50	130.7	127.2	58.0	56.8	180.0	157.8	59.5	59.0	235.6	179.1	61.8	61.3
		8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	198.5	178.8	55.6	55.0	—	—	—	—	—	—	—	—
			50	148.6	144.4	58.9	57.1	199.0	181.9	60.4	59.7	—	—	—	—
6															
	9	5600	40	201.9	149.4	50.7	50.3	245.9	166.5	52.9	52.5	290.9	181.8	55.5	55.1
			45	161.5	132.3	53.5	53.1	207.8	151.0	55.5	55.1	255.4	168.1	57.7	57.3
			50	—	—	—	—	—	—	—	—	213.0	152.5	60.3	59.9
		7000	40	226.1	174.6	52.3	51.8	273.1	193.2	54.9	54.4	321.4	209.9	57.8	57.2
			45	183.7	157.0	54.6	54.1	232.4	177.2	57.0	56.5	283.3	195.7	59.6	59.1
			50	—	—	—	—	—	—	—	—	238.2	179.6	61.8	61.2
		8400	40	245.3	197.4	53.6	53.0	294.2	217.2	56.5	55.8	344.7	235.2	59.6	58.9
			45	201.6	179.7	55.5	54.9	252.0	201.0	58.3	57.6	304.8	220.7	61.2	60.4
			50	—	—	—	—	—	—	—	—	258.2	204.5	63.0	62.2
	12	5600	40	213.7	156.0	49.6	49.5	258.1	173.3	51.8	51.7	304.4	188.9	54.3	54.2
			45	173.5	138.9	52.4	52.3	220.7	157.8	54.4	54.2	268.7	175.1	56.6	56.5
			50	—	—	—	—	176.1	140.5	57.2	57.1	227.1	159.4	59.2	59.0
		7000	40	240.1	182.9	51.2	51.0	287.2	201.3	53.8	53.6	336.6	218.3	56.7	56.5
			45	197.4	165.1	53.5	53.3	247.5	185.7	55.9	55.7	298.7	204.1	58.5	58.3
			50	—	—	—	—	200.4	167.8	58.2	58.0	254.6	188.3	60.6	60.4
		8400	40	260.7	207.4	52.5	52.3	309.4	227.0	55.4	55.2	361.2	245.3	58.5	58.2
			45	217.0	189.5	54.5	54.2	269.0	211.3	57.1	56.9	322.2	231.1	60.1	59.8
			50	166.9	162.7	56.9	56.4	220.4	193.2	59.1	58.8	276.5	215.1	61.8	61.5
	14	5600	40	219.1	158.5	49.2	49.1	263.4	175.5	51.4	51.3	309.9	191.2	53.9	53.8
			45	178.9	141.3	52.0	51.9	226.7	160.4	53.9	53.8	274.9	177.5	56.2	56.1
			50	—	—	—	—	181.9	143.0	56.8	56.7	233.8	162.1	58.7	58.6
		7000	40	246.3	186.2	50.7	50.6	293.8	204.7	53.4	53.3	343.1	221.6	56.2	56.1
			45	203.8	168.4	53.1	53.0	254.6	189.2	55.4	55.3	306.1	207.8	58.1	58.0
			50	—	—	—	—	207.3	171.2	57.8	57.7	262.3	192.0	60.1	60.0
		8400	40	268.0	211.5	52.1	51.9	317.4	231.2	55.0	54.8	368.3	249.2	58.1	57.9
			45	224.1	193.5	54.0	53.9	276.9	215.5	56.7	56.5	330.5	235.4	59.6	59.4
			50	173.5	169.3	56.2	56.1	228.1	197.3	58.7	58.5	285.1	219.4	61.3	61.2

Notes:
1. Blank spaces in the data, designated by a dash (—) indicate coil data is not available at that condition due to the distributor loading.
2. TC = Total capacity (MBh)
3. SC = Sensible capacity (MBh)
4. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (ºF)
5. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (ºF)
6. Subcooled refrigerant liquid temperature entering thermostatic expansion valve = 110ºF

Table 56. Unit size 17 DX cooling capacities, R-22

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	6800	40	211.6	161.1	53.4	52.2	267.8	183.4	55.4	54.2	324.8	203.3	57.8	56.6
			45	157.2	138.6	56.5	55.2	214.3	161.9	58.4	57.1	274.8	184.1	60.4	59.1
			50	112.0	112.0	60.0	57.6	155.9	140.0	61.3	59.9	216.3	162.9	63.3	61.9
		8500	40	239.1	188.5	54.8	53.4	299.5	212.6	57.2	55.7	360.7	234.2	60.0	58.4
			45	180.1	164.4	57.4	55.9	241.9	190.1	59.7	58.1	306.6	213.9	62.2	60.5
			50	131.6	131.6	60.9	57.9	179.0	166.7	62.2	60.6	243.9	191.7	64.6	62.8
		10200	40	261.1	212.7	56.0	54.3	324.5	238.5	58.7	57.0	389.1	261.6	61.7	59.8
			45	199.7	188.0	58.2	56.5	263.7	215.1	60.9	59.0	331.5	240.5	63.6	61.7
			50	149.2	149.2	61.7	58.2	198.8	191.2	63.0	61.1	265.6	217.5	65.7	63.6
	12	6800	40	234.8	175.5	51.5	50.9	293.5	198.6	53.4	52.8	353.9	219.5	55.6	55.1
			45	177.4	151.4	54.7	54.1	238.9	176.4	56.4	55.8	301.9	199.3	58.4	57.7
			50	125.3	121.9	58.3	56.9	176.8	152.9	59.6	58.9	241.9	177.4	61.4	60.7
		8500	40	265.7	206.0	52.9	52.2	328.8	231.1	55.3	54.5	394.2	253.9	57.9	57.1
			45	204.3	180.7	55.7	54.9	269.9	207.8	57.8	57.0	337.3	232.6	60.2	59.3
			50	147.8	143.6	59.2	57.2	203.8	183.1	60.5	59.6	273.1	209.6	62.7	61.8
		10200	40	290.4	233.4	54.2	53.2	356.5	260.1	56.8	55.8	425.2	284.5	59.7	58.7
			45	227.3	207.8	56.5	55.5	294.6	236.1	59.0	58.0	365.0	262.5	61.7	60.6
			50	168.4	168.4	60.0	57.5	227.0	211.3	61.2	60.2	297.8	238.9	63.8	62.7
	14	6800	40	246.1	182.0	50.6	50.2	306.1	205.4	52.5	52.1	367.8	226.7	54.7	54.3
			45	187.8	157.4	53.9	53.6	250.9	183.0	55.5	55.1	315.0	206.2	57.5	57.1
			50	132.2	128.8	57.3	56.5	187.5	158.8	58.8	58.4	254.9	184.0	60.5	60.0
		8500	40	278.9	214.1	52.0	51.6	343.1	239.5	54.4	53.9	410.2	262.7	56.9	56.4
			45	216.9	188.4	54.8	54.3	283.9	215.9	56.9	56.4	352.4	241.0	59.3	58.7
			50	156.2	152.0	58.3	56.9	216.8	190.7	59.6	59.1	287.8	217.8	61.8	61.2
		10200	40	305.2	243.0	53.3	52.7	372.2	270.0	55.9	55.3	443.3	295.0	58.7	58.1
			45	240.8	216.8	55.7	55.0	310.2	245.9	58.1	57.4	381.9	272.6	60.8	60.1
			50	178.1	178.1	59.1	57.2	241.0	220.3	60.4	59.7	314.2	248.8	62.9	62.2
6															
	9	6800	40	249.3	183.1	50.4	50.1	305.7	205.1	52.5	52.1	363.5	224.8	54.9	54.5
			45	196.5	160.7	53.5	53.1	255.8	184.7	55.3	54.9	317.1	206.6	57.4	57.0
			50	140.8	138.5	56.5	56.1	197.7	162.3	58.3	57.9	262.0	186.3	60.2	59.7
		8500	40	280.8	214.4	52.0	51.5	341.5	238.3	54.5	53.9	403.7	259.8	57.2	56.7
			45	225.1	191.3	54.5	54.0	287.9	217.1	56.8	56.2	353.6	240.9	59.3	58.7
			50	164.7	164.7	57.4	56.5	226.7	194.0	59.3	58.7	294.4	219.7	61.6	61.0
		10200	40	305.5	242.7	53.3	52.7	369.3	268.2	56.1	55.4	434.7	291.3	59.1	58.3
			45	248.0	219.1	55.5	54.8	313.4	246.6	58.0	57.3	381.9	271.9	60.8	60.1
			50	186.1	181.0	58.4	56.9	250.2	223.0	60.2	59.4	320.2	250.3	62.8	62.0
	12	6800	40	265.1	191.9	49.3	49.1	322.3	213.9	51.3	51.2	381.7	234.3	53.6	53.5
			45	212.2	169.2	52.3	52.2	273.3	193.7	54.1	53.9	335.3	215.7	56.2	56.0
			50	153.2	145.4	55.6	55.4	214.8	170.9	57.2	57.0	280.6	195.3	58.9	58.8
		8500	40	299.5	225.4	50.8	50.6	360.7	249.3	53.3	53.1	424.6	271.2	56.0	55.8
			45	243.2	201.8	53.4	53.2	308.1	228.3	55.6	55.4	374.5	252.1	58.1	57.9
			50	179.4	176.5	56.1	55.9	246.2	204.6	58.1	57.9	316.2	231.0	60.4	60.1
		10200	40	326.6	255.9	52.1	51.9	390.5	281.2	54.9	54.6	457.5	304.8	57.9	57.6
			45	268.5	231.9	54.3	54.0	336.1	260.1	56.8	56.5	405.4	285.5	59.6	59.3
			50	202.9	197.8	56.9	56.3	271.9	236.0	59.0	58.7	344.6	264.1	61.6	61.2
	14	6800	40	272.4	195.3	48.8	48.7	329.7	217.3	50.9	50.8	389.7	237.5	53.2	53.1
			45	219.6	172.5	51.9	51.8	281.3	197.2	53.6	53.5	343.4	219.2	55.7	55.6
			50	159.1	148.0	55.2	55.1	222.8	174.3	56.7	56.6	289.3	198.9	58.5	58.4
		8500	40	308.0	229.9	50.3	50.2	369.5	253.8	52.8	52.7	433.9	275.8	55.5	55.4
			45	251.8	206.3	52.9	52.8	317.7	233.0	55.1	55.0	384.6	257.0	57.5	57.4
			50	186.9	180.4	55.7	55.6	255.4	209.1	57.7	57.6	326.6	235.9	59.8	59.7
		10200	40	336.6	261.4	51.6	51.5	400.9	286.9	54.4	54.3	467.9	310.2	57.4	57.2
			45	278.1	237.2	53.8	53.7	346.9	265.7	56.3	56.2	416.8	291.3	59.1	58.9
			50	211.4	210.9	56.2	56.1	282.2	241.4	58.5	58.4	356.3	269.8	61.0	60.9

Notes:
1. Blank spaces in the data, designated by a dash (—) indicate coil data is not available at that condition due to the distributor loading.
2. TC = Total capacity (MBh)
3. SC = Sensible capacity (MBh)
4. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (ºF)
5. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (ºF)
6. Subcooled refrigerant liquid temperature entering thermostatic expansion valve = 110ºF

Table 57. Unit size 21 DX cooling capacities, R-22

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	8400	40	256.7	197.0	53.6	52.5	—	—	—	—	—	—	—	—
			45	197.5	172.5	56.3	55.1	261.3	198.7	58.5	57.2	—	—	—	—
			50	142.5	142.3	59.6	57.4	197.2	174.6	61.1	59.8	265.1	200.4	63.4	61.9
		10500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	224.3	203.6	57.4	55.8	—	—	—	—	—	—	—	—
			50	166.4	166.4	60.6	57.8	224.3	207.0	62.1	60.5	294.4	234.3	64.8	63.0
		12600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	245.8	231.7	58.3	56.5	—	—	—	—	—	—	—	—
			50	187.7	187.7	61.5	58.1	246.2	236.3	63.0	61.0	—	—	—	—
	12	8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	220.7	187.7	54.7	54.1	286.5	214.6	56.8	56.1	—	—	—	—
			50	158.9	158.9	57.8	56.7	221.4	190.0	59.5	58.8	291.8	216.6	61.6	60.9
		10500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	250.3	222.3	55.7	55.0	—	—	—	—	—	—	—	—
			50	185.9	180.6	58.9	57.1	251.4	226.0	60.5	59.6	—	—	—	—
		12600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	274.2	254.0	56.7	55.7	—	—	—	—	—	—	—	—
			50	210.4	210.4	59.8	57.5	275.7	259.1	61.4	60.3	—	—	—	—
	14	8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	232.1	194.5	53.9	53.6	—	—	—	—	—	—	—	—
			50	167.4	163.2	56.9	56.3	233.3	196.7	58.7	58.3	305.2	223.8	60.9	60.4
		10500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	263.1	230.7	55.0	54.5	—	—	—	—	—	—	—	—
			50	195.9	190.7	58.0	56.8	264.9	234.5	59.7	59.2	—	—	—	—
		12600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	288.3	264.1	55.9	55.3	—	—	—	—	—	—	—	—
			50	221.8	221.8	59.0	57.2	290.5	269.4	60.6	59.9	—	—	—	—
6															
	9	8400	40	287.7	217.4	51.4	51.0	347.2	240.7	53.9	53.5	407.9	261.4	56.7	56.3
			45	234.9	195.3	53.8	53.4	296.9	220.5	56.1	55.7	361.4	243.8	58.7	58.2
			50	174.3	171.2	56.5	56.0	238.3	198.2	58.6	58.1	305.6	223.5	60.9	60.4
		10500	40	319.0	253.1	53.0	52.5	381.9	278.3	55.9	55.3	446.3	301.1	59.0	58.4
			45	264.1	230.7	55.0	54.5	329.2	257.9	57.7	57.1	397.0	283.0	60.6	59.9
			50	201.5	201.5	57.6	56.6	268.2	235.2	59.7	59.1	338.2	262.4	62.4	61.7
		12600	40	343.4	285.6	54.4	53.7	408.3	312.5	57.5	56.7	475.2	337.0	60.7	60.0
			45	287.9	263.3	56.0	55.3	354.3	292.1	59.0	58.2	424.0	318.8	62.1	61.3
			50	225.4	225.4	58.8	57.1	292.5	269.4	60.6	59.8	364.2	298.3	63.6	62.8
	12	8400	40	303.1	226.3	50.4	50.3	362.5	249.7	52.9	52.8	424.2	270.4	55.7	55.6
			45	250.4	204.1	52.9	52.7	313.8	229.7	55.1	55.0	378.1	253.3	57.6	57.5
			50	188.1	179.1	55.6	55.5	255.0	207.2	57.6	57.4	323.7	232.9	59.9	59.7
		10500	40	336.6	264.3	52.1	51.9	398.8	289.1	55.0	54.7	464.5	312.2	58.0	57.8
			45	282.0	241.8	54.0	53.8	348.4	269.5	56.7	56.5	415.7	294.3	59.6	59.3
			50	217.7	216.5	56.3	56.0	287.4	246.6	58.7	58.5	359.4	274.4	61.3	61.1
		12600	40	363.2	299.3	53.4	53.1	426.8	325.7	56.5	56.2	494.5	350.5	59.8	59.5
			45	307.7	276.8	55.0	54.7	375.9	306.3	57.9	57.6	445.1	332.9	61.1	60.7
			50	242.4	242.4	57.5	56.6	313.8	283.5	59.6	59.3	387.6	313.1	62.5	62.2
	14	8400	40	309.7	229.5	50.1	50.0	368.8	252.4	52.6	52.5	431.3	273.5	55.4	55.3
			45	257.4	207.4	52.5	52.4	321.3	233.2	54.7	54.6	386.0	256.2	57.3	57.2
			50	194.5	182.1	55.3	55.2	262.7	210.6	57.2	57.1	332.3	236.6	59.5	59.4
		10500	40	344.6	268.8	51.7	51.6	406.7	293.6	54.6	54.5	472.3	316.5	57.6	57.5
			45	290.2	246.3	53.6	53.5	357.3	274.3	56.3	56.2	425.3	299.1	59.2	59.0
			50	225.8	220.8	55.9	55.8	296.3	251.1	58.3	58.2	369.2	279.5	60.9	60.8
		12600	40	372.6	304.7	53.0	52.8	436.2	331.3	56.1	55.9	503.0	355.6	59.4	59.2
			45	316.8	282.3	54.6	54.5	385.8	312.0	57.5	57.3	455.9	338.8	60.6	60.5
			50	250.7	244.4	56.9	56.3	323.7	289.0	59.2	59.0	398.6	318.9	62.1	61.9

Notes:
1. Blank spaces in the data, designated by a dash (—) indicate coil data is not available at that condition due to the distributor loading.
2. TC = Total capacity (MBh)
3. SC = Sensible capacity (MBh)
4. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (ºF)
5. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (ºF)
6. Subcooled refrigerant liquid temperature entering thermostatic expansion valve = 110ºF

Table 58. Unit size 25 DX cooling capacities, R-22

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	10000	40	312.7	239.5	53.2	52.2	—	—	—	—	—	—	—	—
			45	243.0	210.6	55.8	54.8	318.7	241.7	58.0	56.9	—	—	—	—
			50	175.5	175.3	59.1	57.2	243.1	213.2	60.7	59.5	324.0	243.9	62.9	61.7
		12500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	275.5	248.7	56.9	55.6	—	—	—	—	—	—	—	—
			50	204.8	204.8	60.1	57.6	275.9	252.8	61.7	60.2	359.7	285.5	64.3	62.8
		15000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	301.4	283.1	57.8	56.3	382.3	318.0	60.8	59.1	468.3	350.9	63.8	62.1
			50	231.1	231.1	61.0	57.9	302.5	288.8	62.5	60.8	—	—	—	—
	12	10000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	269.8	227.6	54.3	53.8	—	—	—	—	—	—	—	—
			50	194.7	189.7	57.3	56.5	271.3	230.4	59.1	58.6	354.5	261.9	61.3	60.7
		12500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	305.0	269.5	55.4	54.7	—	—	—	—	—	—	—	—
			50	227.5	221.2	58.5	57.0	306.9	274.0	60.1	59.4	—	—	—	—
		15000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	333.8	308.0	56.3	55.5	—	—	—	—	—	—	—	—
			50	257.4	257.4	59.4	57.3	336.3	314.3	61.0	60.1	—	—	—	—
	14	10000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	282.1	234.8	53.6	53.3	—	—	—	—	—	—	—	—
			50	204.5	199.5	56.5	56.1	284.3	237.6	58.4	58.1	—	—	—	—
		12500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	319.4	278.6	54.7	54.3	—	—	—	—	—	—	—	—
			50	239.3	233.1	57.6	56.6	322.1	283.2	59.4	59.0	—	—	—	—
		15000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	—	—	—	—	—	—	—	—	—	—	—	—
			50	270.2	270.2	58.6	57.0	353.1	325.6	60.3	59.7	—	—	—	—
6															
	9	10000	40	345.1	260.9	51.2	50.9	415.5	288.3	53.7	53.4	487.2	312.8	56.6	56.2
			45	283.8	235.2	53.6	53.3	357.0	265.0	55.9	55.6	433.0	292.3	58.5	58.1
			50	—	—	—	—	288.4	238.9	58.3	58.0	368.0	268.8	60.6	60.3
		12500	40	382.8	304.0	52.8	52.4	456.5	333.6	55.7	55.3	532.5	360.5	58.8	58.4
			45	318.9	277.9	54.8	54.3	395.7	310.1	57.5	57.0	475.1	339.6	60.4	59.9
			50	—	—	—	—	324.3	283.5	59.4	58.9	407.1	315.8	62.1	61.6
		15000	40	412.3	343.4	54.2	53.6	487.6	374.8	57.3	56.7	566.5	403.9	60.6	60.0
			45	347.4	317.4	55.8	55.2	425.6	351.5	58.7	58.1	507.0	382.8	61.9	61.2
			50	273.3	273.3	58.5	57.0	353.6	325.1	60.3	59.7	438.2	359.3	63.3	62.7
	12	10000	40	362.0	270.3	50.3	50.2	431.7	297.4	52.9	52.8	504.2	322.1	55.7	55.6
			45	300.8	244.6	52.7	52.6	375.4	274.8	55.0	54.9	450.9	301.8	57.6	57.5
			50	—	—	—	—	306.9	248.4	57.4	57.3	388.2	278.9	59.7	59.6
		12500	40	402.0	315.9	52.0	51.8	474.5	344.9	54.9	54.7	551.4	371.9	58.0	57.8
			45	338.5	289.7	53.9	53.8	416.7	322.3	56.6	56.4	495.9	351.6	59.5	59.3
			50	263.3	260.0	56.1	55.9	345.5	295.6	58.5	58.4	430.5	328.4	61.2	61.0
		15000	40	433.6	357.9	53.3	53.1	508.6	388.9	56.4	56.2	586.9	417.9	59.7	59.5
			45	369.1	331.8	54.9	54.7	449.4	366.6	57.8	57.6	530.8	398.0	61.0	60.7
			50	292.2	292.1	57.3	56.5	377.1	340.0	59.4	59.2	464.1	375.0	62.4	62.1
	14	10000	40	369.3	273.5	50.0	49.9	438.8	300.4	52.6	52.5	511.9	325.0	55.4	55.3
			45	308.5	247.7	52.4	52.3	383.5	278.0	54.7	54.6	459.2	305.1	57.3	57.2
			50	—	—	—	—	315.3	251.7	57.1	57.0	397.2	282.2	59.4	59.3
		12500	40	410.6	320.1	51.7	51.6	483.7	349.3	54.6	54.5	559.8	375.9	57.7	57.6
			45	347.6	294.0	53.6	53.5	426.3	326.9	56.2	56.1	505.8	356.3	59.1	59.0
			50	272.0	264.1	55.8	55.7	355.2	300.1	58.2	58.1	441.1	333.3	60.8	60.7
		15000	40	443.3	363.6	52.9	52.8	518.3	395.0	56.1	56.0	595.8	423.4	59.4	59.3
			45	379.1	337.6	54.5	54.4	460.4	372.5	57.4	57.3	542.4	404.0	60.6	60.5
			50	301.4	293.9	56.7	56.3	388.1	345.8	59.1	59.0	476.3	381.0	62.0	61.9

Notes:
1. Blank spaces in the data, designated by a dash (—) indicate coil data is not available at that condition due to the distributor loading.
2. TC = Total capacity (MBh)
3. SC = Sensible capacity (MBh)
4. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
5. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)
6. Subcooled refrigerant liquid temperature entering thermostatic expansion valve = 110°F

Table 59. Unit size 30 DX cooling capacities, R-22

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	12000	40	383.6	290.7	52.9	51.9	499.5	336.9	54.4	53.4	618.6	379.0	56.2	55.2
			45	277.5	247.0	56.3	55.2	386.3	291.2	57.9	56.8	511.3	337.0	59.5	58.4
			50	—	—	—	—	274.1	249.4	61.2	60.0	387.6	292.0	62.9	61.7
		15000	40	440.4	343.2	54.1	52.9	569.9	394.9	56.0	54.7	—	—	—	—
			45	320.7	294.4	57.1	55.8	442.9	344.6	59.1	57.7	581.5	395.6	61.1	59.6
			50	—	—	—	—	317.1	298.2	62.0	60.5	443.7	346.3	64.1	62.6
		18000	40	488.7	391.7	55.2	53.7	626.2	445.9	57.4	55.9	—	—	—	—
			45	358.9	338.3	57.9	56.3	490.9	393.2	60.2	58.5	637.4	447.5	62.4	60.7
			50	263.6	263.6	61.7	58.2	354.7	343.5	62.7	61.0	491.2	396.1	65.1	63.3
	12	12000	40	430.1	317.6	50.8	50.4	555.3	367.1	52.1	51.6	—	—	—	—
			45	314.2	269.3	54.6	54.1	435.0	318.0	55.9	55.4	569.1	366.9	57.2	56.7
			50	—	—	—	—	311.3	271.3	59.5	58.9	438.5	318.6	60.9	60.4
		15000	40	497.8	377.6	52.0	51.4	—	—	—	—	—	—	—	—
			45	366.9	323.6	55.4	54.7	502.8	387.9	57.0	56.3	648.6	432.2	58.8	58.1
			50	259.9	259.9	59.3	57.3	362.5	326.6	60.3	59.5	506.1	380.5	62.0	61.3
		18000	40	554.1	431.8	53.1	52.4	—	—	—	—	—	—	—	—
			45	412.0	373.6	56.1	55.3	558.9	434.3	58.1	57.2	—	—	—	—
			50	297.5	297.5	60.0	57.5	408.7	378.6	60.9	60.0	561.8	437.1	63.0	62.1
	14	12000	40	453.9	330.4	49.9	49.6	581.8	380.9	51.0	50.8	—	—	—	—
			45	333.4	279.7	53.8	53.5	460.2	330.7	54.9	54.6	597.5	380.5	56.1	55.9
			50	—	—	—	—	330.9	281.4	58.7	58.4	465.2	331.1	60.0	59.6
		15000	40	527.7	394.1	51.0	50.7	—	—	—	—	—	—	—	—
			45	390.6	337.0	54.5	54.1	534.3	395.4	56.0	55.6	—	—	—	—
			50	274.5	267.0	58.4	56.9	387.6	340.0	59.4	59.0	538.7	396.8	61.0	60.5
		18000	40	587.0	451.0	52.1	51.7	—	—	—	—	—	—	—	—
			45	440.6	390.5	55.2	54.7	593.3	453.4	57.1	56.5	—	—	—	—
			50	315.1	315.1	59.1	57.2	437.1	395.2	60.1	59.5	597.7	456.1	62.0	61.4
6															
	9	12000	40	474.3	339.3	49.2	48.9	597.0	387.4	50.6	50.3	721.9	430.7	52.3	52.0
			45	360.2	290.3	53.0	52.7	484.8	340.4	54.2	53.9	617.4	388.1	55.6	55.3
			50	250.4	246.4	56.3	56.0	360.2	291.8	57.9	57.6	494.3	341.5	59.2	58.8
		15000	40	547.9	402.7	50.5	50.1	682.4	455.3	52.3	51.9	820.2	502.8	54.5	54.1
			45	419.2	348.2	53.9	53.4	559.1	404.9	55.4	55.0	704.0	456.9	57.3	56.9
			50	296.2	288.7	57.1	56.4	419.1	351.1	58.8	58.3	568.9	407.0	60.4	59.9
		18000	40	510.2	459.4	51.7	51.2	751.5	515.9	53.9	53.4	899.0	567.0	56.4	55.8
			45	470.3	402.2	54.7	54.1	619.2	463.0	56.6	56.0	772.8	518.8	58.8	58.2
			50	337.8	328.8	57.9	56.8	470.3	406.7	59.5	58.9	629.0	466.6	61.5	60.9
	12	12000	40	510.3	357.9	47.8	47.7	635.4	406.6	49.1	49.0	765.1	451.3	50.7	50.6
			45	392.1	306.4	51.7	51.6	523.7	359.1	52.7	52.6	658.9	407.5	54.1	54.0
			50	273.1	258.2	55.4	55.3	393.7	307.7	56.7	56.6	536.1	360.2	57.7	57.6
		15000	40	591.2	426.0	49.1	48.9	729.1	479.5	50.9	50.7	872.9	529.3	52.9	52.8
			45	459.3	369.4	52.6	52.4	605.4	428.1	54.0	53.9	754.2	481.2	55.8	55.7
			50	324.5	315.2	55.9	55.7	461.1	372.0	57.5	57.3	618.1	430.2	59.0	58.8
		18000	40	657.7	487.4	50.3	50.1	805.1	544.7	52.4	52.2	959.9	599.8	54.7	54.6
			45	517.8	428.3	53.3	53.1	672.5	491.0	55.2	55.0	831.4	548.0	57.3	57.1
			50	370.9	370.0	56.3	56.1	520.0	432.6	58.2	57.9	685.5	494.6	60.1	59.8
	14	12000	40	527.5	365.6	47.2	47.1	652.7	414.3	48.5	48.4	784.4	459.6	50.1	50.0
			45	407.8	312.9	51.2	51.1	542.1	366.8	52.2	52.1	678.1	415.2	53.5	53.4
			50	284.1	262.5	55.1	55.0	410.0	314.0	56.2	56.1	555.1	367.4	57.2	57.1
		15000	40	612.2	435.7	48.5	48.4	750.9	489.4	50.2	50.1	895.8	539.1	52.3	52.2
			45	478.8	378.3	52.0	51.9	627.4	437.9	53.4	53.3	778.6	491.5	55.2	55.1
			50	338.8	321.7	55.5	55.4	481.8	380.9	56.9	56.8	641.8	440.0	58.4	58.3
		18000	40	681.6	499.6	494.7	49.6	831.1	557.6	51.8	51.7	987.3	610.8	54.1	54.0
			45	541.5	440.1	52.7	52.6	698.2	503.3	54.6	54.4	859.7	561.3	56.7	56.6
			50	388.3	378.9	55.9	55.8	544.6	444.1	57.6	57.5	713.1	506.8	59.5	59.3

Notes:
1. Blank spaces in the data, designated by a dash (—) indicate coil data is not available at that condition due to the distributor loading.
2. TC = Total capacity (MBh)
3. SC = Sensible capacity (MBh)
4. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (ºF)
5. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (ºF)
6. Subcooled refrigerant liquid temperature entering thermostatic expansion valve = 110ºF

Cooling Capacities - DX Coil, R-410A

Table 60. Unit size 3 DX cooling capacities, R-410A

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	1200	40	35.9	27.7	53.9	52.7	46.0	31.8	55.9	54.6	—	—	—	—
			45	26.6	23.9	56.9	55.6	36.2	27.9	58.9	57.5	47.0	31.8	60.9	59.5
			50	19.0	19.0	60.6	57.8	26.4	24.2	61.7	60.3	36.4	28.0	63.8	62.3
		1500	40	40.6	32.5	55.3	53.8	—	—	—	—	—	—	—	—
			45	30.4	28.3	57.8	56.2	40.9	32.7	60.2	58.5	—	—	—	—
			50	22.4	22.4	61.4	58.1	30.2	28.8	62.6	60.8	41.0	33.0	65.1	63.2
		1800	40	44.4	36.7	56.4	54.6	—	—	—	—	—	—	—	—
			45	33.7	32.4	58.6	56.8	44.7	37.1	61.3	59.3	—	—	—	—
			50	25.4	25.4	62.2	58.4	33.5	33.0	63.4	61.3	44.8	37.5	66.1	64.0
	12	1200	40	40.4	30.5	51.8	51.2	—	—	—	—	—	—	—	—
			45	30.3	26.2	55.1	54.4	40.9	30.6	56.8	56.1	—	—	—	—
			50	21.4	21.4	58.8	57.1	30.1	26.5	59.9	59.2	41.3	30.7	61.8	61.0
		1500	40	45.9	35.9	53.2	52.4	—	—	—	—	—	—	—	—
			45	34.8	31.3	56.0	55.2	46.4	36.1	58.1	57.2	—	—	—	—
			50	25.4	25.4	59.6	57.4	34.7	31.7	60.8	59.9	46.8	36.4	63.0	62.1
		1800	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	38.7	35.9	56.8	55.8	51.0	41.1	59.2	58.1	—	—	—	—
			50	28.9	28.9	60.4	57.7	38.6	36.6	61.6	60.4	51.3	41.6	64.1	62.9
	14	1200	40	42.7	31.8	50.8	50.5	—	—	—	—	—	—	—	—
			45	32.2	27.3	54.2	53.8	43.4	31.9	55.8	55.4	—	—	—	—
			50	22.7	22.7	57.8	56.7	32.1	27.6	59.1	58.7	43.9	32.0	60.8	60.3
		1500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	37.1	32.7	55.1	54.6	49.4	37.7	57.1	56.6	—	—	—	—
			50	26.9	26.9	58.7	57.0	37.0	33.1	60.0	59.4	49.8	38.0	62.0	61.4
		1800	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	41.3	37.7	56.0	55.3	—	—	—	—	—	—	—	—
			50	30.7	30.7	59.5	57.4	41.2	38.3	60.7	60.0	54.8	43.5	63.1	62.3
6															
	9	1200	40	46.9	33.7	49.4	49.1	58.4	38.1	51.0	50.7	70.5	42.3	52.9	52.6
			45	36.5	29.2	52.8	52.5	48.2	33.9	54.3	53.9	60.8	38.4	55.9	55.6
			50	—	—	—	—	—	—	—	—	49.4	34.1	59.2	58.8
		1500	40	53.6	39.7	50.8	50.4	66.4	44.7	52.8	52.4	79.9	49.3	55.0	54.6
			45	42.1	34.8	53.8	53.4	55.1	40.1	55.7	55.2	69.1	45.1	57.7	57.2
			50	—	—	—	—	42.4	35.3	58.6	58.2	56.4	40.5	60.5	60.0
		1800	40	59.2	45.2	52.1	51.6	72.9	50.6	54.4	53.8	87.3	55.6	56.9	56.3
			45	46.9	40.1	54.7	54.1	60.8	45.8	56.9	56.3	75.7	51.2	59.2	58.5
			50	—	—	—	—	47.2	40.7	59.5	58.8	62.2	46.3	61.7	61.0
	12	1200	40	50.2	35.4	48.0	47.9	62.1	40.0	49.6	49.5	74.7	44.3	51.3	51.2
			45	39.6	30.8	51.6	51.5	51.9	35.7	52.9	52.8	64.8	40.3	54.4	54.3
			50	—	—	—	—	40.1	31.0	56.5	56.4	53.4	35.9	57.8	57.7
		1500	40	57.8	42.0	49.5	49.3	70.9	47.1	51.4	51.2	85.0	51.9	53.5	53.4
			45	45.9	36.9	52.6	52.4	59.6	42.4	54.3	54.1	74.0	47.5	56.2	56.0
			50	—	—	—	—	46.5	37.3	57.4	57.2	61.3	42.8	59.1	58.9
		1800	40	64.0	47.9	50.7	50.5	78.1	53.4	52.9	52.7	93.2	58.6	55.4	55.1
			45	51.3	42.6	53.4	53.2	66.0	48.5	55.4	55.2	81.4	54.1	57.7	57.4
			50	—	—	—	—	52.0	43.2	58.2	58.0	67.8	49.1	60.2	60.0
	14	1200	40	51.8	36.1	47.5	47.4	63.8	40.7	49.0	48.9	76.5	45.1	50.7	50.6
			45	41.1	31.4	51.1	51.0	53.6	36.4	52.4	52.3	66.7	41.0	53.8	53.7
			50	—	—	—	—	41.7	31.6	56.0	55.9	55.3	36.6	57.3	57.2
		1500	40	59.7	42.9	48.9	48.8	73.1	48.0	50.8	50.7	87.2	52.8	52.9	52.8
			45	47.8	37.7	52.1	52.0	61.7	43.3	53.7	53.6	76.4	48.5	55.5	55.4
			50	—	—	—	—	48.5	38.1	56.9	56.8	63.7	43.8	58.5	58.4
		1800	40	66.3	49.1	50.1	50.0	80.7	54.7	52.3	52.2	—	—	—	—
			45	53.5	43.7	52.9	52.8	68.5	49.8	54.8	54.7	84.3	55.4	57.0	56.9
			50	—	—	—	—	54.2	44.3	57.6	57.5	70.6	50.4	59.6	59.5

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
4. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)

Table 61. Unit size 6 DX cooling capacities, R-410A

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	2400	40	73.6	56.2	53.6	52.4	—	—	—	—	—	—	—	—
			45	55.7	48.8	56.5	55.2	74.5	56.6	58.6	57.2	—	—	—	—
			50	40.1	40.1	59.8	57.5	55.5	49.4	61.3	59.9	75.2	56.9	63.5	62.0
		3000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	63.3	57.7	57.5	55.9	83.6	66.1	60.0	58.3	—	—	—	—
			50	47.0	47.0	60.8	57.8	63.1	58.5	62.3	60.6	84.3	66.8	64.8	63.0
		3600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	69.6	65.7	58.4	56.6	—	—	—	—	—	—	—	—
			50	53.0	53.0	61.6	58.2	69.5	66.9	63.1	61.1	—	—	—	—
	12	2400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	63.1	53.5	54.7	54.0	83.6	61.9	56.5	55.9	—	—	—	—
			50	45.3	45.2	57.9	56.7	63.1	54.1	59.5	58.8	84.8	62.2	61.5	60.7
		3000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	72.0	63.6	55.7	54.9	—	—	—	—	—	—	—	—
			50	53.0	51.5	58.9	57.1	72.0	64.4	60.5	59.6	—	—	—	—
		3600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	79.5	72.8	56.6	55.6	—	—	—	—	—	—	—	—
			50	60.0	60.0	59.9	57.5	79.5	74.0	61.3	60.2	—	—	—	—
	14	2400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	66.9	55.7	53.8	53.5	—	—	—	—	—	—	—	—
			50	48.0	46.7	56.9	56.3	67.0	56.2	58.7	58.3	89.7	64.7	60.5	60.1
		3000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	76.6	66.3	54.9	54.3	—	—	—	—	—	—	—	—
			50	56.3	54.7	58.0	56.8	76.7	67.2	59.7	59.1	—	—	—	—
		3600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	84.7	76.1	55.7	55.1	—	—	—	—	—	—	—	—
			50	63.6	63.5	58.9	57.1	84.9	77.4	60.5	59.7	—	—	—	—
6															
	9	2400	40	92.1	66.3	49.8	49.4	113.3	74.6	51.7	51.3	135.5	82.1	53.8	53.4
			45	73.2	58.2	52.9	52.5	95.0	67.0	54.6	54.2	118.4	75.3	56.5	56.0
			50	—	—	—	—	74.1	58.8	57.7	57.3	98.0	67.6	59.4	58.9
		3000	40	104.4	77.8	51.3	50.8	127.8	86.9	53.6	53.0	152.2	95.3	56.1	55.5
			45	83.7	69.1	54.0	53.4	107.8	78.8	56.1	55.5	133.5	88.0	58.3	57.7
			50	—	—	—	—	84.9	70.1	58.8	58.2	110.9	79.8	60.9	60.2
		3600	40	114.2	88.1	52.7	52.0	139.3	98.0	55.2	54.5	—	—	—	—
			45	92.5	79.1	55.0	54.3	117.9	89.6	57.4	56.6	145.3	99.6	59.9	59.1
			50	69.5	69.4	57.5	56.6	93.8	80.5	59.7	58.9	121.4	91.0	62.1	61.3
	12	2400	40	98.2	69.7	48.5	48.3	120.0	78.1	50.3	50.2	143.0	85.9	52.4	52.2
			45	79.0	61.4	51.7	51.5	101.8	70.4	53.2	53.1	125.8	78.9	55.0	54.9
			50	—	—	—	—	80.5	62.0	56.5	56.3	105.3	71.1	58.1	57.9
		3000	40	111.7	82.1	50.0	49.8	135.8	91.4	52.2	52.0	—	—	—	—
			45	90.9	73.2	52.8	52.5	115.9	83.2	54.7	54.5	142.4	92.7	56.9	56.7
			50	—	—	—	—	92.5	74.2	57.5	57.3	119.9	84.3	59.5	59.2
		3600	40	122.8	93.3	51.3	51.1	148.4	103.3	53.8	53.5	—	—	—	—
			45	100.7	84.1	53.7	53.4	127.4	95.0	56.0	55.7	155.4	105.1	58.5	58.1
			50	76.2	74.3	56.2	55.9	102.6	85.6	58.4	58.1	131.7	96.5	60.7	60.3
	14	2400	40	100.9	71.0	48.0	47.9	123.0	79.5	49.8	49.7	146.2	87.3	51.8	51.7
			45	81.8	62.6	51.2	51.1	104.9	71.8	52.7	52.6	129.2	80.4	54.5	54.4
			50	—	—	—	—	—	—	—	—	108.8	72.6	57.5	57.4
		3000	40	115.2	83.9	49.5	49.4	139.4	93.2	51.7	51.6	—	—	—	—
			45	94.2	74.9	52.2	52.1	119.7	85.1	54.1	54.0	146.4	94.6	56.3	56.2
			50	—	—	—	—	96.2	76.0	57.0	56.9	124.1	86.3	58.9	58.8
		3600	40	126.8	95.5	50.8	50.6	152.5	105.5	53.3	53.1	—	—	—	—
			45	104.7	86.2	53.2	53.0	131.9	97.3	55.4	55.2	160.1	107.4	57.9	57.7
			50	—	—	—	—	106.9	87.7	57.8	57.7	136.7	98.9	60.1	59.9

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
4. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)

Table 62. Unit size 8 DX cooling capacities, R-410A

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	3200	40	106.9	79.4	52.3	51.3	—	—	—	—	—	—	—	—
			45	81.4	68.7	55.4	54.4	108.7	79.8	57.3	56.2	—	—	—	—
			50	57.8	57.7	58.6	57.0	81.3	69.3	60.3	59.1	110.3	80.2	62.3	61.0
		4000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	92.8	81.2	56.5	55.2	—	—	—	—	—	—	—	—
			50	67.6	67.5	59.6	57.4	92.7	82.3	61.3	59.9	124.4	94.3	63.6	62.1
		4800	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	102.4	92.6	57.4	55.8	—	—	—	—	—	—	—	—
			50	76.4	76.3	60.5	57.8	102.4	94.1	62.2	60.5	—	—	—	—
	12	3200	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	91.1	74.7	53.7	53.2	—	—	—	—	—	—	—	—
			50	64.7	64.2	56.8	56.2	91.4	75.3	58.6	58.1	122.8	87.0	60.3	59.8
		4000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	104.5	88.8	54.8	54.1	—	—	—	—	—	—	—	—
			50	76.0	75.9	57.7	56.7	104.7	89.9	59.6	58.9	—	—	—	—
		4800	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	115.7	101.8	55.7	54.9	—	—	—	—	—	—	—	—
			50	86.0	85.8	58.7	57.1	116.0	103.3	60.4	59.5	—	—	—	—
	14	3200	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	96.0	77.4	52.9	52.7	—	—	—	—	—	—	—	—
			50	68.3	66.3	56.1	55.8	96.5	78.0	57.8	57.5	—	—	—	—
		4000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	110.4	92.3	54.0	53.6	—	—	—	—	—	—	—	—
			50	80.3	78.2	56.8	56.3	111.0	93.3	58.8	58.3	—	—	—	—
		4800	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	—	—	—	—	—	—	—	—	—	—	—	—
			50	91.0	90.8	57.8	56.7	123.2	107.6	59.6	59.0	—	—	—	—
6															
	9	3200	40	126.8	90.5	49.2	48.9	156.2	101.9	50.9	50.6	186.9	112.4	53.0	52.7
			45	100.7	79.3	52.4	52.1	130.9	91.3	54.0	53.7	163.2	102.8	55.8	55.4
			50	—	—	—	—	102.1	80.0	57.3	56.9	135.0	92.1	58.9	58.5
		4000	40	144.2	106.4	50.7	50.3	176.9	119.1	52.8	52.4	210.9	130.7	55.2	54.8
			45	115.7	94.3	53.5	53.1	149.1	107.8	55.5	55.0	184.7	120.5	57.6	57.1
			50	—	—	—	—	117.2	95.5	58.3	57.8	153.4	109.0	60.3	59.8
		4800	40	158.5	120.8	52.0	51.5	193.5	134.6	54.5	53.9	—	—	—	—
			45	128.2	108.2	54.5	53.9	163.7	122.7	56.7	56.1	201.8	136.5	59.2	58.5
			50	95.8	95.4	56.9	56.3	130.0	109.9	59.2	58.6	168.6	124.5	61.5	60.8
	12	3200	40	134.9	94.8	47.9	47.8	165.0	106.4	49.6	49.5	196.8	117.2	51.6	51.5
			45	108.4	83.3	51.3	51.2	139.8	95.7	52.7	52.6	172.9	107.5	54.4	54.3
			50	—	—	—	—	110.3	84.1	56.1	56.0	144.6	96.6	57.6	57.5
		4000	40	154.1	111.9	49.4	49.3	187.6	124.8	51.5	51.4	—	—	—	—
			45	125.1	99.5	52.3	52.2	159.8	113.4	54.2	54.0	196.5	126.4	56.3	56.1
			50	—	—	—	—	127.4	100.7	57.1	56.9	165.3	114.8	58.9	58.8
		4800	40	170.0	127.5	50.8	50.6	205.8	141.4	53.2	52.9	—	—	—	—
			45	139.1	114.5	53.3	53.0	176.3	129.6	55.4	55.2	215.4	143.6	57.8	57.6
			50	—	—	—	—	141.7	116.3	58.0	57.7	182.3	131.5	60.1	59.9
	14	3200	40	138.4	96.4	47.4	47.3	168.8	108.1	49.1	49.0	201.0	118.9	51.1	51.0
			45	—	—	—	—	143.9	97.4	52.2	52.1	177.3	109.2	53.9	53.8
			50	—	—	—	—	—	—	—	—	149.2	98.3	57.1	57.0
		4000	40	158.7	114.1	48.9	48.8	192.2	127.0	51.0	50.9	—	—	—	—
			45	129.5	101.5	51.8	51.7	164.9	115.7	53.6	53.5	201.8	128.7	55.7	55.6
			50	—	—	—	—	132.2	102.9	56.6	56.5	171.0	117.2	58.4	58.3
		4800	40	175.4	130.3	50.2	50.1	211.3	144.2	52.6	52.5	—	—	—	—
			45	144.3	117.2	52.7	52.6	182.3	132.5	54.9	54.7	221.7	146.7	57.2	57.1
			50	—	—	—	—	147.4	119.0	57.5	57.3	188.9	134.5	59.6	59.4

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
4. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)

Table 63. Unit size 10 DX cooling capacities, R-410A

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	4000	40	130.9	97.4	52.8	51.6	—	—	—	—	—	—	—	—
			45	98.2	83.7	55.9	54.7	132.7	97.7	57.8	56.5	—	—	—	—
			50	69.2	69.1	59.3	57.3	97.8	84.4	60.8	59.4	134.1	98.1	62.8	61.3
		5000	40	148.5	114.0	54.2	52.8	—	—	—	—	—	—	—	—
			45	112.4	99.0	57.0	55.4	150.2	114.6	59.2	57.6	—	—	—	—
			50	81.4	81.3	60.2	57.6	111.8	100.2	61.8	60.1	151.5	115.3	64.1	62.3
		6000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	124.3	113.0	57.9	56.1	164.6	129.8	60.3	58.5	—	—	—	—
			50	92.2	92.2	61.0	57.9	123.7	114.7	62.7	60.7	165.8	130.9	65.2	63.2
	12	4000	40	146.0	106.5	50.7	50.1	—	—	—	—	—	—	—	—
			45	111.0	91.7	54.1	53.5	148.5	106.8	55.7	55.1	—	—	—	—
			50	78.2	78.0	57.3	56.5	110.9	92.4	59.0	58.3	150.6	107.2	60.7	60.0
		5000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	127.7	109.2	55.1	54.3	169.2	126.1	57.1	56.2	—	—	—	—
			50	92.0	91.9	58.3	56.9	127.5	110.3	60.0	59.1	171.2	126.8	62.0	61.1
		6000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	141.8	125.2	56.0	55.0	—	—	—	—	—	—	—	—
			50	104.5	101.4	59.2	57.2	141.6	126.9	60.8	59.7	—	—	—	—
	14	4000	40	153.6	110.8	49.7	49.4	—	—	—	—	—	—	—	—
			45	117.6	95.4	53.3	52.9	156.6	111.1	54.7	54.3	—	—	—	—
			50	82.8	81.5	56.5	56.1	117.8	96.0	58.2	57.8	159.2	111.4	59.7	59.3
		5000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	135.7	113.9	54.2	53.7	—	—	—	—	—	—	—	—
			50	97.7	97.5	57.3	56.5	135.8	115.0	59.1	58.5	181.6	132.3	61.0	60.4
		6000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	151.1	131.1	55.1	54.5	—	—	—	—	—	—	—	—
			50	110.9	110.7	58.2	56.9	151.1	132.7	59.9	59.2	—	—	—	—
6															
	9	4000	40	160.2	113.6	49.0	48.7	199.1	128.8	50.6	50.2	240.1	142.9	52.4	52.1
			45	125.0	98.4	52.6	52.2	164.6	114.2	54.0	53.6	207.1	129.4	55.6	55.1
			50	—	—	—	—	—	—	—	—	168.9	114.8	58.9	58.5
		5000	40	183.6	134.0	50.5	50.0	227.3	151.0	52.4	51.9	273.0	166.7	54.6	54.1
			45	144.4	117.3	53.6	53.1	188.6	135.1	55.4	54.8	236.1	152.1	57.3	56.8
			50	—	—	—	—	145.5	118.4	58.5	57.9	193.0	136.1	60.3	59.7
		6000	40	203.1	152.4	51.8	51.2	250.5	170.9	54.0	53.4	299.9	188.0	56.5	55.8
			45	160.7	134.7	54.5	53.9	208.2	154.0	56.6	55.9	259.6	172.6	58.9	58.1
			50	—	—	—	—	161.9	136.4	59.3	58.6	213.0	155.6	61.5	60.7
	12	4000	40	172.0	120.0	47.6	47.5	212.5	135.7	49.0	48.9	255.4	150.4	50.7	50.6
			45	135.9	104.1	51.3	51.1	177.4	120.6	52.5	52.4	221.8	136.4	53.9	53.8
			50	—	—	—	—	137.7	104.7	56.2	56.0	182.7	121.3	57.4	57.3
		5000	40	198.3	142.1	49.0	48.8	243.8	159.7	50.8	50.7	291.8	176.1	52.9	52.7
			45	157.9	124.7	52.3	52.1	204.4	143.4	53.9	53.7	254.1	161.0	55.7	55.5
			50	—	—	—	—	159.8	125.8	57.1	56.9	210.2	144.5	58.8	58.5
		6000	40	220.2	162.3	50.3	50.0	269.5	181.5	52.4	52.2	—	—	—	—
			45	176.5	143.8	53.2	52.9	226.9	164.2	55.1	54.8	280.6	183.3	57.2	56.9
			50	130.1	125.2	56.0	55.7	178.6	145.5	58.0	57.6	233.1	165.9	59.9	59.6
	14	4000	40	177.5	122.6	47.0	46.9	218.6	138.4	48.4	48.3	262.2	153.3	50.0	49.9
			45	—	—	—	—	183.5	123.3	51.9	51.8	228.5	139.3	53.3	53.2
			50	—	—	—	—	—	—	—	—	189.4	124.0	56.8	56.7
		5000	40	205.3	145.7	48.4	48.3	251.4	163.5	50.1	50.0	300.3	180.1	52.1	52.0
			45	164.4	128.0	51.7	51.6	212.1	147.0	53.2	53.1	262.5	164.9	55.0	54.9
			50	—	—	—	—	166.8	129.2	56.5	56.4	218.6	148.1	58.1	58.0
		6000	40	228.5	166.7	49.6	49.5	278.3	186.0	51.7	51.6	—	—	—	—
			45	184.2	147.8	52.5	52.4	236.0	168.6	54.4	54.2	290.4	188.0	56.5	56.3
			50	—	—	—	—	186.9	149.5	57.3	57.2	243.0	170.4	59.2	59.0

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
4. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)

Table 64. Unit size 12 DX cooling capacities, R-410A

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	4800	40	162.2	119.4	52.3	51.2	—	—	—	—	—	—	—	—
			45	121.3	102.1	55.6	54.4	164.6	119.7	57.3	56.1	211.4	136.7	59.1	57.9
			50	84.7	84.5	59.0	57.2	120.8	102.9	60.5	59.2	166.5	120.0	62.3	61.0
		6000	40	184.9	140.1	53.7	52.3	—	—	—	—	—	—	—	—
			45	139.4	121.2	56.6	55.2	187.2	140.7	58.7	57.2	—	—	—	—
			50	99.9	99.7	59.9	57.5	138.8	122.4	61.5	59.9	189.0	141.4	63.6	62.0
		7200	40	203.7	158.6	54.9	53.3	—	—	—	—	—	—	—	—
			45	154.7	138.5	57.5	55.8	205.9	159.7	59.8	58.1	—	—	—	—
			50	113.5	113.3	60.7	57.8	154.0	140.3	62.3	60.4	207.6	160.8	64.8	62.8
	12	4800	40	180.5	130.3	50.2	49.7	—	—	—	—	—	—	—	—
			45	136.9	111.7	53.8	53.2	183.7	130.6	55.2	54.6	—	—	—	—
			50	95.5	95.2	56.9	56.4	136.8	112.4	58.7	58.1	186.5	130.9	60.2	59.6
		6000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	158.2	133.3	54.8	54.0	210.3	154.5	56.6	55.8	—	—	—	—
			50	112.9	112.7	57.9	56.7	158.0	134.5	59.6	58.8	213.1	155.2	61.5	60.7
		7200	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	176.3	153.2	55.6	54.7	—	—	—	—	—	—	—	—
			50	128.5	128.2	58.8	57.1	176.0	155.0	60.4	59.4	235.1	177.5	62.6	61.6
	14	4800	40	189.6	135.4	49.2	48.9	—	—	—	—	—	—	—	—
			45	144.8	116.2	52.9	52.6	193.4	135.7	54.2	53.9	—	—	—	—
			50	101.1	98.6	56.3	55.9	145.1	116.8	57.9	57.5	196.9	136.0	59.3	58.9
		6000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	167.9	139.0	53.9	53.4	—	—	—	—	—	—	—	—
			50	119.8	116.6	56.9	56.3	168.0	140.2	58.8	58.3	225.7	161.8	60.5	60.0
		7200	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	187.6	160.2	54.7	54.1	—	—	—	—	—	—	—	—
			50	136.4	136.2	57.8	56.7	187.7	162.0	59.6	58.9	—	—	—	—
6															
	9	4800	40	197.7	138.9	48.6	48.2	246.0	157.7	50.0	49.7	297.0	175.4	51.7	51.3
			45	153.9	119.8	52.2	51.9	203.2	139.5	53.5	53.1	256.0	158.4	54.9	54.6
			50	—	—	—	—	—	—	—	—	208.5	140.1	58.5	58.1
		6000	40	227.9	164.3	50.0	49.5	282.4	185.6	51.8	51.3	339.7	205.2	53.8	53.4
			45	178.6	143.2	53.2	52.7	233.9	165.4	54.9	54.4	293.5	186.7	56.7	56.2
			50	—	—	—	—	180.0	144.4	58.1	57.6	239.7	166.5	59.8	59.2
		7200	40	252.9	187.3	51.3	50.7	312.6	210.5	53.3	52.7	374.8	231.9	55.7	55.0
			45	199.6	164.7	54.1	53.5	259.8	189.0	56.1	55.4	324.5	212.3	58.2	57.5
			50	—	—	—	—	201.1	166.6	59.0	58.3	265.7	190.7	61.0	60.2
	12	4800	40	211.7	146.5	47.1	47.0	262.1	166.0	48.4	48.3	315.3	184.3	49.9	49.8
			45	—	—	—	—	218.6	147.1	52.0	51.9	273.6	166.8	53.3	53.2
			50	—	—	—	—	—	—	—	—	225.1	147.8	57.0	56.9
		6000	40	245.6	174.0	48.5	48.3	302.4	196.1	50.2	50.0	362.4	216.6	52.1	51.9
			45	194.8	152.0	51.9	51.7	253.1	175.3	53.4	53.2	315.3	197.4	55.0	54.9
			50	—	—	—	—	197.3	153.2	56.8	56.6	260.5	176.5	58.3	58.1
		7200	40	273.8	199.2	49.7	49.5	335.9	223.2	51.7	51.5	401.2	245.5	53.9	53.7
			45	218.7	175.6	52.8	52.5	282.2	201.1	54.6	54.3	350.0	225.3	56.5	56.3
			50	—	—	—	—	221.4	177.5	57.6	57.3	290.1	203.0	59.4	59.1
	14	4800	40	218.2	149.5	46.5	46.4	269.3	169.3	47.8	47.7	323.3	187.8	49.3	49.2
			45	—	—	—	—	225.7	150.3	51.4	51.3	281.6	170.2	52.7	52.6
			50	—	—	—	—	—	—	—	—	233.0	151.0	56.4	56.3
		6000	40	253.8	178.2	47.9	47.8	311.5	200.4	49.5	49.4	372.6	221.2	51.4	51.3
			45	202.6	155.8	51.3	51.2	262.3	179.6	52.7	52.6	325.5	202.0	54.3	54.2
			50	—	—	—	—	205.6	157.1	56.2	56.1	270.5	180.9	57.6	57.5
		7200	40	283.8	204.4	49.1	48.9	346.7	228.6	51.0	50.9	—	—	—	—
			45	228.1	180.4	52.1	52.0	293.2	206.5	53.9	53.7	361.8	230.9	55.8	55.7
			50	—	—	—	—	231.4	182.3	57.0	56.8	302.1	208.4	58.7	58.6

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
4. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)

Table 65. Unit size 14 DX cooling capacities, R-410A

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	5600	40	190.3	139.7	52.2	51.1	—	—	—	—	—	—	—	—
			45	144.5	120.3	55.4	54.2	193.7	140.2	57.2	56.0	—	—	—	—
			50	101.8	101.6	58.5	57.0	144.3	121.3	60.3	59.0	196.6	140.8	62.2	60.8
		7000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	165.3	142.4	56.5	55.0	219.5	164.5	58.6	57.1	—	—	—	—
			50	119.3	119.1	59.5	57.4	165.0	143.9	61.3	59.7	222.2	165.6	63.6	61.9
		8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	182.7	162.4	57.4	55.7	—	—	—	—	—	—	—	—
			50	134.9	134.7	60.4	57.7	182.4	164.6	62.2	60.3	—	—	—	—
	12	5600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	162.2	131.3	53.6	53.0	215.1	152.6	55.2	54.6	—	—	—	—
			50	114.6	112.3	56.8	56.2	162.6	132.3	58.5	57.9	219.1	153.2	60.2	59.5
		7000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	186.5	156.3	54.6	53.9	—	—	—	—	—	—	—	—
			50	134.7	134.4	57.5	56.6	186.9	157.9	59.5	58.7	—	—	—	—
		8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	207.0	179.2	55.6	54.7	—	—	—	—	—	—	—	—
			50	152.4	148.1	58.5	57.0	207.5	181.6	60.4	59.4	—	—	—	—
	14	5600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	171.2	136.4	52.8	52.4	—	—	—	—	—	—	—	—
			50	121.2	116.3	56.1	55.7	172.0	137.3	57.7	57.3	230.7	159.0	59.2	58.8
		7000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	197.5	162.8	53.8	53.3	—	—	—	—	—	—	—	—
			50	142.7	141.0	56.7	56.2	198.3	164.4	58.7	58.1	—	—	—	—
		8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	219.7	187.2	54.7	54.1	—	—	—	—	—	—	—	—
			50	161.7	157.3	57.5	56.6	220.6	189.6	59.5	58.8	—	—	—	—
6															
	9	5600	40	227.0	160.4	48.8	48.5	280.0	180.9	50.5	50.2	335.7	200.0	52.4	52.1
			45	179.5	139.7	52.2	51.9	234.2	161.6	53.7	53.3	292.3	182.2	55.4	55.0
			50	—	—	—	—	181.8	140.8	57.1	56.7	241.2	162.6	58.6	58.2
		7000	40	259.7	189.0	50.3	49.9	318.9	211.9	52.4	51.9	380.8	233.0	54.7	54.2
			45	207.0	166.5	53.3	52.8	267.8	190.9	55.2	54.6	332.6	214.0	57.2	56.7
			50	—	—	—	—	209.6	168.3	58.1	57.6	275.6	192.7	60.0	59.4
		8400	40	286.6	214.7	51.7	51.1	350.7	239.7	54.0	53.4	—	—	—	—
			45	230.1	191.0	54.3	53.6	295.4	217.5	56.4	55.8	365.5	242.7	58.7	58.0
			50	170.5	167.3	56.9	56.2	233.0	193.7	59.0	58.3	303.6	220.2	61.2	60.5
	12	5600	40	241.6	168.5	47.5	47.4	296.7	189.6	49.1	49.0	354.5	209.2	50.9	50.8
			45	193.7	147.2	51.0	50.9	250.5	169.8	52.3	52.2	310.8	191.2	53.9	53.8
			50	—	—	—	—	—	—	—	—	259.0	171.0	57.2	57.1
		7000	40	277.9	199.2	49.0	48.8	339.2	222.9	50.9	50.8	403.6	244.6	53.1	53.0
			45	224.5	176.2	52.0	51.9	287.8	201.5	53.8	53.6	355.1	225.3	55.7	55.5
			50	—	—	—	—	228.3	178.1	56.9	56.7	297.5	203.5	58.6	58.4
		8400	40	307.7	227.2	50.3	50.1	374.0	252.8	52.6	52.3	—	—	—	—
			45	250.5	202.9	53.0	52.7	318.7	230.5	55.0	54.8	391.4	256.3	57.3	57.0
			50	—	—	—	—	254.8	205.8	57.7	57.5	329.3	233.5	59.8	59.5
	14	5600	40	248.4	171.6	47.0	46.9	304.0	192.9	48.5	48.4	362.5	212.7	50.3	50.2
			45	—	—	—	—	258.0	173.1	51.8	51.7	319.0	194.6	53.3	53.2
			50	—	—	—	—	—	—	—	—	267.4	174.4	56.7	56.6
		7000	40	286.3	203.5	48.4	48.3	348.4	227.3	50.4	50.3	—	—	—	—
			45	232.7	180.3	51.5	51.4	297.3	206.0	53.2	53.1	365.4	230.0	55.1	55.0
			50	—	—	—	—	237.3	182.3	56.3	56.2	308.0	208.2	58.0	57.9
		8400	40	317.8	232.6	49.7	49.6	384.5	258.6	51.9	51.8	—	—	—	—
			45	260.2	208.0	52.4	52.3	330.0	236.0	54.4	54.3	403.1	262.4	56.6	56.5
			50	—	—	—	—	265.4	211.0	57.2	57.0	341.7	239.2	59.1	59.0

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
4. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)

Table 66. Unit size 17 DX cooling capacities, R-410A

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	6800	40	228.9	168.5	52.4	51.3	—	—	—	—	—	—	—	—
			45	172.3	144.6	55.6	54.4	232.5	169.0	57.4	56.1	—	—	—	—
			50	120.8	120.6	58.9	57.1	171.7	145.7	60.5	59.2	235.5	169.6	62.4	61.0
		8500	40	260.3	197.3	53.8	52.4	—	—	—	—	—	—	—	—
			45	197.4	171.2	56.7	55.2	263.8	198.3	58.8	57.2	—	—	—	—
			50	142.0	141.8	59.8	57.5	196.7	173.0	61.5	59.9	266.6	199.5	63.7	62.0
		10200	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	218.5	195.3	57.6	55.8	—	—	—	—	—	—	—	—
			50	160.9	160.6	60.7	57.8	217.8	198.0	62.4	60.5	292.2	226.5	64.9	62.9
	12	6800	40	254.3	183.8	50.3	49.8	—	—	—	—	—	—	—	—
			45	194.1	158.2	53.8	53.2	259.1	184.4	55.3	54.7	—	—	—	—
			50	136.3	135.1	56.9	56.3	194.2	159.2	58.7	58.1	263.4	184.9	60.3	59.6
		8500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	223.6	188.4	54.8	54.0	—	—	—	—	—	—	—	—
			50	160.5	160.3	57.8	56.7	223.6	190.2	59.7	58.8	300.1	219.0	61.6	60.7
		10200	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	248.5	216.1	55.7	54.8	—	—	—	—	—	—	—	—
			50	182.3	177.0	58.8	57.1	248.5	218.8	60.5	59.5	—	—	—	—
	14	6800	40	266.9	191.0	49.3	49.0	—	—	—	—	—	—	—	—
			45	205.2	164.4	52.9	52.6	272.7	191.6	54.3	54.0	—	—	—	—
			50	144.3	140.0	56.3	55.9	205.8	165.4	57.9	57.5	277.8	192.1	59.3	58.9
		8500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	237.2	196.4	53.9	53.5	—	—	—	—	—	—	—	—
			50	170.2	169.9	56.8	56.3	237.6	198.2	58.8	58.3	—	—	—	—
		10200	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	264.3	226.0	54.8	54.2	—	—	—	—	—	—	—	—
			50	193.3	193.0	57.8	56.7	264.7	228.7	59.6	58.9	—	—	—	—
6															
	9	6800	40	276.9	195.3	48.8	48.4	343.3	221.1	50.3	50.0	413.2	245.1	52.1	51.8
			45	217.0	169.1	52.3	51.9	285.1	196.4	53.7	53.3	357.7	222.3	55.2	54.8
			50	—	—	—	—	219.2	170.3	57.2	56.8	292.9	197.4	58.6	58.2
		8500	40	317.9	230.4	50.2	49.8	392.5	259.4	52.2	51.7	470.6	286.1	54.3	53.8
			45	250.9	201.8	53.4	52.8	326.9	232.3	55.1	54.6	408.4	261.4	57.0	56.5
			50	—	—	—	—	253.4	203.7	58.2	57.6	335.7	234.1	60.0	59.4
		10200	40	351.9	262.1	51.5	50.9	432.9	293.7	53.7	53.1	517.3	322.7	56.2	55.5
			45	279.5	231.7	54.3	53.6	361.8	264.9	56.4	55.7	450.1	296.7	58.6	57.8
			50	—	—	—	—	282.2	234.6	59.1	58.4	370.6	267.7	61.2	60.4
	12	6800	40	295.9	205.6	47.4	47.2	365.1	232.4	48.8	48.7	438.0	257.3	50.5	50.3
			45	235.0	178.7	51.0	50.9	306.1	206.9	52.2	52.1	381.7	233.8	53.7	53.5
			50	—	—	—	—	—	—	—	—	315.7	208.1	57.2	57.0
		8500	40	341.8	243.7	48.8	48.6	419.3	273.7	50.6	50.4	500.9	301.5	52.7	52.5
			45	273.2	214.1	52.0	51.8	352.9	245.9	53.6	53.4	437.9	276.1	55.4	55.2
			50	—	—	—	—	277.1	216.1	56.9	56.7	363.8	248.0	58.5	58.3
		10200	40	379.6	278.4	50.1	49.8	463.9	311.0	52.2	51.9	—	—	—	—
			45	305.7	246.9	52.9	52.7	392.1	281.7	54.8	54.6	484.2	314.5	57.0	56.7
			50	—	—	—	—	310.1	249.9	57.7	57.4	403.8	284.8	59.7	59.3
	14	6800	40	304.8	209.8	46.8	46.7	374.8	236.8	48.2	48.1	448.7	262.0	49.8	49.7
			45	—	—	—	—	315.8	211.2	51.7	51.6	392.5	238.4	53.0	52.9
			50	—	—	—	—	—	—	—	—	326.5	212.5	56.6	56.5
		8500	40	352.9	249.4	48.2	48.1	431.5	279.7	50.0	49.9	514.4	307.8	52.0	51.9
			45	283.9	219.4	51.4	51.3	365.4	251.9	53.0	52.9	451.6	282.4	54.7	54.6
			50	—	—	—	—	288.6	221.5	56.3	56.2	377.4	254.2	57.8	57.7
		10200	40	393.0	285.5	49.4	49.3	478.2	318.3	51.5	51.4	—	—	—	—
			45	318.4	253.5	52.3	52.2	406.9	289.0	54.2	54.0	500.0	322.1	56.3	56.1
			50	—	—	—	—	323.7	256.6	57.1	57.0	420.0	292.2	59.0	58.8

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
4. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)

Table 67. Unit size 21 DX cooling capacities, R-410A

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	217.2	180.3	55.4	54.2	288.4	209.2	57.3	56.1	—	—	—	—
			50	154.6	154.3	58.3	56.9	217.5	181.9	60.3	59.0	293.5	210.3	62.3	60.9
		10500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	247.2	212.7	56.5	55.1	—	—	—	—	—	—	—	—
			50	180.2	179.9	59.4	57.3	247.5	215.2	61.4	59.7	—	—	—	—
		12600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	272.2	242.0	57.5	55.8	—	—	—	—	—	—	—	—
			50	202.9	202.5	60.4	57.7	272.6	245.6	62.3	60.4	—	—	—	—
	12	8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	242.9	196.6	53.7	53.1	—	—	—	—	—	—	—	—
			50	173.7	168.9	56.7	56.1	244.2	198.3	58.5	57.9	—	—	—	—
		10500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	277.8	233.3	54.8	54.0	—	—	—	—	—	—	—	—
			50	203.0	202.7	57.4	56.6	279.3	236.0	59.6	58.7	—	—	—	—
		12600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	—	—	—	—	—	—	—	—	—	—	—	—
			50	228.9	228.5	58.5	57.0	308.7	270.8	60.5	59.4	—	—	—	—
	14	8400	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	255.9	204.1	52.8	52.5	—	—	—	—	—	—	—	—
			50	183.6	175.0	56.0	55.7	257.8	205.7	57.7	57.3	—	—	—	—
		10500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	—	—	—	—	—	—	—	—	—	—	—	—
			50	214.8	211.5	56.7	56.2	295.7	245.6	58.7	58.2	—	—	—	—
		12600	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	—	—	—	—	—	—	—	—	—	—	—	—
			50	242.4	242.0	57.5	56.6	—	—	—	—	—	—	—	—
6															
	9	8400	40	330.9	236.1	49.3	49.0	405.2	264.8	51.2	50.9	483.0	291.2	53.4	53.0
			45	265.2	207.7	52.4	52.1	342.6	238.6	54.1	53.7	424.2	267.6	56.0	55.6
			50	—	—	—	—	269.6	209.8	57.3	56.8	353.9	240.8	59.0	58.5
		10500	40	375.5	277.0	55.1	50.4	457.7	308.9	53.2	52.7	—	—	—	—
			45	303.6	246.6	53.6	53.1	388.7	280.8	55.6	55.1	479.0	313.0	57.9	57.3
			50	225.2	215.1	56.4	55.8	308.7	250.0	58.4	57.8	401.0	284.3	60.4	59.8
		12600	40	411.3	313.7	52.3	51.6	499.3	348.3	54.8	54.1	—	—	—	—
			45	335.5	282.2	54.6	53.9	425.6	319.0	57.0	56.3	522.3	354.0	59.5	58.7
			50	253.2	249.5	57.0	56.3	341.3	287.0	59.3	58.6	439.4	324.1	61.7	60.9
	12	8400	40	350.6	247.2	48.1	48.0	427.5	276.6	49.9	49.8	508.0	303.6	52.0	51.9
			45	284.9	218.4	51.3	51.1	364.6	250.0	52.9	52.7	449.1	279.8	54.7	54.5
			50	—	—	—	—	290.9	220.7	56.1	55.9	378.6	252.6	57.7	57.5
		10500	40	399.5	291.0	49.7	49.5	484.3	323.7	51.9	51.7	—	—	—	—
			45	327.6	260.3	52.4	52.2	415.8	295.5	54.4	54.2	508.7	328.5	56.5	56.3
			50	—	—	—	—	334.7	264.0	57.1	56.9	431.0	299.6	59.1	58.9
		12600	40	439.1	330.9	51.0	50.8	529.4	366.1	53.5	53.2	—	—	—	—
			45	363.3	299.0	53.4	53.1	456.9	337.1	55.6	55.4	556.0	372.7	58.1	57.8
			50	—	—	—	—	371.4	304.3	58.0	57.7	474.0	342.8	60.3	60.0
	14	8400	40	359.7	251.5	47.6	47.5	437.0	281.0	49.4	49.3	518.0	308.2	51.5	51.4
			45	—	—	—	—	374.8	254.6	52.4	52.3	460.1	284.5	54.1	54.0
			50	—	—	—	—	—	—	—	—	389.7	257.4	57.1	57.0
		10500	40	410.7	296.9	49.2	49.1	495.7	329.6	51.4	51.3	—	—	—	—
			45	338.9	266.1	51.9	51.8	428.1	301.8	53.8	53.7	521.7	334.9	56.0	55.9
			50	—	—	—	—	347.0	270.0	56.6	56.5	445.2	306.0	58.5	58.4
		12600	40	452.4	338.2	50.5	50.4	—	—	—	—	—	—	—	—
			45	376.4	306.1	52.8	52.7	471.7	344.7	55.1	54.9	571.6	380.3	57.6	57.4
			50	—	—	—	—	385.7	311.6	57.5	57.4	490.5	350.7	59.7	59.6

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
4. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)

Table 68. Unit size 25 DX cooling capacities, R-410A

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	10000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	267.5	220.4	54.9	53.9	—	—	—	—	—	—	—	—
			50	190.8	189.8	57.7	56.6	268.3	222.3	59.8	58.7	360.4	256.7	61.7	60.5
		12500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	304.6	260.3	56.0	54.8	—	—	—	—	—	—	—	—
			50	222.4	222.0	58.8	57.1	305.5	263.4	60.9	59.4	—	—	—	—
		15000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	335.6	296.4	57.0	55.5	—	—	—	—	—	—	—	—
			50	250.3	249.9	59.8	57.5	336.6	300.9	61.8	60.1	—	—	—	—
	12	10000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	297.2	238.7	53.2	52.8	—	—	—	—	—	—	—	—
			50	213.3	205.0	56.3	55.8	299.3	240.7	58.1	57.6	—	—	—	—
		12500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	340.2	283.5	54.3	53.7	—	—	—	—	—	—	—	—
			50	249.0	247.3	57.0	56.3	342.5	286.8	59.2	58.5	—	—	—	—
		15000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	—	—	—	—	—	—	—	—	—	—	—	—
			50	280.8	280.4	58.0	56.8	—	—	—	—	—	—	—	—
	14	10000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	312.0	247.0	52.5	52.2	—	—	—	—	—	—	—	—
			50	—	—	—	—	315.0	248.9	57.4	57.1	—	—	—	—
		12500	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	—	—	—	—	—	—	—	—	—	—	—	—
			50	262.9	256.1	56.4	55.9	361.5	297.5	58.4	57.9	—	—	—	—
		15000	40	—	—	—	—	—	—	—	—	—	—	—	—
			45	—	—	—	—	—	—	—	—	—	—	—	—
			50	296.6	288.8	57.0	56.4	—	—	—	—	—	—	—	—
6															
	9	10000	40	399.3	284.4	49.0	48.7	487.9	318.5	50.9	50.6	580.5	349.8	53.1	52.8
			45	322.0	250.9	52.1	51.8	414.1	287.6	53.8	53.5	511.6	322.1	55.7	55.4
			50	—	—	—	—	328.0	253.6	56.9	56.6	428.5	290.5	58.6	58.3
		12500	40	453.1	333.8	50.6	50.2	551.0	371.7	52.9	52.5	—	—	—	—
			45	368.7	298.0	53.3	52.8	469.9	338.7	55.3	54.9	577.6	377.1	57.6	57.1
			50	274.9	260.3	56.0	55.6	375.7	302.3	58.0	57.5	486.2	343.3	60.1	59.6
		15000	40	496.7	378.3	52.0	51.5	600.9	419.4	54.5	54.0	—	—	—	—
			45	407.5	341.3	54.3	53.7	514.6	385.1	56.6	56.1	629.7	426.7	59.2	58.6
			50	309.0	302.1	56.7	56.1	415.5	347.4	59.0	58.4	532.7	391.6	61.3	60.7
	12	10000	40	421.1	296.1	47.9	47.8	512.1	330.9	49.8	49.7	606.7	362.8	51.9	51.8
			45	343.9	262.4	51.1	51.0	438.7	299.9	52.7	52.6	538.7	335.1	54.5	54.4
			50	—	—	—	—	—	—	—	—	455.8	303.4	57.4	57.3
		12500	40	479.9	348.9	49.5	49.4	580.0	387.3	51.7	51.6	—	—	—	—
			45	395.5	312.9	52.2	52.0	499.7	354.6	54.2	54.0	610.0	393.5	56.4	56.2
			50	—	—	—	—	404.8	317.5	56.9	56.7	519.4	359.8	58.9	58.7
		15000	40	527.2	396.8	50.9	50.7	—	—	—	—	—	—	—	—
			45	438.5	359.5	53.1	52.9	549.6	404.6	55.4	55.2	666.5	446.6	57.9	57.7
			50	—	—	—	—	449.2	366.1	57.8	57.6	571.4	411.9	60.1	59.8
	14	10000	40	430.9	300.6	47.5	47.4	522.0	335.3	49.4	49.3	617.8	367.4	51.5	51.4
			45	—	—	—	—	449.6	304.5	52.2	52.1	550.2	339.8	54.0	53.9
			50	—	—	—	—	—	—	—	—	468.4	308.1	57.0	56.9
		12500	40	491.9	354.8	49.1	49.0	592.1	393.1	51.3	51.2	—	—	—	—
			45	407.9	318.6	51.7	51.6	513.6	360.8	53.7	53.6	624.0	399.7	55.9	55.8
			50	—	—	—	—	418.5	323.5	56.5	56.4	535.0	366.4	58.4	58.3
		15000	40	541.6	404.6	50.4	50.3	—	—	—	—	—	—	—	—
			45	453.0	367.2	52.7	52.6	565.8	412.9	54.9	54.8	683.0	454.8	57.4	57.3
			50	—	—	—	—	465.2	374.2	57.3	57.2	589.6	420.3	59.6	59.4

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
4. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)

Table 69. Unit size 30 DX cooling capacities, R-410A

Rows of Coil	fpi	Airflow	Suct. Temp	Entering Air Temperature - Dry Bulb/Wet Bulb (°F)											
				75/63				80/67				85/71			
				TC	SC	LDB	LWB	TC	SC	LDB	LWB	TC	SC	LDB	LWB
4															
	9	12000	40	410.0	302.1	52.0	51.1	524.4	347.4	53.6	52.6	—	—	—	—
			45	303.3	257.1	55.5	54.4	414.8	302.4	57.1	56.0	537.5	347.0	58.7	57.6
			50	—	—	—	—	301.3	259.1	60.4	59.2	418.6	303.0	62.1	60.9
		15000	40	469.3	355.5	53.4	52.2	598.6	406.7	55.3	54.0	—	—	—	—
			45	349.8	305.8	56.4	55.1	473.7	356.5	58.4	57.0	611.7	406.9	60.4	59.0
			50	249.3	248.9	59.9	57.5	347.4	308.9	61.3	59.9	476.8	357.9	63.4	61.9
		18000	40	519.0	403.5	54.6	53.1	—	—	—	—	—	—	—	—
			45	389.5	350.3	57.3	55.7	522.8	405.3	59.5	57.9	672.9	460.5	61.8	60.1
			50	284.0	284.0	60.7	57.8	386.8	354.7	62.1	60.4	525.2	407.7	64.5	62.7
	12	12000	40	456.7	329.3	49.9	49.5	581.5	378.4	51.2	50.8	—	—	—	—
			45	342.3	280.4	53.7	53.2	463.6	329.4	55.0	54.5	597.7	377.7	56.4	55.9
			50	—	—	—	—	341.3	282.0	58.6	58.1	469.5	329.7	60.1	59.5
		15000	40	526.8	390.1	51.3	50.7	—	—	—	—	—	—	—	—
			45	397.3	335.6	54.6	54.0	533.4	390.9	56.3	55.6	—	—	—	—
			50	281.1	280.6	58.0	56.8	395.7	338.4	59.5	58.8	538.5	392.0	61.3	60.6
		18000	40	585.9	445.3	52.4	51.7	—	—	—	—	—	—	—	—
			45	444.4	386.5	55.4	54.6	591.9	447.0	57.4	56.6	—	—	—	—
			50	320.9	320.3	58.8	57.1	442.4	390.7	60.3	59.4	596.4	449.2	62.4	61.4
	14	12000	40	480.5	342.2	48.9	48.7	609.5	392.9	50.1	49.8	—	—	—	—
			45	362.4	291.2	52.9	52.6	488.7	342.1	54.0	53.7	627.2	392.1	55.2	55.0
			50	250.3	249.1	56.1	56.0	361.5	292.5	57.8	57.5	495.8	342.2	59.1	58.8
		15000	40	556.6	406.7	50.2	49.9	—	—	—	—	—	—	—	—
			45	422.0	349.6	53.8	53.4	564.5	407.3	55.3	54.9	—	—	—	—
			50	297.8	297.3	57.0	56.4	420.5	352.1	58.7	58.2	571.0	408.1	60.3	59.9
		18000	40	621.0	465.5	51.4	50.9	—	—	—	—	—	—	—	—
			45	473.4	403.7	54.6	54.0	628.5	467.1	56.4	55.8	—	—	—	—
			50	340.5	331.2	57.8	56.7	472.0	407.6	59.4	58.9	634.3	469.0	61.4	60.8
6															
	9	12000	40	508.7	354.6	48.0	47.7	639.1	405.8	49.1	48.8	777.7	454.3	50.4	50.2
			45	—	—	—	—	521.2	355.0	53.0	52.7	662.6	405.9	54.2	53.9
			50	—	—	—	—	—	—	—	—	532.8	355.5	58.1	57.7
		15000	40	591.5	421.7	49.3	48.9	741.2	480.1	50.8	50.4	899.3	535.1	52.5	52.1
			45	—	—	—	—	605.4	422.9	54.3	53.9	766.8	481.0	55.8	55.4
			50	—	—	—	—	—	—	—	—	617.0	424.2	59.3	58.8
		18000	40	662.6	482.7	50.5	50.0	827.3	547.2	52.3	51.8	1001.3	607.4	54.2	53.7
			45	512.7	419.1	53.8	53.2	675.9	485.0	55.5	54.9	854.4	549.0	57.3	56.7
			50	—	—	—	—	514.1	422.5	58.7	58.1	688.3	487.4	60.4	59.8
	12	12000	40	546.9	374.2	46.5	46.4	683.1	427.6	47.4	47.3	828.7	478.5	48.6	48.5
			45	—	—	—	—	561.9	374.7	51.5	51.4	710.4	428.0	52.5	52.4
			50	—	—	—	—	—	—	—	—	576.8	375.2	56.6	56.5
		15000	40	640.5	447.7	47.7	47.6	797.6	508.9	49.0	48.9	964.8	566.8	50.5	50.4
			45	499.1	385.7	51.5	51.4	657.3	448.9	52.7	52.6	827.7	509.8	54.0	53.9
			50	—	—	—	—	—	—	—	—	673.0	450.0	57.7	57.6
		18000	40	721.1	514.9	48.9	48.7	894.9	582.4	50.5	50.3	1079.7	646.0	52.3	52.1
			45	564.3	447.1	52.3	52.1	738.9	517.2	53.8	53.6	927.2	584.4	55.4	55.2
			50	—	—	—	—	568.1	450.2	57.3	57.0	755.3	519.3	58.8	58.6
	14	12000	40	—	—	—	—	703.0	436.7	46.7	46.6	851.5	488.7	47.8	47.7
			45	—	—	—	—	—	—	—	—	732.4	437.1	51.8	51.7
			50	—	—	—	—	—	—	—	—	—	—	—	—
		15000	40	663.8	458.8	47.0	46.9	823.9	521.0	48.3	48.2	994.9	580.2	49.7	49.6
			45	—	—	—	—	682.6	460.1	52.0	51.9	856.4	522.1	53.3	53.2
			50	—	—	—	—	—	—	—	—	700.4	461.3	57.0	56.9
		18000	40	749.7	529.3	48.1	48.0	926.8	598.0	49.7	49.6	1116.4	663.1	51.4	51.3
			45	589.8	459.8	51.7	51.6	769.8	531.8	53.1	53.0	962.2	600.3	54.6	54.5
			50	—	—	—	—	594.9	462.9	56.6	56.5	788.5	533.8	58.1	57.9

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature entering thermostatic expansion valve (°F)
4. LWB = Leaving wet-bulb temperature entering thermostatic expansion valve (°F)

Cooling Capacities - Chilled Water Coil

Table 70. Unit size 3 chilled water cooling capacities, EAT = 80°F DB / 67°F WB and EWT = 45°F

Rows of Coil	fpi	Air-flow	8°F						10°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	1200	37.8	28.8	58.2	57.1	9.4	2.1	32.2	26.7	59.8	58.7	6.4	1.1
		1500	43.6	34.2	59.3	57.9	10.9	2.8	37.6	31.9	60.7	59.2	7.5	1.4
		1800	48.5	39.1	60.3	58.6	12.1	3.4	42.2	36.7	61.5	59.8	8.4	1.7
	12	1200	43.3	31.8	55.9	55.4	10.8	2.7	37.5	29.5	57.7	57.1	7.5	1.4
		1500	50.4	38.0	57.0	56.3	12.6	3.6	43.9	35.5	58.5	57.8	8.8	1.9
		1800	56.4	43.7	58.0	57.1	14.1	4.4	49.5	41.1	59.3	58.4	9.9	2.3
	14	1200	46.2	33.3	54.8	54.5	11.6	3.1	40.3	30.9	56.6	56.3	8.1	1.6
		1500	54.0	39.9	55.9	55.5	13.5	4.1	47.4	37.3	57.5	57.0	9.5	2.1
		1800	60.7	46.0	56.8	56.3	15.2	5.1	53.5	43.2	58.2	57.7	10.7	2.7
6	9	1200	51.3	35.4	53.3	53.0	12.8	5.2	46.7	33.4	54.7	54.4	9.3	2.9
		1500	60.1	42.3	54.4	54.0	15.0	6.8	54.8	40.2	55.7	55.3	11.0	3.9
		1800	67.8	48.8	55.4	54.8	17.0	8.5	61.8	46.4	56.7	56.0	12.4	4.8
	12	1200	56.5	37.8	51.4	51.3	14.1	6.1	51.9	35.9	52.9	52.8	10.4	3.5
		1500	66.9	45.6	52.4	52.3	16.7	8.3	61.4	43.3	53.8	53.6	12.3	4.8
		1800	76.2	52.9	53.4	53.1	19.0	10.5	69.8	50.3	54.7	54.4	14.0	6.0
	14	1200	59.0	38.9	50.6	50.5	14.7	6.6	54.5	37.0	52.0	51.9	10.9	3.8
		1500	70.3	47.2	51.5	51.4	17.6	9.0	64.8	44.9	52.9	52.8	13.0	5.2
		1800	80.4	54.9	52.3	52.2	20.1	11.5	74.0	52.2	53.7	53.6	14.8	6.6
8	9	1200	59.6	39.2	50.4	50.3	14.9	8.6	55.8	37.5	51.6	51.5	11.2	5.1
		1500	70.9	47.3	51.4	51.2	17.7	11.7	66.2	45.3	52.6	52.5	13.2	6.9
		1800	81.0	55.0	52.3	52.1	20.3	14.9	75.5	52.6	53.5	53.3	15.1	8.8
	12	1200	63.8	41.1	49.0	48.9	16.0	9.7	60.3	39.5	50.2	50.1	12.1	5.9
		1500	76.7	50.0	49.8	49.7	19.2	13.5	72.2	48.0	51.0	50.9	14.4	8.1
		1800	88.6	58.5	50.6	50.5	22.2	17.4	83.1	56.1	51.8	51.7	16.6	10.4
	14	1200	65.7	42.0	48.3	48.2	16.4	10.2	62.4	40.4	49.4	49.3	12.5	6.2
		1500	79.5	51.2	49.0	48.9	19.9	14.4	75.1	49.3	50.2	50.1	15.0	8.7
		1800	92.3	60.1	49.8	49.7	23.1	18.7	86.8	57.7	51.0	50.9	17.4	11.2

Rows of Coil	fpi	Air-flow	12°F						16°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	1200	26.2	24.5	61.5	60.3	4.4	0.5	—	—	—	—	—	—
		1500	31.3	29.6	62.1	60.6	5.2	0.7	—	—	—	—	—	—
		1800	35.7	34.4	62.7	60.9	5.9	0.9	—	—	—	—	—	—
	12	1200	31.1	27.1	59.5	58.9	5.2	0.7	—	—	—	—	—	—
		1500	37.2	33.0	60.1	59.3	6.2	1.0	—	—	—	—	—	—
		1800	42.4	38.4	60.7	59.7	7.1	1.3	—	—	—	—	—	—
	14	1200	33.7	28.4	58.5	58.2	5.6	0.8	—	—	—	—	—	—
		1500	40.3	34.6	59.1	58.6	6.7	1.2	—	—	—	—	—	—
		1800	46.1	40.4	59.7	59.1	7.7	1.5	—	—	—	—	—	—
6	9	1200	41.6	31.4	56.3	55.9	6.9	1.7	—	—	—	—	—	—
		1500	49.1	37.9	57.1	56.6	8.2	2.3	36.9	33.3	59.9	59.4	4.6	0.8
		1800	55.6	43.9	57.9	57.3	9.3	2.9	42.6	39.0	60.3	59.7	5.3	1.1
	12	1200	46.8	33.8	54.5	54.4	7.8	2.1	35.0	29.2	58.0	57.9	4.4	0.7
		1500	55.5	41.0	55.3	55.1	9.3	2.9	42.6	36.1	58.2	58.1	5.3	1.1
		1800	63.3	47.7	56.0	55.8	10.5	3.6	49.3	42.3	58.7	58.5	6.2	1.4
	14	1200	49.4	34.9	53.7	53.6	8.2	2.3	37.4	30.1	57.3	57.2	4.7	0.8
		1500	58.9	42.4	54.4	54.3	9.8	3.2	45.6	37.2	57.5	57.4	5.7	1.2
		1800	67.3	49.5	55.1	54.9	11.2	4.0	52.9	43.9	57.9	57.8	6.6	1.6
8	9	1200	51.5	35.7	53.0	52.9	8.6	3.2	41.5	31.7	56.1	56.0	5.2	1.3
		1500	61.1	43.2	53.9	53.7	10.2	4.3	49.8	38.7	56.6	56.4	6.2	1.8
		1800	69.7	50.3	54.7	54.5	11.6	5.5	57.2	45.3	57.2	56.9	7.2	2.3
	12	1200	56.2	37.7	51.5	51.4	9.4	3.7	46.1	33.5	54.7	54.6	5.8	1.6
		1500	67.2	45.9	52.3	52.2	11.2	5.1	55.6	41.1	55.2	55.1	7.0	2.2
		1800	77.2	53.6	53.0	52.9	12.9	6.6	64.2	48.3	55.7	55.6	8.0	2.8
	14	1200	58.4	38.7	50.8	50.7	9.7	4.0	48.4	34.5	54.0	53.9	6.1	1.7
		1500	70.2	47.1	51.5	51.4	11.7	5.5	58.6	42.3	54.4	54.3	7.3	2.4
		1800	81.0	55.2	52.2	52.1	13.5	7.1	67.8	49.8	54.9	54.8	8.5	3.1

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature (°F)
4. LWB = Leaving wet-bulb temperature (°F)
5. gpm = Water flow rate, gallons per minute
6. WPD = water pressure drop @ average water density (ft H_2O)
7. Some of the volumetric flow rates are less than those required for self-venting (see Table 2, p. 19).
8. A blank value means the gpm is below the minimum or above the maximum for the application.
9. Capacities calculated with 0.00000 tube-side fouling factor.

Table 71. Unit size 6 chilled water cooling capacities, EAT = 80°F DB / 67°F WB and EWT = 45°F

Rows of Coil	fpi	Air-flow	8°F						10°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	2400	63.9	53.3	59.9	58.7	16.0	1.3	—	—	—	—	—	—
		3000	75.1	63.9	60.7	59.3	18.8	1.7	54.6	54.6	63.5	61.5	10.9	0.6
		3600	84.5	73.5	61.5	59.8	21.1	2.1	64	64	63.9	61.6	12.8	0.8
	12	2400	75.2	59.2	57.6	57.1	18.8	1.7	57.0	52.3	60.2	59.7	11.4	0.7
		3000	88.5	71.3	58.5	57.7	22.1	2.3	70.3	64.5	60.5	59.8	14.1	1.0
		3600	99.8	82.4	59.2	58.3	24.9	2.9	81.4	75.6	61.0	60.0	16.3	1.3
	14	2400	81.2	62.1	56.6	56.2	20.3	2.0	63.0	55.2	59.2	58.8	12.6	0.8
		3000	95.7	75.0	57.4	56.9	23.9	2.7	77.3	68.0	59.5	59.0	15.5	1.2
		3600	108.1	86.9	58.1	57.6	27	3.4	89.3	79.8	59.9	59.3	17.9	1.5
6	9	2400	94.7	67.4	54.5	54.2	23.7	3.3	82.3	62.4	56.4	56.1	16.5	1.7
		3000	111.1	80.9	55.5	55.1	27.8	4.4	97.5	75.6	57.2	56.7	19.5	2.3
		3600	125.3	93.4	56.5	55.9	31.3	5.5	110.8	87.7	57.9	57.3	22.2	2.9
	12	2400	105.4	72.5	52.6	52.5	26.3	4.0	93.1	67.4	54.5	54.4	18.6	2.1
		3000	124.7	87.5	53.6	53.4	31.2	5.4	111.0	81.9	55.3	55.1	22.2	2.9
		3600	141.7	101.4	54.5	54.2	35.4	6.9	126.7	95.4	56.0	55.7	25.3	3.7
	14	2400	110.6	74.7	51.8	51.7	27.7	4.3	98.6	69.6	53.7	53.6	19.7	2.3
		3000	131.6	90.5	52.7	52.6	32.9	6.0	117.9	84.9	54.4	54.3	23.6	3.2
		3600	150.1	105.3	53.5	53.4	37.5	7.7	135.0	99.2	55.0	54.9	27.0	4.1
8	9	2400	113.1	75.8	51.4	51.3	28.3	5.4	103.4	71.6	52.9	52.8	20.7	3.0
		3000	134.3	91.5	52.4	52.2	33.6	7.3	123.0	86.8	53.8	53.6	24.6	4.1
		3600	153.0	106.2	53.3	53.1	38.3	9.4	140.3	100.9	54.6	54.4	28.1	5.3
	12	2400	122.2	79.7	49.9	49.8	30.6	6.2	113.0	75.7	51.4	51.3	22.6	3.5
		3000	146.4	96.9	50.7	50.6	36.6	8.6	135.5	92.2	52.1	52.0	27.1	4.9
		3600	168.5	113.1	51.5	51.4	42.1	11.2	155.8	107.7	52.9	52.8	31.2	6.4
	14	2400	126.4	81.6	49.2	49.1	31.6	6.6	117.6	77.7	50.7	50.6	23.5	3.8
		3000	152.2	99.4	50.0	49.9	38.1	9.3	141.7	94.8	51.4	51.3	28.3	5.3
		3600	176.0	116.4	50.7	50.6	44.0	12.1	163.5	111.0	52.1	52.0	32.7	7.0

Rows of Coil	fpi	Air-flow	12°F						16°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	2400	—	—	—	—	—	—	—	—	—	—	—	—
		3000	—	—	—	—	—	—	—	—	—	—	—	—
		3600	—	—	—	—	—	—	—	—	—	—	—	—
	12	2400	—	—	—	—	—	—	—	—	—	—	—	—
		3000	—	—	—	—	—	—	—	—	—	—	—	—
		3600	—	—	—	—	—	—	—	—	—	—	—	—
	14	2400	—	—	—	—	—	—	—	—	—	—	—	—
		3000	—	—	—	—	—	—	—	—	—	—	—	—
		3600	65.6	65.6	63.5	61.5	10.9	0.6	—	—	—	—	—	—
6	9	2400	67.1	56.6	58.6	58.3	11.2	0.8	—	—	—	—	—	—
		3000	82.0	69.6	59.0	58.5	13.7	1.2	—	—	—	—	—	—
		3600	94.7	81.6	59.5	58.8	15.8	1.5	—	—	—	—	—	—
	12	2400	78.1	61.4	56.8	56.7	13.0	1.1	—	—	—	—	—	—
		3000	95.1	75.7	57.1	57.0	15.9	1.5	—	—	—	—	—	—
		3600	109.9	88.9	57.6	57.4	18.3	2.0	—	—	—	—	—	—
	14	2400	83.7	63.6	56.0	55.9	13.9	1.2	—	—	—	—	—	—
		3000	102.0	78.5	56.3	56.2	17.0	1.7	—	—	—	—	—	—
		3600	118.0	92.5	56.7	56.6	19.7	2.3	—	—	—	—	—	—
8	9	2400	91.8	66.9	54.7	54.6	15.3	1.7	—	—	—	—	—	—
		3000	110.1	81.5	55.4	55.2	18.3	2.4	—	—	—	—	—	—
		3600	126.3	95.3	56.0	55.8	21.0	3.1	93.4	82.7	59.2	58.9	11.7	1.0
	12	2400	101.7	71.0	53.2	53.1	17.0	2.1	—	—	—	—	—	—
		3000	122.7	86.9	53.8	53.7	20.5	2.9	90.5	74.1	57.6	57.5	11.3	1.0
		3600	141.6	101.9	54.3	54.2	23.6	3.8	107.7	88.6	57.7	57.6	13.5	1.4
	14	2400	106.6	73.0	52.4	52.3	17.8	2.3	—	—	—	—	—	—
		3000	129.0	89.5	53.0	52.9	21.5	3.2	96.8	76.5	56.9	56.8	12.1	1.1
		3600	149.3	105.1	53.6	53.5	24.9	4.2	115.1	91.4	57.0	56.9	14.4	1.5

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature (°F)
4. LWB = Leaving wet-bulb temperature (°F)
5. gpm = Water flow rate, gallons per minute
6. WPD = water pressure drop @ average water density (ft H_2O)
7. Some of the volumetric flow rates are less than those required for self-venting (see Table 2, p. 19).
8. A blank value means the gpm is below the minimum or above the maximum for the application.
9. Capacities calculated with 0.00000 tube-side fouling factor.

Table 72. Unit size 8 chilled water cooling capacities, EAT = 80°F DB / 67°F WB and EWT = 45°F

Rows of Coil	fpi	Air-flow	8°F						10°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	3200	89.5	72.5	59.5	58.3	22.4	2.0	67.9	64.5	61.7	60.5	13.6	0.8
		4000	104.4	86.7	60.4	58.9	26.1	2.7	83.2	78.8	62.1	60.6	16.6	1.1
		4800	117.0	99.5	61.2	59.5	29.2	3.3	95.6	91.7	62.7	60.9	19.1	1.5
	12	3200	104.5	80.5	57.2	56.6	26.1	2.7	83.1	72.3	59.5	58.9	16.6	1.1
		4000	122.3	96.7	58.1	57.4	30.6	3.6	100.5	88.4	60.0	59.2	20.1	1.6
		4800	137.5	111.5	58.9	58.0	34.4	4.5	115.1	103.1	60.5	59.6	23.0	2.1
	14	3200	112.5	84.4	56.1	55.8	28.1	3.1	91.0	76.1	58.4	58.1	18.2	1.3
		4000	132.0	101.6	57.0	56.5	33.0	4.2	109.8	93.1	58.9	58.4	22.0	1.9
		4800	148.8	117.5	57.8	57.2	37.2	5.3	125.8	108.8	59.5	58.9	25.2	2.5
6	9	3200	128.9	91.0	54.2	53.9	32.2	4.8	113.7	84.8	56.0	55.6	22.7	2.5
		4000	151.0	109.0	55.3	54.8	37.7	6.4	134.3	102.3	56.8	56.3	26.9	3.4
		4800	170.1	125.7	56.3	55.7	42.5	8.0	152.1	118.5	57.6	57.0	30.4	4.3
	12	3200	143.1	97.7	52.3	52.2	35.8	5.8	128.2	91.5	54.1	54.0	25.6	3.1
		4000	169.1	117.8	53.3	53.2	42.3	7.9	152.3	110.9	54.9	54.7	30.5	4.3
		4800	192.0	136.5	54.2	54.0	48.0	10.1	173.4	129.0	55.6	55.4	34.7	5.5
	14	3200	150.1	100.7	51.5	51.4	37.5	6.3	135.4	94.5	53.2	53.1	27.1	3.4
		4000	178.3	121.9	52.4	52.3	44.6	8.8	161.5	114.9	54.0	53.9	32.3	4.8
		4800	203.4	141.8	53.2	53.1	50.9	11.2	184.6	134.0	54.7	54.6	36.9	6.1
8	9	3200	152.7	101.8	51.2	51.1	38.2	7.6	140.7	96.7	52.6	52.5	28.1	4.3
		4000	181.1	122.9	52.2	52.0	45.3	10.4	167.1	117.0	53.5	53.3	33.4	5.9
		4800	206.5	142.5	53.1	52.9	51.6	13.3	190.4	135.9	54.3	54.1	38.1	7.5
	12	3200	164.7	107.1	49.7	49.6	41.2	8.7	153.4	102.1	51.1	51.0	30.7	5.0
		4000	197.3	130.1	50.5	50.4	49.3	12.2	183.7	124.2	51.9	51.8	36.7	7.0
		4800	227.1	151.9	51.3	51.2	56.8	15.9	211.0	145.0	52.6	52.5	42.2	9.1
	14	3200	170.2	109.6	49.0	48.9	42.6	9.3	159.5	104.8	50.3	50.2	31.9	5.4
		4000	205.1	133.5	49.7	49.6	51.3	13.1	191.9	127.7	51.1	51.0	38.4	7.6
		4800	237.2	156.3	50.5	50.4	59.3	17.2	221.2	149.4	51.8	51.7	44.2	9.9

Rows of Coil	fpi	Air-flow	12°F						16°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	3200	—	—	—	—	—	—	—	—	—	—	—	—
		4000	—	—	—	—	—	—	—	—	—	—	—	—
		4800	—	—	—	—	—	—	—	—	—	—	—	—
	12	3200	—	—	—	—	—	—	—	—	—	—	—	—
		4000	—	—	—	—	—	—	—	—	—	—	—	—
		4800	86.8	86.8	63.6	61.5	14.5	0.9	—	—	—	—	—	—
	14	3200	—	—	—	—	—	—	—	—	—	—	—	—
		4000	79.3	79.3	62.0	60.9	13.2	0.7	—	—	—	—	—	—
		4800	95.3	95.3	62.0	60.9	15.9	1.0	—	—	—	—	—	—
6	9	3200	95.6	77.7	58.0	57.6	15.9	1.3	—	—	—	—	—	—
		4000	115.3	95.0	58.5	58.0	19.2	1.8	—	—	—	—	—	—
		4800	132.2	111.0	59.0	58.4	22.0	2.3	—	—	—	—	—	—
	12	3200	110.1	84.2	56.1	56.0	18.4	1.7	—	—	—	—	—	—
		4000	132.9	103.2	56.6	56.4	22.2	2.3	—	—	—	—	—	—
		4800	152.8	120.9	57.2	56.9	25.5	3.0	98.6	98.6	61.4	60.7	12.3	0.8
	14	3200	117.5	87.2	55.3	55.2	19.6	1.9	—	—	—	—	—	—
		4000	142.1	107.1	55.7	55.6	23.7	2.7	—	—	—	—	—	—
		4800	163.6	125.7	56.3	56.1	27.3	3.5	112.4	106.6	59.9	59.8	14.1	1.0
8	9	3200	126.5	90.8	54.3	54.2	21.1	2.5	—	—	—	—	—	—
		4000	151.1	110.4	55.0	54.8	25.2	3.5	112.4	95.4	58.4	58.2	14.1	1.2
		4800	172.9	128.8	55.7	55.5	28.8	4.5	132.4	113.2	58.6	58.4	16.5	1.6
	12	3200	139.7	96.3	52.7	52.6	23.3	3.0	102.7	81.4	56.9	56.8	12.8	1.0
		4000	168.0	117.6	53.4	53.3	28.0	4.2	128.8	102.0	56.9	56.8	16.1	1.5
		4800	193.3	137.7	54.0	53.9	32.2	5.5	151.6	121.2	57.1	57.0	19.0	2.0
	14	3200	146.1	99.0	52.0	51.9	24.3	3.3	109.5	84.1	56.2	56.1	13.7	1.1
		4000	176.3	121.1	52.6	52.5	29.4	4.6	137.2	105.2	56.2	56.1	17.1	1.7
		4800	203.7	142.0	53.2	53.1	33.9	6.0	161.5	125.0	56.4	56.3	20.2	2.3

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature (°F)
4. LWB = Leaving wet-bulb temperature (°F)
5. gpm = Water flow rate, gallons per minute
6. WPD = water pressure drop @ average water density (ft H_2O)
7. Some of the volumetric flow rates are less than those required for self-venting (see Table 2, p. 19).
8. A blank value means the gpm is below the minimum or above the maximum for the application.
9. Capacities calculated with 0.00000 tube-side fouling factor.

Table 73. Unit size 10 chilled water cooling capacities, EAT = 80°F DB / 67°F WB and EWT = 45°F

Rows of Coil	fpi	Air-flow	8°F						10°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	4000	128.0	97.1	58.0	56.9	32.0	4.3	109.1	89.8	59.6	58.5	21.8	2.1
		5000	147.8	115.3	59.1	57.7	37.0	5.6	128.0	107.8	60.5	59.1	25.6	2.8
		6000	164.6	131.8	60.1	58.5	41.1	6.9	144.0	124.0	61.3	59.6	28.8	3.5
	12	4000	147.1	107.3	55.7	55.2	36.8	5.6	127.9	99.7	57.4	56.9	25.6	2.8
		5000	170.9	128.1	56.8	56.1	42.7	7.4	150.4	120.1	58.2	57.5	30.1	3.8
		6000	191.3	147.2	57.8	56.9	47.8	9.2	169.5	138.8	59.0	58.2	33.9	4.8
	14	4000	157.1	112.2	54.6	54.3	39.3	6.3	137.9	104.6	56.3	56.0	27.6	3.2
		5000	183.2	134.4	55.6	55.2	45.8	8.5	162.4	126.2	57.1	56.7	32.5	4.4
		6000	206.0	155.0	56.6	56.1	51.5	10.6	183.5	146.2	57.9	57.4	36.7	5.6
6	9	4000	172.4	118.5	53.2	52.8	43.1	9.1	157.7	112.4	54.5	54.2	31.5	5.1
		5000	201.9	141.8	54.3	53.9	50.5	12.3	185.1	134.9	55.5	55.1	37.0	6.8
		6000	227.9	163.5	55.3	54.7	57.0	15.4	208.8	155.8	56.5	55.9	41.8	8.6
	12	4000	189.8	126.8	51.3	51.2	47.5	10.9	175.6	120.8	52.6	52.5	35.1	6.2
		5000	224.8	152.9	52.3	52.1	56.2	15.0	207.7	145.7	53.6	53.4	41.5	8.5
		6000	256.2	177.4	53.2	53.0	64.0	19.2	236.0	169.1	54.5	54.2	47.2	10.8
	14	4000	198.3	130.5	50.4	50.3	49.6	11.8	184.5	124.5	51.8	51.7	36.9	6.8
		5000	236.3	158.1	51.3	51.2	59.1	16.5	219.2	150.8	52.7	52.6	43.8	9.4
		6000	270.7	184.2	52.2	52.1	67.7	21.2	250.2	175.6	53.5	53.4	50.0	12.0
8	9	4000	199.4	131.0	50.3	50.2	49.8	14.0	187.4	125.8	51.5	51.4	37.5	8.2
		5000	237.2	158.3	51.3	51.2	59.3	19.3	222.3	151.9	52.5	52.3	44.5	11.3
		6000	271.3	183.9	52.2	52.0	67.8	24.8	253.4	176.3	53.4	53.2	50.7	14.4
	12	4000	213.7	137.4	48.9	48.8	53.4	15.9	202.7	132.4	50.0	49.9	40.5	9.5
		5000	257.1	167.2	49.7	49.6	64.3	22.4	242.7	160.9	50.8	50.7	48.5	13.3
		6000	297.0	195.6	50.5	50.4	74.2	29.3	279.3	187.9	51.6	51.5	55.9	17.2
	14	4000	220.2	140.3	48.2	48.1	55.1	16.8	209.8	135.6	49.3	49.2	42.0	10.1
		5000	266.4	171.4	48.9	48.8	66.6	23.9	252.6	165.2	50.1	50.0	50.5	14.3
		6000	309.3	201.0	49.6	49.5	77.3	31.6	292.1	193.4	50.8	50.7	58.4	18.7

Rows of Coil	fpi	Air-flow	12°F						16°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	4000	85.7	81.1	61.6	60.4	14.3	0.9	—	—	—	—	—	—
		5000	105.3	99.4	62.0	60.6	17.5	1.4	—	—	—	—	—	—
		6000	121.3	115.7	62.5	60.8	20.2	1.8	—	—	—	—	—	—
	12	4000	104.8	90.9	59.4	58.9	17.5	1.4	—	—	—	—	—	—
		5000	127.0	111.3	59.8	59.1	21.2	2.0	—	—	—	—	—	—
		6000	145.6	129.9	60.4	59.5	24.3	2.5	—	—	—	—	—	—
	14	4000	114.8	95.7	58.3	58.0	19.1	1.6	—	—	—	—	—	—
		5000	138.7	117.1	58.8	58.3	23.1	2.3	—	—	—	—	—	—
		6000	159.0	136.9	59.3	58.8	26.5	3.0	—	—	—	—	—	—
6	9	4000	140.9	105.6	56.1	55.7	23.5	2.9	—	—	—	—	—	—
		5000	166.6	127.6	56.9	56.4	27.8	4.0	122.7	113.1	59.5	59.4	15.3	1.3
		6000	188.9	148.0	57.6	57.1	31.5	5.0	143.9	131.0	60.2	59.6	18.0	1.8
	12	4000	158.9	113.9	54.2	54.1	26.5	3.7	115.8	97.0	58.0	57.9	14.5	1.2
		5000	189.0	138.1	55.0	54.8	31.5	5.0	144.2	120.7	58.1	58.0	18.0	1.8
		6000	215.4	160.8	55.7	55.5	35.9	6.4	168.4	142.6	58.5	58.2	21.1	2.4
	14	4000	168.0	117.6	53.3	53.2	28.0	4.1	125.2	100.6	57.2	57.1	15.7	1.4
		5000	200.5	143.1	54.1	54.0	33.4	5.6	155.3	125.3	57.3	57.2	19.4	2.0
		6000	229.2	167.0	54.8	54.7	38.2	7.2	181.4	148.4	57.6	57.5	22.7	2.7
8	9	4000	173.6	119.9	52.8	52.7	28.9	5.1	139.2	106.0	56.0	55.9	17.4	2.0
		5000	206.2	145.2	53.7	53.5	34.4	7.0	168.5	130.3	56.4	56.3	21.1	2.8
		6000	235.0	168.7	54.5	54.3	39.2	8.9	194.2	153.3	56.8	56.7	24.3	3.7
	12	4000	189.6	126.7	51.3	51.2	31.6	6.0	155.8	112.6	54.5	54.4	19.5	2.4
		5000	227.0	154.1	52.1	52.0	37.8	8.3	189.1	138.5	54.9	54.8	23.6	3.5
		6000	260.7	180.0	52.8	52.7	43.4	10.8	218.8	162.9	55.4	55.3	27.3	4.6
	14	4000	197.3	130.1	50.5	50.4	32.9	6.4	164.0	115.9	53.7	53.6	20.5	2.7
		5000	237.2	158.5	51.3	51.2	39.5	9.0	199.5	142.7	54.1	54.0	24.9	3.8
		6000	273.5	185.4	52.0	51.9	45.6	11.8	231.4	168.0	54.6	54.5	28.9	5.0

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature (°F)
4. LWB = Leaving wet-bulb temperature (°F)
5. gpm = Water flow rate, gallons per minute
6. WPD = water pressure drop @ average water density (ft H_2O)
7. Some of the volumetric flow rates are less than those required for self-venting (see Table 2, p. 19).
8. A blank value means the gpm is below the minimum or above the maximum for the application.
9. Capacities calculated with 0.00000 tube-side fouling factor.

Table 74. Unit size 12 chilled water cooling capacities, EAT = 80°F DB / 67°F WB and EWT = 45°F

Rows of Coil	fpi	Air-flow	8°F						10°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	4800	157.3	118.3	57.7	56.6	39.3	3.0	133.3	109.0	59.4	58.3	26.7	1.5
		6000	182.4	140.8	58.7	57.4	45.6	4.0	157.3	131.2	60.2	58.9	31.5	2.0
		7200	203.8	161.3	59.7	58.2	50.9	4.9	177.7	151.4	60.9	59.4	35.5	2.5
	12	4800	180.3	130.5	55.4	54.9	45.1	3.9	156.3	120.9	57.2	56.7	31.3	2.0
		6000	210.4	156.2	56.4	55.8	52.6	5.2	184.6	146.0	57.9	57.3	36.9	2.7
		7200	236.3	179.8	57.4	56.6	59.1	6.5	208.9	169.2	58.7	57.9	41.8	3.4
	14	4800	192.3	136.4	54.2	54.0	48.1	4.4	168.3	126.7	56.1	55.8	33.7	2.3
		6000	225.3	163.7	55.3	54.9	56.3	5.9	199.2	153.3	56.8	56.5	39.8	3.1
		7200	254.0	189.0	56.2	55.7	63.5	7.4	225.9	178.0	57.6	57.1	45.2	3.9
6	9	4800	210.9	144.0	52.8	52.5	52.7	6.7	192.8	136.5	54.2	53.9	38.6	3.8
		6000	247.9	172.7	53.9	53.5	62.0	9.0	227.2	164.2	55.2	54.8	45.4	5.1
		7200	280.5	199.4	54.9	54.4	70.1	11.3	257.1	189.9	56.1	55.6	51.4	6.4
	12	4800	231.5	153.8	51.0	50.9	57.9	7.9	214.1	146.3	52.4	52.3	42.8	4.5
		6000	274.9	185.8	51.9	51.8	68.7	10.9	254.2	177.1	53.3	53.1	50.8	6.2
		7200	314.1	215.9	52.8	52.6	78.5	13.9	289.7	205.7	54.1	53.9	57.9	7.9
	14	4800	241.4	158.1	50.1	50.0	60.3	8.6	224.5	150.8	51.5	51.4	44.9	5.0
		6000	288.3	191.8	51.0	50.9	72.1	11.9	267.8	183.0	52.4	52.3	53.6	6.8
		7200	331.2	223.8	51.8	51.7	82.8	15.3	306.5	213.4	53.1	53.0	61.3	8.8
8	9	4800	242.7	158.7	50.0	49.9	60.7	10.5	228.3	152.4	51.2	51.1	45.7	6.2
		6000	289.6	192.2	51.0	50.8	72.4	14.5	271.8	184.5	52.1	52.0	54.4	8.5
		7200	332.2	223.6	51.8	51.7	83.0	18.6	310.7	214.5	53.0	52.8	62.1	10.9
	12	4800	259.3	166.1	48.6	48.5	64.8	11.8	246.2	160.3	49.7	49.6	49.2	7.1
		6000	312.7	202.5	49.4	49.3	78.2	16.6	295.8	195.0	50.5	50.4	59.2	10.0
		7200	362.1	237.2	50.1	50.0	90.5	21.8	341.1	228.0	51.3	51.2	68.2	12.9
	14	4800	266.7	169.5	48.0	47.9	66.7	12.4	254.5	163.9	49.0	48.9	50.9	7.6
		6000	323.4	207.3	48.7	48.6	80.8	17.7	307.2	200.1	49.8	49.7	61.4	10.7
		7200	376.3	243.5	49.3	49.2	94.1	23.3	356.0	234.5	50.5	50.4	71.2	14.0

Rows of Coil	fpi	Air-flow	12°F						16°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	4800	102.7	97.6	61.6	60.4	17.1	0.6	—	—	—	—	—	—
		6000	128.0	120.3	61.8	60.5	21.3	1.0	—	—	—	—	—	—
		7200	148.5	140.6	62.3	60.7	24.8	1.3	—	—	—	—	—	—
	12	4800	126.5	109.6	59.3	58.8	21.1	1.0	—	—	—	—	—	—
		6000	154.7	134.7	59.6	59.0	25.8	1.4	—	—	—	—	—	—
		7200	178.5	157.7	60.1	59.3	29.7	1.8	—	—	—	—	—	—
	14	4800	138.7	115.3	58.2	57.9	23.1	1.1	—	—	—	—	—	—
		6000	169.0	141.7	58.6	58.2	28.2	1.6	—	—	—	—	—	—
		7200	194.8	166.1	59.1	58.6	32.5	2.1	—	—	—	—	—	—
6	9	4800	171.8	127.9	55.8	55.5	28.6	2.2	—	—	—	—	—	—
		6000	204.1	155.0	56.6	56.2	34.0	3.0	148.1	133.7	59.8	59.4	18.5	1.0
		7200	232.3	180.1	57.3	56.8	38.7	3.8	175.1	158.5	60.0	59.5	21.9	1.3
	12	4800	193.4	137.7	54.0	53.9	32.2	2.7	138.2	116.1	58.1	58.0	17.3	0.9
		6000	231.0	167.6	54.7	54.5	38.5	3.7	174.3	145.4	58.0	57.9	21.8	1.3
		7200	264.2	195.4	55.4	55.2	44.0	4.8	205.0	172.4	58.3	58.1	25.6	1.8
	14	4800	204.2	142.2	53.1	53.0	34.0	3.0	149.7	120.5	57.3	57.2	18.7	1.0
		6000	244.8	173.4	53.8	53.7	40.8	4.1	187.8	150.8	57.2	57.1	23.5	1.5
		7200	280.8	202.8	54.5	54.4	46.8	5.3	220.7	179.2	57.4	57.3	27.6	2.0
8	9	4800	211.4	145.2	52.6	52.5	35.2	3.9	168.3	127.7	55.9	55.8	21.0	1.5
		6000	252.0	176.2	53.4	53.3	42.0	5.3	205.0	157.5	56.2	56.1	25.6	2.2
		7200	288.3	205.2	54.2	54.0	48.0	6.8	237.3	184.8	56.7	56.5	29.7	2.8
	12	4800	230.3	153.3	51.1	51.0	38.4	4.5	188.2	135.6	54.4	54.3	23.5	1.9
		6000	276.7	186.8	51.8	51.7	46.1	6.3	229.7	167.3	54.7	54.6	28.7	2.7
		7200	318.7	218.5	52.5	52.4	53.1	8.2	266.9	197.2	55.2	55.1	33.4	3.5
	14	4800	239.3	157.2	50.3	50.2	39.9	4.8	198.0	139.6	53.6	53.5	24.8	2.0
		6000	288.7	192.0	51.0	50.9	48.1	6.8	242.1	172.3	54.0	53.9	30.3	2.9
		7200	333.8	224.9	51.7	51.6	55.6	8.9	281.9	203.3	54.4	54.3	35.2	3.8

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature (°F)
4. LWB = Leaving wet-bulb temperature (°F)
5. gpm = Water flow rate, gallons per minute
6. WPD = water pressure drop @ average water density (ft H_2O)
7. Some of the volumetric flow rates are less than those required for self-venting (see Table 2, p. 19).
8. A blank value means the gpm is below the minimum or above the maximum for the application.
9. Capacities calculated with 0.00000 tube-side fouling factor.

Table 75. Unit size 14 chilled water cooling capacities, EAT = 80°F DB / 67°F WB and EWT = 45°F

Rows of Coil	fpi	Air-flow	8°F						10°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	5600	191.3	141.1	57.2	56.1	47.8	4.7	168.0	131.9	58.6	57.6	33.6	2.4
		7000	220.8	167.4	58.3	57.0	55.2	6.1	195.9	157.7	59.6	58.3	39.2	3.2
		8400	245.9	191.3	59.4	57.8	61.5	7.5	219.6	181.1	60.5	58.9	43.9	4.0
	12	5600	218.1	155.4	54.9	54.4	54.5	6.0	194.7	145.9	56.4	55.9	38.9	3.2
		7000	253.7	185.5	56.0	55.4	63.4	7.9	227.9	175.2	57.3	56.7	45.6	4.3
		8400	284.8	213.3	57.0	56.2	71.2	9.8	256.3	202.1	58.2	57.4	51.3	5.3
	14	5600	232.1	162.3	53.7	53.5	58.0	6.7	208.7	152.7	55.3	55.0	41.7	3.6
		7000	271.4	194.4	54.8	54.5	67.9	9.0	245.0	183.8	56.2	55.8	49.0	4.9
		8400	306.2	224.4	55.8	55.3	76.5	11.2	276.3	212.6	57.1	56.6	55.3	6.1
6	9	5600	250.9	170.1	52.5	52.2	62.7	9.9	232.4	162.3	53.7	53.4	46.5	5.7
		7000	294.9	203.9	53.6	53.2	73.7	13.4	272.8	194.7	54.8	54.4	54.6	7.7
		8400	333.9	235.3	54.6	54.1	83.5	16.8	308.2	224.8	55.7	55.2	61.6	9.6
	12	5600	274.9	181.5	50.6	50.5	68.7	11.7	257.0	173.8	51.9	51.8	51.4	6.9
		7000	326.8	219.4	51.6	51.5	81.7	16.1	304.4	209.9	52.8	52.7	60.9	9.4
		8400	373.6	254.9	52.5	52.3	93.4	20.6	346.9	243.7	53.7	53.5	69.4	11.9
	14	5600	286.4	186.6	49.8	49.7	71.6	12.6	269.0	179.0	51.0	50.9	53.8	7.5
		7000	342.6	226.4	50.7	50.6	85.6	17.6	320.3	216.9	51.9	51.8	64.1	10.3
		8400	393.8	264.2	51.5	51.4	98.4	22.7	366.8	252.8	52.7	52.6	73.4	13.2
8	9	5600	286.7	186.7	49.8	49.7	71.7	15.4	271.5	180.0	50.9	50.8	54.3	9.3
		7000	342.3	226.2	50.7	50.6	85.6	21.3	322.8	217.7	51.8	51.7	64.6	12.7
		8400	392.8	263.1	51.6	51.4	98.2	27.4	369.1	253.0	52.7	52.5	73.8	16.2
	12	5600	305.9	195.4	48.4	48.3	76.5	17.3	292.1	189.1	49.4	49.3	58.4	10.6
		7000	369.3	238.3	49.1	49.0	92.3	24.5	350.9	230.1	50.2	50.1	70.2	14.8
		8400	427.9	279.1	49.9	49.8	107.0	32.0	405.0	269.1	51.0	50.9	81.0	19.2
	14	5600	314.4	199.3	47.7	47.6	78.6	18.2	301.5	193.4	48.7	48.6	60.3	11.2
		7000	381.6	243.9	48.4	48.3	95.4	26.0	364.2	236.0	49.4	49.3	72.8	15.8
		8400	444.4	286.5	49.1	49.0	111.1	34.3	422.4	276.7	50.1	50.0	84.5	20.7

Rows of Coil	fpi	Air-flow	12°F						16°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	5600	140.7	121.5	60.3	59.2	23.5	1.2	—	—	—	—	—	—
		7000	168.2	147.2	60.9	59.6	28.0	1.7	—	—	—	—	—	—
		8400	191.2	170.5	61.6	60.0	31.9	2.2	—	—	—	—	—	—
	12	5600	167.2	135.2	58.1	57.6	27.9	1.7	—	—	—	—	—	—
		7000	199.2	164.1	58.7	58.1	33.2	2.4	—	—	—	—	—	—
		8400	226.4	190.7	59.4	58.6	37.7	3.0	149.9	149.9	63.8	61.6	18.7	0.8
	14	5600	181.2	141.9	57.0	56.7	30.2	2.0	—	—	—	—	—	—
		7000	215.8	172.4	57.7	57.3	36.0	2.7	135.4	135.4	62.5	61.1	16.9	0.7
		8400	245.6	200.7	58.3	57.8	40.9	3.5	165.8	165.8	62.1	61.0	20.7	1.0
6	9	5600	211.4	153.6	55.1	54.8	35.2	3.4	159.6	133.4	58.4	58.1	19.9	1.2
		7000	249.3	185.2	56.0	55.6	41.6	4.6	195.0	164.2	58.7	58.3	24.4	1.7
		8400	282.4	214.6	56.8	56.3	47.1	5.8	225.3	192.6	59.2	58.6	28.2	2.3
	12	5600	236.5	165.2	53.3	53.2	39.4	4.2	184.8	144.4	56.6	56.5	23.1	1.6
		7000	280.7	200.0	54.1	54.0	46.8	5.8	225.1	178.3	56.9	56.8	28.1	2.3
		8400	319.8	232.6	54.9	54.7	53.3	7.3	226.0	226.0	55.6	55.6	28.2	2.3
	14	5600	249.0	170.4	52.4	52.3	41.5	4.6	197.6	149.4	55.8	55.7	24.7	1.8
		7000	296.7	206.9	53.2	53.1	49.5	6.4	240.8	184.4	56.1	56.0	30.1	2.6
		8400	339.2	241.4	54.0	53.9	56.5	8.1	278.7	217.3	56.6	56.5	34.8	3.3
8	9	5600	254.1	172.6	52.1	52.0	42.4	5.9	211.2	154.9	54.9	54.8	26.4	2.5
		7000	302.0	208.9	53.0	52.8	50.3	8.1	253.8	189.5	55.5	55.4	31.7	3.5
		8400	344.6	242.8	53.8	53.6	57.4	10.2	291.6	222.3	56.0	55.9	36.4	4.5
	12	5600	275.9	182.0	50.5	50.4	46.0	6.8	234.1	164.2	53.4	53.3	29.3	3.0
		7000	330.7	221.3	51.3	51.2	55.1	9.5	282.7	201.1	54.0	53.9	35.3	4.2
		8400	380.4	258.5	52.1	52.0	63.4	12.2	326.3	236.1	54.5	54.4	40.8	5.5
	14	5600	286.2	186.5	49.8	49.7	47.7	7.3	245.3	168.9	52.7	52.6	30.7	3.3
		7000	344.5	227.3	50.6	50.5	57.4	10.2	297.1	207.1	53.2	53.1	37.1	4.6
		8400	398.2	266.1	51.3	51.2	66.4	13.3	343.9	243.3	53.7	53.6	43.0	6.0

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature (°F)
4. LWB = Leaving wet-bulb temperature (°F)
5. gpm = Water flow rate, gallons per minute
6. WPD = water pressure drop @ average water density (ft H_2O)
7. Some of the volumetric flow rates are less than those required for self-venting (see Table 2, p. 19).
8. A blank value means the gpm is below the minimum or above the maximum for the application.
9. Capacities calculated with 0.00000 tube-side fouling factor.

Table 76. Unit size 17 chilled water cooling capacities, EAT = 80°F DB / 67°F WB and EWT = 45°F

Rows of Coil	fpi	Air-flow	8°F						10°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	6800	225.3	168.3	57.6	56.5	56.3	3.3	194.4	156.3	59.2	58.1	38.9	1.7
		8500	260.2	199.7	58.7	57.4	65.0	4.3	227.6	187.2	60.0	58.7	45.5	2.2
		10200	289.8	228.3	59.7	58.1	72.5	5.2	255.7	215.3	60.9	59.2	51.1	2.8
	12	6800	257.7	185.6	55.3	54.8	64.4	4.2	226.6	173.2	56.9	56.4	45.3	2.2
		8500	299.7	221.6	56.4	55.7	74.9	5.6	266.1	208.3	57.8	57.1	53.2	3.0
		10200	336.0	254.7	57.4	56.5	84.0	6.9	299.8	240.7	58.6	57.8	60.0	3.7
	14	6800	274.6	194.0	54.1	53.9	68.7	4.7	243.6	181.4	55.8	55.5	48.7	2.5
		8500	320.8	232.4	55.2	54.8	80.2	6.3	286.7	218.7	56.7	56.3	57.3	3.4
		10200	361.4	268.1	56.2	55.7	90.3	7.9	323.8	253.3	57.5	57.0	64.8	4.2
16	9	6800	299.5	204.2	52.8	52.5	74.9	7.3	275.5	194.1	54.1	53.8	55.1	4.2
		8500	351.4	244.6	53.9	53.5	87.8	9.8	323.5	233.1	55.1	54.7	64.7	5.6
		10200	397.3	282.1	54.9	54.4	99.3	12.3	365.2	269.1	56.1	55.5	73.0	7.0
	12	6800	328.7	218.2	50.9	50.8	82.2	8.7	305.5	208.3	52.2	52.1	61.1	5.0
		8500	390.1	263.4	51.9	51.8	97.5	11.8	361.8	251.5	53.2	53.0	72.4	6.9
		10200	445.3	305.8	52.8	52.6	111.3	15.1	411.7	291.8	54.1	53.9	82.3	8.7
	14	6800	342.8	224.4	50.1	50.0	85.7	9.4	320.3	214.6	51.4	51.3	64.1	5.5
		8500	409.3	272.1	51.0	50.9	102.3	12.9	381.1	260.0	52.3	52.2	76.2	7.5
		10200	469.8	317.3	51.8	51.7	117.4	16.6	435.7	302.9	53.1	53.0	87.1	9.6
8	9	6800	344.1	224.9	50.0	49.9	86.0	11.7	324.6	216.4	51.2	51.1	64.9	7.0
		8500	410.2	272.2	51.0	50.8	102.5	16.0	385.5	261.5	52.1	52.0	77.1	9.5
		10200	470.0	316.4	51.9	51.7	117.5	20.5	440.3	303.8	53.0	52.8	88.1	12.1
	12	6800	367.8	235.6	48.6	48.5	91.9	13.1	349.9	227.5	49.7	49.6	70.0	8.0
		8500	443.3	287.0	49.4	49.3	110.8	18.4	419.8	276.6	50.5	50.4	84.0	11.1
		10200	512.9	336.0	50.1	50.0	128.2	24.0	483.9	323.3	51.3	51.2	96.8	14.4
	14	6800	378.4	240.4	48.0	47.9	94.6	13.8	361.6	232.8	49.0	48.9	72.3	8.5
		8500	458.6	293.9	48.7	48.6	114.6	19.6	436.1	283.9	49.7	49.6	87.2	11.9
		10200	533.3	345.1	49.3	49.2	133.3	25.8	505.2	332.6	50.4	50.3	101.0	15.5

Rows of Coil	fpi	Air-flow	12°F						16°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	6800	157.1	142.3	61.0	59.9	26.2	0.8	—	—	—	—	—	—
		8500	190.6	173.4	61.5	60.1	31.8	1.1	—	—	—	—	—	—
		10200	218.4	201.5	62.1	60.4	36.4	1.5	—	—	—	—	—	—
	12	6800	189.5	158.9	58.8	58.3	31.6	1.1	—	—	—	—	—	—
		8500	227.9	193.8	59.3	58.6	38.0	1.6	—	—	—	—	—	—
		10200	260.5	225.8	59.9	59.1	43.4	2.0	—	—	—	—	—	—
	14	6800	206.5	167.0	57.7	57.4	34.4	1.3	—	—	—	—	—	—
		8500	248.0	203.8	58.3	57.8	41.3	1.9	—	—	—	—	—	—
		10200	283.5	237.9	58.9	58.3	47.3	2.4	179.1	179.1	64.1	61.7	22.4	0.6
16	9	6800	247.9	182.9	55.6	55.3	41.3	2.5	177.8	157.8	59.0	58.9	22.2	0.8
		8500	293.1	220.9	56.4	56.0	48.8	3.3	221.5	193.5	59.4	58.9	27.7	1.2
		10200	332.3	256.1	57.2	56.7	55.4	4.2	258.0	227.9	59.8	59.2	32.3	1.6
	12	6800	278.5	197.0	53.7	53.6	46.4	3.1	209.0	169.5	57.4	57.3	26.1	1.1
		8500	331.1	238.8	54.5	54.4	55.2	4.2	257.9	210.6	57.5	57.4	32.2	1.6
		10200	377.4	277.9	55.3	55.1	62.9	5.3	300.1	247.8	58.0	57.8	37.5	2.1
	14	6800	293.8	203.3	52.9	52.8	49.0	3.4	224.8	175.5	56.6	56.5	28.1	1.2
		8500	350.6	247.2	53.6	53.5	58.4	4.6	276.9	217.8	56.8	56.7	34.6	1.8
		10200	400.9	288.6	54.4	54.3	66.8	5.9	322.3	257.4	57.1	57.0	40.3	2.3
8	9	6800	302.0	206.8	52.4	52.3	50.3	4.4	245.8	183.8	55.5	55.4	30.7	1.8
		8500	359.0	250.4	53.3	53.2	59.8	6.0	296.8	225.6	55.9	55.8	37.1	2.5
		10200	409.6	291.1	54.1	53.9	68.3	7.6	341.8	263.9	56.5	56.3	42.7	3.3
	12	6800	328.8	218.2	50.9	50.8	54.8	5.1	273.8	195.0	54.0	53.9	34.2	2.2
		8500	394.0	265.5	51.7	51.6	65.7	7.1	331.8	239.6	54.5	54.4	41.5	3.1
		10200	452.9	310.1	52.4	52.3	75.5	9.1	383.7	281.6	55.0	54.9	48.0	4.0
	14	6800	341.5	223.8	50.2	50.1	56.9	5.5	287.5	200.7	53.2	53.1	35.9	2.4
		8500	411.0	272.8	50.9	50.8	68.5	7.7	349.4	246.7	53.7	53.6	43.7	3.4
		10200	474.5	319.3	51.6	51.5	79.1	9.9	405.1	290.3	54.2	54.1	50.6	4.4

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature (°F)
4. LWB = Leaving wet-bulb temperature (°F)
5. gpm = Water flow rate, gallons per minute
6. WPD = water pressure drop @ average water density (ft H_2O)
7. Some of the volumetric flow rates are less than those required for self-venting (see Table 2, p. 19).
8. A blank value means the gpm is below the minimum or above the maximum for the application.
9. Capacities calculated with 0.00000 tube-side fouling factor.

Table 77. Unit size 21 chilled water cooling capacities, EAT = 80°F DB / 67°F WB and EWT = 45°F

Rows of Coil	fpi	Air-flow	8°F						10°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	8400	291.7	213.2	57.0	55.9	72.9	5.9	261.4	201.2	58.3	57.2	52.3	3.2
		10500	335.5	252.2	58.2	56.9	83.9	7.6	302.3	239.2	59.4	58.0	60.5	4.2
		12600	373.2	287.8	59.3	57.7	93.3	9.3	337.0	273.8	60.3	58.7	67.4	5.1
	12	8400	332.0	234.8	54.7	54.2	83.0	7.5	301.1	222.3	56.0	55.5	60.2	4.1
		10500	385.7	279.9	55.8	55.2	96.4	9.9	350.1	265.7	57.1	56.4	70.0	5.5
		12600	432.6	321.6	56.9	56.1	108.2	12.2	392.2	305.6	58.0	57.2	78.4	6.7
	14	8400	353.1	245.4	53.5	53.2	88.3	8.4	321.9	232.5	54.9	54.6	64.4	4.7
		10500	412.8	293.7	54.6	54.3	103.2	11.2	375.7	278.7	55.9	55.5	75.1	6.2
		12600	465.3	338.6	55.6	55.1	116.3	14.0	422.6	321.6	56.9	56.3	84.5	7.7
6	9	8400	378.9	256.0	52.4	52.1	94.7	12.7	353.1	245.1	53.6	53.2	70.6	7.4
		10500	445.0	306.7	53.5	53.1	111.2	17.0	413.3	293.5	54.7	54.2	82.7	9.9
		12600	503.4	353.7	54.6	54.0	125.9	21.3	466.5	338.5	55.6	55.1	93.3	12.3
	12	8400	415.3	273.6	50.5	50.4	103.8	15.0	390.1	262.6	51.7	51.6	78.0	8.9
		10500	493.5	330.4	51.5	51.3	123.4	20.5	461.4	316.7	52.7	52.5	92.3	12.0
		12600	563.9	383.6	52.4	52.2	141.0	26.1	525.5	367.5	53.6	53.4	105.1	15.3
	14	8400	432.8	281.3	49.6	49.5	108.2	16.1	408.2	270.5	50.8	50.7	81.6	9.6
		10500	517.4	341.2	50.5	50.4	129.4	22.3	485.8	327.5	51.7	51.6	97.2	13.2
		12600	594.5	398.0	51.4	51.3	148.6	28.8	556.0	381.6	52.5	52.4	111.2	16.9
8	9	8400	431.7	280.8	49.7	49.6	107.9	20.0	410.0	271.2	50.7	50.6	82.0	12.1
		10500	515.1	339.9	50.7	50.5	128.8	27.5	487.0	327.7	51.7	51.6	97.4	16.5
		12600	590.7	395.2	51.6	51.4	147.7	35.2	556.6	380.6	52.6	52.4	111.3	21.0
	12	8400	460.8	293.9	48.3	48.2	115.2	22.5	441.1	285.0	49.2	49.1	88.2	13.8
		10500	556.0	358.4	49.1	49.0	139.0	31.6	529.7	346.6	50.1	50.0	105.9	19.2
		12600	644.0	419.7	49.8	49.7	161.0	41.2	611.2	405.2	50.8	50.7	122.2	24.9
	14	8400	473.6	299.8	47.6	47.5	118.4	23.6	455.3	291.4	48.6	48.5	91.1	14.6
		10500	574.7	366.8	48.3	48.2	143.7	33.5	549.9	355.6	49.3	49.2	110.0	20.6
		12600	—	—	—	—	—	—	637.6	416.8	50.0	49.9	127.5	26.9

Rows of Coil	fpi	Air-flow	12°F						16°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	8400	227.1	188.0	59.7	58.6	37.9	1.8	—	—	—	—	—	—
		10500	266.6	225.6	60.5	59.1	44.4	2.4	173.2	173.2	65.1	62.0	21.7	0.6
		12600	300.0	259.8	61.3	59.7	50.0	2.9	208.0	208.0	65.1	62.0	26.0	0.9
	12	8400	266.2	208.5	57.5	57.0	44.4	2.4	164.9	164.9	62.2	61.0	20.6	0.6
		10500	312.9	251.2	58.3	57.6	52.1	3.2	223.2	217.9	61.2	60.5	27.9	1.0
		12600	352.7	290.5	59.1	58.3	58.8	4.0	262.9	257.3	61.5	60.6	32.9	1.4
	14	8400	286.9	218.6	56.4	56.1	47.8	2.7	195.1	183.9	60.2	59.8	24.4	0.8
		10500	337.8	263.8	57.2	56.8	56.3	3.7	247.3	229.7	60.2	59.7	30.9	1.2
		12600	381.5	305.6	58.0	57.5	63.6	4.6	289.6	271.3	60.5	59.9	36.2	1.6
6	9	8400	325.1	233.6	54.8	54.5	54.2	4.6	258.8	207.3	57.6	57.3	32.3	1.8
		10500	381.3	280.5	55.8	55.3	63.6	6.1	309.9	256.8	57.8	57.7	38.7	2.5
		12600	430.2	324.0	56.7	56.1	71.7	7.6	312.0	312.0	57.6	59.3	39.0	2.5
	12	8400	362.6	251.0	52.9	52.8	60.4	5.6	295.8	223.9	55.8	55.7	37.0	2.3
		10500	428.4	302.9	53.9	53.7	71.4	7.5	354.9	274.1	56.3	56.2	44.4	3.2
		12600	486.7	351.5	54.7	54.5	81.1	9.5	406.5	321.4	56.9	56.8	50.8	4.0
	14	8400	381.2	258.9	52.1	52.0	63.5	6.1	314.7	231.4	55.0	54.9	39.3	2.6
		10500	452.4	313.4	52.9	52.8	75.4	8.3	378.2	283.3	55.5	55.4	47.3	3.6
		12600	516.4	365.1	53.7	53.6	86.1	10.6	434.2	332.2	56.1	56.0	54.3	4.6
8	9	8400	386.1	260.9	51.8	51.7	64.3	7.8	328.6	237.1	54.4	54.3	41.1	3.5
		10500	457.3	315.0	52.8	52.7	76.2	10.6	391.8	288.6	55.1	55.0	49.0	4.8
		12600	521.2	365.8	53.7	53.5	86.9	13.4	447.6	335.9	55.8	55.6	56.0	6.0
	12	8400	418.7	275.1	50.3	50.2	69.8	9.0	362.8	251.1	52.9	52.8	45.3	4.1
		10500	500.8	334.0	51.2	51.1	83.5	12.5	435.1	306.2	53.6	53.5	54.4	5.7
		12600	575.8	390.0	51.9	51.8	96.0	16.0	499.8	358.4	54.2	54.1	62.5	7.4
	14	8400	434.0	281.9	49.6	49.5	72.3	9.6	379.6	258.2	52.1	52.0	47.4	4.5
		10500	521.8	343.2	50.4	50.3	87.0	13.4	456.7	315.2	52.8	52.7	57.1	6.3
		12600	602.9	401.6	51.1	51.0	100.5	17.4	526.3	369.2	53.4	53.3	65.8	8.1

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature (°F)
4. LWB = Leaving wet-bulb temperature (°F)
5. gpm = Water flow rate, gallons per minute
6. WPD = water pressure drop @ average water density (ft H_2O)
7. Some of the volumetric flow rates are less than those required for self-venting (see Table 2, p. 19).
8. A blank value means the gpm is below the minimum or above the maximum for the application.
9. Capacities calculated with 0.00000 tube-side fouling factor.

Table 78. Unit size 25 chilled water cooling capacities, EAT = 80°F DB / 67°F WB and EWT = 45°F

Rows of Coil	fpi	Air-flow	8°F						10°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	10000	348.3	254.1	57.0	55.9	87.1	6.7	313.4	240.2	58.2	57.1	62.7	3.7
		12500	400.4	300.4	58.2	56.9	100.1	8.7	361.8	285.3	59.3	57.9	72.4	4.8
		15000	445.2	342.6	59.3	57.7	111.3	10.5	402.8	326.2	60.3	58.6	80.6	5.8
	12	10000	396.4	279.9	54.6	54.1	99.1	8.5	360.6	265.4	55.9	55.4	72.1	4.7
		12500	460.4	333.6	55.8	55.2	115.1	11.2	418.6	316.8	57.0	56.4	83.7	6.2
		15000	516.3	383.0	56.9	56.0	129.1	13.9	468.7	364.3	58.0	57.1	93.7	7.7
	14	10000	421.7	292.6	53.5	53.2	105.4	9.5	385.3	277.6	54.8	54.5	77.1	5.3
		12500	492.8	350.1	54.6	54.2	123.2	12.7	449.2	332.5	55.9	55.5	89.8	7.1
		15000	555.3	403.5	55.6	55.1	138.8	15.9	505.2	383.5	56.8	56.3	101.0	8.8
6	9	10000	451.6	305.0	52.4	52.1	112.9	14.3	421.4	292.2	53.5	53.2	84.3	8.4
		12500	530.2	365.2	53.5	53.1	132.6	19.1	493.0	349.7	54.6	54.2	98.6	11.1
		15000	599.7	421.0	54.6	54.0	149.9	23.9	556.2	403.2	55.6	55.1	111.2	13.8
	12	10000	495.1	326.0	50.5	50.4	123.8	16.9	465.4	313.1	51.6	51.5	93.1	10.0
		12500	588.1	393.6	51.5	51.3	147.0	23.1	550.5	377.5	52.6	52.5	110.1	13.6
		15000	671.9	456.8	52.4	52.2	168.0	29.5	626.8	437.8	53.5	53.3	125.4	17.2
	14	10000	516.0	335.2	49.6	49.5	129.0	18.2	487.1	322.5	50.8	50.7	97.4	10.9
		12500	616.8	406.6	50.5	50.4	154.2	25.2	579.6	390.5	51.7	51.6	115.9	14.9
		15000	708.5	474.1	51.4	51.3	177.1	32.5	663.3	454.9	52.5	52.4	132.7	19.1
8	9	10000	514.3	334.5	49.7	49.6	128.6	22.4	488.7	323.2	50.7	50.6	97.7	13.6
		12500	613.5	404.7	50.7	50.5	153.4	30.8	580.4	390.3	51.7	51.6	116.1	18.5
		15000	703.3	470.4	51.6	51.4	175.8	39.5	663.1	453.2	52.6	52.4	132.6	23.6
	12	10000	549.0	350.1	48.3	48.2	137.2	25.2	525.8	339.6	49.2	49.1	105.2	15.5
		12500	662.3	426.8	49.1	49.0	165.6	35.4	631.4	413.0	50.1	50.0	126.3	21.6
		15000	—	—	—	—	—	—	728.4	482.7	50.8	50.7	145.7	28.0
	14	10000	564.3	357.2	47.6	47.5	141.1	26.5	542.8	347.3	48.5	48.4	108.6	16.4
		12500	684.7	436.9	48.3	48.2	171.2	37.6	655.5	423.7	49.3	49.2	131.1	23.1
		15000	—	—	—	—	—	—	760.0	496.6	50.0	49.9	152.0	30.2

Rows of Coil	fpi	Air-flow	12°F						16°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	10000	274.4	225.2	59.6	58.4	45.7	2.1	—	—	—	—	—	–
		12500	321.0	269.7	60.4	59.0	53.5	2.7	214.6	214.6	64.5	61.8	26.8	0.8
		15000	360.3	310.2	61.3	59.6	60.1	3.4	254.3	254.3	64.6	61.9	31.8	1.1
	12	10000	320.8	249.7	57.4	56.8	53.5	2.7	218.0	211.2	60.9	60.3	27.3	0.8
		12500	375.9	300.2	58.2	57.5	62.7	3.6	275.0	262.6	61.0	60.2	34.4	1.2
		15000	423.0	346.7	59.0	58.2	70.5	4.5	321.0	309.0	61.3	60.4	40.1	1.6
	14	10000	345.4	261.6	56.3	56.0	57.6	3.1	243.5	222.9	59.8	59.5	30.4	1.0
		12500	405.5	315.2	57.1	56.7	67.6	4.2	303.3	276.6	59.9	59.5	37.9	1.4
		15000	457.2	364.8	58.0	57.4	76.2	5.2	352.6	325.6	60.3	59.7	44.1	1.9
6	9	10000	389.0	278.8	54.7	54.4	64.8	5.2	313.0	248.7	57.5	57.1	39.1	2.1
		12500	455.5	334.5	55.7	55.3	75.9	6.9	373.3	302.3	58.1	57.6	46.7	2.8
		15000	513.4	386.0	56.7	56.1	85.6	8.6	373.9	373.9	57.4	57.4	46.7	2.9
	12	10000	433.5	299.6	52.8	52.7	72.2	6.3	356.9	268.5	55.7	55.6	44.6	2.6
		12500	511.6	361.2	53.8	53.7	85.3	8.5	426.7	327.1	56.3	56.1	53.3	3.6
		15000	581.1	419.0	54.7	54.5	96.8	10.7	487.9	384.2	56.8	56.7	61.0	4.6
	14	10000	455.6	309.0	52.0	51.9	75.9	6.9	379.3	277.4	54.9	54.8	47.4	2.9
		12500	540.3	373.9	52.9	52.8	90.1	9.4	454.5	338.9	55.4	55.3	56.8	4.0
		15000	616.6	435.3	53.7	53.6	102.8	11.9	520.8	397.0	56.0	55.9	65.1	5.2
8	9	10000	460.7	311.1	51.8	51.7	76.8	8.8	394.2	283.4	54.3	54.2	49.3	3.9
		12500	545.4	375.4	52.8	52.6	90.9	11.9	469.1	344.7	55.0	54.9	58.6	5.4
		15000	621.4	435.8	53.7	53.5	103.6	15.0	535.2	400.8	55.8	55.6	66.9	6.8
	12	10000	499.5	327.9	50.3	50.2	83.3	10.1	434.9	300.2	52.8	52.7	54.4	4.7
		12500	597.3	398.1	51.1	51.0	99.6	14.0	520.6	365.7	53.5	53.4	65.1	6.5
		15000	686.7	464.8	51.9	51.8	114.5	18.0	597.4	427.6	54.2	54.1	74.7	8.3
	14	10000	517.8	336.0	49.5	49.4	86.3	10.8	454.8	308.6	52.0	51.9	56.8	5.1
		12500	622.5	409.1	50.3	50.2	103.7	15.1	546.4	376.4	52.7	52.6	68.3	7.1
		15000	719.1	478.7	51.1	51.0	119.9	19.6	629.0	440.6	53.4	53.3	78.6	9.1

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature (°F)
4. LWB = Leaving wet-bulb temperature (°F)
5. gpm = Water flow rate, gallons per minute
6. WPD = water pressure drop @ average water density (ft H_2O)
7. Some of the volumetric flow rates are less than those required for self-venting (see Table 2, p. 19).
8. A blank value means the gpm is below the minimum or above the maximum for the application.
9. Capacities calculated with 0.00000 tube-side fouling factor.

Table 79. Unit size 30 chilled water cooling capacities, EAT = 80°F DB / 67°F WB and EWT = 45°F

Rows of Coil	fpi	Air-flow	8°F						10°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	12000	430.2	309.8	56.6	55.5	107.5	10.9	393.1	294.9	57.7	56.6	78.6	6.1
		15000	494.7	366.0	57.9	56.5	123.7	14.1	451.6	349.0	58.9	57.5	90.3	7.9
		18000	550.2	417.2	59.0	57.4	137.6	17.2	501.9	398.4	59.9	58.3	100.4	9.6
	12	12000	489.3	341.5	54.2	53.7	122.3	13.8	449.8	325.3	55.4	54.9	90.0	7.8
		15000	568.7	406.8	55.4	54.8	142.2	18.2	521.5	387.7	56.6	55.9	104.3	10.3
		18000	638.0	467.0	56.5	55.7	159.5	22.6	584.0	445.5	57.6	56.7	116.8	12.7
	14	12000	520.2	357.1	53.0	52.7	130.1	15.5	479.9	340.3	54.3	54.0	96.0	8.8
		15000	608.5	427.2	54.2	53.8	152.1	20.7	559.6	407.1	55.4	55.0	111.9	11.7
		18000	686.2	492.2	55.2	54.7	171.5	25.8	629.5	469.3	56.4	55.8	125.9	14.5
6	9	12000	551.3	369.9	52.1	51.8	137.8	22.9	517.2	355.4	53.2	52.8	103.4	13.5
		15000	647.6	442.9	53.2	52.8	161.9	30.7	605.5	425.3	54.3	53.9	121.1	18.0
		18000	732.8	510.6	54.3	53.7	183.2	38.4	683.4	490.2	55.3	54.7	136.7	22.5
	12	12000	603.7	395.4	50.1	50.0	150.9	27.0	570.7	381.0	51.2	51.1	114.1	16.2
		15000	717.8	477.5	51.1	51.0	179.4	37.0	675.7	459.3	52.2	52.1	135.1	22.0
		18000	—	—	—	—	—	—	769.8	532.7	53.2	53.0	154.0	27.9
	14	12000	628.6	406.5	49.3	49.2	157.2	29.0	596.9	392.4	50.4	50.3	119.4	17.6
		15000	—	—	—	—	—	—	710.9	475.2	51.3	51.2	142.2	24.1
		18000	—	—	—	—	—	—	814.3	553.6	52.1	52.0	162.9	30.9
8	9	12000	624.0	404.4	49.5	49.4	156.0	35.7	595.3	391.7	50.4	50.3	119.1	21.8
		15000	744.9	489.4	50.4	50.3	186.2	49.2	707.6	473.1	51.4	51.3	141.5	29.8
		18000	—	—	—	—	—	—	808.9	549.4	52.3	52.1	161.8	38.0
	12	12000	665.3	423.1	48.0	47.9	166.3	40.1	639.8	411.5	48.9	48.8	128.0	24.9
		15000	—	—	—	—	—	—	769.1	500.6	49.7	49.6	153.8	34.7
		18000	—	—	—	—	—	—	887.8	585.3	50.5	50.4	177.6	45.0
	14	12000	683.3	431.5	47.4	47.3	170.8	42.0	660.0	420.7	48.2	48.1	132.0	26.3
		15000	—	—	—	—	—	—	797.8	513.5	49.0	48.9	159.6	37.0
		18000	—	—	—	—	—	—	925.8	602.1	49.7	49.6	185.2	48.5

Rows of Coil	fpi	Air-flow	12°F						16°F					
			TC	SC	LDB	LWB	gpm	WPD	TC	SC	LDB	LWB	gpm	WPD
4	9	12000	354.3	279.7	58.9	57.7	59.0	3.6	262.7	245.4	61.5	60.3	32.8	1.2
		15000	409.7	332.8	59.9	58.5	68.3	4.7	316.8	298.2	62.0	60.5	39.6	1.7
		18000	456.7	381.1	60.8	59.1	76.1	5.8	361.6	346.0	62.6	60.9	45.2	2.2
	12	12000	409.8	309.3	56.6	56.1	68.3	4.7	316.3	273.4	59.3	58.8	39.5	1.7
		15000	475.9	369.8	57.7	57.0	79.3	6.2	378.4	332.8	59.9	59.2	47.3	2.4
		18000	532.8	425.6	58.6	57.7	88.8	7.6	431.0	387.3	60.5	59.6	53.9	3.0
	14	12000	439.2	323.7	55.5	55.2	73.2	5.4	344.7	287.0	58.3	58.0	43.1	2.0
		15000	511.7	388.0	56.6	56.1	85.3	7.1	411.7	349.6	58.9	58.4	51.5	2.8
		18000	575.0	447.9	57.4	56.9	95.8	8.8	469.0	407.6	59.5	58.9	58.6	3.6
6	9	12000	482.2	340.8	54.3	53.9	80.4	8.6	404.3	309.5	56.6	56.3	50.5	3.7
		15000	563.0	407.9	55.4	54.9	93.8	11.3	476.3	373.6	57.4	57.0	59.5	4.9
		18000	634.3	470.4	56.3	55.7	105.7	14.0	538.7	433.0	58.2	57.6	67.3	6.2
	12	12000	535.5	365.9	52.4	52.3	89.2	10.3	456.7	333.5	54.8	54.7	57.1	4.6
		15000	631.7	440.8	53.4	53.2	105.3	13.9	540.6	403.8	55.6	55.4	67.6	6.2
		18000	717.9	511.2	54.3	54.0	119.7	17.6	614.1	469.6	56.4	56.1	76.8	7.8
	14	12000	562.1	377.3	51.5	51.4	93.7	11.3	483.4	344.3	54.0	53.9	60.4	5.1
		15000	667.0	456.4	52.4	52.3	111.2	15.4	574.1	418.1	54.7	54.6	71.8	6.9
		18000	761.7	531.3	53.2	53.1	126.9	19.6	654.0	487.8	55.4	55.3	81.8	8.8
8	9	12000	564.0	378.1	51.4	51.3	94.0	14.2	493.1	348.3	53.7	53.6	61.6	6.6
		15000	667.9	456.1	52.4	52.3	111.3	19.3	583.4	421.0	54.6	54.4	72.9	9.0
		18000	761.4	529.4	53.3	53.1	126.9	24.4	663.2	491.5	55.3	55.2	82.9	11.3
	12	12000	610.6	398.5	49.9	49.8	101.8	16.4	541.6	368.5	52.2	52.1	67.7	7.8
		15000	730.9	483.8	50.8	50.7	121.8	22.7	645.3	447.3	53.0	52.9	80.7	10.7
		18000	840.9	565.0	51.6	51.5	140.2	29.2	738.9	522.1	53.7	53.6	92.4	13.7
	14	12000	632.5	408.2	49.2	49.1	105.4	17.5	565.3	378.7	51.4	51.3	70.7	8.5
		15000	761.2	497.2	50.0	49.9	126.9	24.4	676.2	460.3	52.2	52.1	84.5	11.7
		18000	880.2	582.0	50.7	50.6	146.7	31.7	777.7	538.2	52.9	52.8	97.2	15.0

Notes:
1. TC = Total capacity (MBh)
2. SC = Sensible capacity (MBh)
3. LDB = Leaving dry-bulb temperature (°F)
4. LWB = Leaving wet-bulb temperature (°F)
5. gpm = Water flow rate, gallons per minute
6. WPD = water pressure drop @ average water density (ft H_2O)
7. Some of the volumetric flow rates are less than those required for self-venting (see Table 2, p. 19).
8. A blank value means the gpm is below the minimum or above the maximum for the application.
9. Capacities calculated with 0.00000 tube-side fouling factor.

Heating Capacities - Hot Water Coil

Table 80. Unit size 3 hot water heating capacities, EAT = 60°F

Water Temp. Rise		1 Row of Coil									2 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		1200	1500	1800	1200	1500	1800	1200	1500	1800	1200	1500	1800	1200	1500	1800	1200	1500	1800
10°F	TC	46.0	51.4	56.0	58.5	65.1	70.8	64.7	71.9	78.2	82.2	94.3	104.6	95.3	110.2	122.9	102.5	118.9	133.0
	LAT	95.4	91.6	88.7	105.0	100.0	96.2	109.7	104.2	100.0	123.1	118.0	113.6	133.3	127.7	122.9	138.7	133.1	128.1
	gpm	9.2	10.3	11.2	11.7	13.0	14.1	12.9	14.4	15.6	16.4	18.8	20.9	19.0	22.0	24.5	20.5	23.7	26.6
	WPD	0.8	1.0	1.2	1.3	1.7	1.9	1.6	2.0	2.4	3.2	4.1	5.0	4.2	5.6	6.8	4.8	6.4	7.9
15°F	TC	42.4	47.3	51.5	53.9	59.8	65.0	59.5	66.1	71.7	78.5	90.0	99.7	91.3	105.2	117.2	98.2	113.7	127.0
	SC	92.6	89.1	86.4	101.4	96.8	93.3	105.7	100.6	96.7	120.3	115.3	111.1	130.1	124.7	120.0	135.4	129.9	125.0
	gpm	5.7	6.3	6.9	7.2	8.0	8.7	7.9	8.8	9.5	10.5	12.0	13.3	12.2	14.0	15.6	13.1	15.1	16.9
	WPD	0.3	0.4	0.5	0.5	0.6	0.8	0.6	0.8	0.9	1.4	1.8	2.1	1.8	2.4	2.9	2.1	2.7	3.4
20°F	TC	38.9	43.3	47.1	49.3	54.7	59.3	54.4	60.3	65.4	74.9	85.7	94.8	87.1	100.3	111.5	93.8	108.4	120.9
	SC	89.9	86.6	84.1	97.9	93.6	90.4	101.8	97.1	93.5	117.5	112.7	108.6	126.9	121.6	117.1	132.1	126.6	121.9
	gpm	3.9	4.3	4.7	4.9	5.5	5.9	5.4	6.0	6.5	7.5	8.6	9.5	8.7	10.0	11.1	9.4	10.8	12.1
	WPD	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.7	0.9	1.1	1.0	1.3	1.5	1.1	1.5	1.8
25°F	TC	35.1	39.2	42.7	44.7	49.6	53.7	49.3	54.6	59.1	71.2	81.3	89.9	82.9	95.3	105.8	89.4	103.0	114.7
	SC	87.0	84.1	81.9	94.3	90.5	87.5	97.9	93.6	90.3	114.7	110.0	106.0	123.7	118.6	114.2	128.7	123.3	118.8
	gpm	2.8	3.1	3.4	3.6	4.0	4.3	3.9	4.4	4.7	5.7	6.5	7.2	6.6	7.6	8.5	7.1	8.2	9.2
	WPD	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.7	0.6	0.8	0.9	0.7	0.9	1.1
30°F	TC	30.7	34.6	37.8	39.5	44.1	48.0	43.9	48.7	52.9	67.4	76.9	84.9	78.6	90.2	99.9	84.8	97.6	108.5
	SC	83.6	81.2	79.4	90.4	87.1	84.6	93.7	89.9	87.1	111.8	107.3	103.5	120.4	115.4	111.2	125.2	120.0	115.6
	gpm	2.0	2.3	2.5	2.6	2.9	3.2	2.9	3.2	3.5	4.5	5.1	5.7	5.2	6.0	6.7	5.7	6.5	7.2
	WPD	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.4	0.4	0.5	0.6	0.4	0.6	0.7
40°F	TC	—	—	—	—	—	—	—	—	—	59.2	67.6	74.5	69.5	79.5	87.9	75.2	86.2	95.5
	SC	—	—	—	—	—	—	—	—	—	105.5	101.5	98.2	113.4	108.9	105.0	117.8	113.0	108.9
	gpm	—	—	—	—	—	—	—	—	—	3.0	3.4	3.7	3.5	4.0	4.4	3.8	4.3	4.8
	WPD	—	—	—	—	—	—	—	—	—	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3

Water Temp. Rise		4 Rows of Coil									6 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		1200	1500	1800	1200	1500	1800	1200	1500	1800	1200	1500	1800	1200	1500	1800	1200	1500	1800
10°F	TC	109.6	128.7	145.5	121.2	143.6	163.6	126.8	151.0	172.8	131.5	157.6	181.3	140.1	169.5	196.8	143.8	174.9	203.9
	LAT	102.1	99.6	97.3	106.6	104.1	101.9	108.7	106.4	104.3	110.5	108.4	106.4	113.8	112.1	110.4	115.2	113.7	112.2
	gpm	22.0	25.8	29.2	24.3	28.8	32.8	25.4	30.3	34.6	26.4	31.6	36.3	28.1	34.0	39.4	28.8	35.0	40.9
	WPD	2.2	2.9	3.7	2.6	3.6	4.6	2.8	4.0	5.1	3.6	5.1	6.7	4.1	5.9	7.8	4.3	6.2	8.4
15°F	TC	101.1	118.3	133.3	112.6	132.7	150.6	118.2	140.0	159.5	125.1	149.2	171.0	134.2	161.6	186.7	138.4	167.3	194.2
	SC	98.8	96.4	94.1	103.2	100.8	98.6	105.4	103.0	100.9	108.0	105.8	103.8	111.6	109.7	107.8	113.2	111.4	109.7
	gpm	13.5	15.8	17.8	15.0	17.7	20.1	15.8	18.7	21.3	16.7	19.9	22.8	17.9	21.6	24.9	18.5	22.4	25.9
	WPD	0.9	1.2	1.5	1.1	1.4	1.8	1.2	1.6	2.0	1.6	2.2	2.8	1.8	2.5	3.3	1.9	2.7	3.6
20°F	TC	90.5	106.2	119.8	101.9	120.3	136.4	107.7	127.5	145.0	117.4	139.7	159.6	127.1	152.4	175.4	131.6	158.5	183.1
	SC	94.8	92.6	90.7	99.2	97.0	94.9	101.4	99.2	97.1	105.1	102.9	100.9	108.8	106.8	104.9	110.5	108.7	106.9
	gpm	9.1	10.6	12.0	10.2	12.1	13.7	10.8	12.8	14.5	11.8	14.0	16.0	12.7	15.3	17.6	13.2	15.9	18.3
	WPD	0.4	0.5	0.7	0.5	0.7	0.9	0.6	0.8	1.0	0.8	1.1	1.4	0.9	1.3	1.7	1.0	1.4	1.9
25°F	TC	75.2	89.8	102.3	86.8	103.7	118.3	92.8	111.0	126.8	107.3	127.9	146.2	117.4	141.0	162.1	122.3	147.3	169.9
	SC	88.9	87.6	86.2	93.4	91.9	90.3	95.6	94.1	92.5	101.2	99.3	97.4	105.1	103.3	101.5	107.0	105.3	103.5
	gpm	6.0	7.2	8.2	7.0	8.3	9.5	7.4	8.9	10.2	8.6	10.2	11.7	9.4	11.3	13.0	9.8	11.8	13.6
	WPD	0.2	0.3	0.3	0.2	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.8	0.5	0.8	1.0	0.6	0.8	1.1
30°F	TC	—	—	—	—	76.1	91.0	—	84.5	99.9	93.1	112.2	128.9	103.8	125.5	144.9	109.1	132.2	152.9
	SC	—	—	—	—	83.4	83.3	—	86.0	85.6	95.8	94.5	93.0	99.9	98.6	97.1	101.9	100.6	99.2
	gpm	—	—	—	—	5.1	6.1	—	5.6	6.7	6.2	7.5	8.6	6.9	8.4	9.7	7.3	8.8	10.2
	WPD	—	—	—	—	0.1	0.2	—	0.2	0.2	0.3	0.4	0.5	0.3	0.4	0.6	0.3	0.5	0.6
40°F	TC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	SC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	gpm	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	WPD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Notes:
1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 80. Unit size 3 hot water heating capacities, EAT = 60°F (continued)

Water Temp. Rise		8 Rows of Coil								
		9 fpi			12 fpi			14 fpi		
		Airflow								
		1200	1500	1800	1200	1500	1800	1200	1500	1800
10°F	TC	142.9	173.7	202.4	148.7	182.2	214.1	150.8	185.7	219.0
	LAT	114.9	113.4	111.8	117.1	116.0	114.8	118.0	117.1	116.1
	gpm	28.6	34.8	40.6	29.8	36.5	42.9	30.2	37.2	43.9
	WPD	5.0	7.1	9.5	5.3	7.8	10.6	5.5	8.1	11.0
15°F	TC	138.3	167.2	194.1	144.9	176.8	206.8	147.6	180.8	212.4
	SC	113.1	111.4	109.7	115.7	114.3	113.0	116.7	115.6	114.4
	gpm	18.5	22.3	25.9	19.4	23.6	27.6	19.7	24.2	28.4
	WPD	2.2	3.1	4.1	2.4	3.5	4.7	2.5	3.6	4.9
20°F	TC	132.5	159.7	184.6	140.0	170.0	198.1	143.1	174.6	204.2
	SC	110.9	109.1	107.3	113.8	112.3	110.7	115.0	113.7	112.3
	gpm	13.3	16.0	18.5	14.0	17.0	19.8	14.3	17.5	20.5
	WPD	1.2	1.7	2.2	1.3	1.9	2.5	1.4	2.0	2.7
25°F	TC	125.0	150.4	173.6	133.2	161.5	187.6	136.9	166.6	194.2
	SC	108.0	106.2	104.5	111.2	109.6	108.1	112.6	111.2	109.7
	gpm	10.0	12.1	13.9	10.7	12.9	15.0	11.0	13.4	15.6
	WPD	0.7	1.0	1.3	0.8	1.1	1.5	0.8	1.2	1.6
30°F	TC	114.7	138.4	159.8	123.8	150.2	174.4	127.9	155.7	181.4
	SC	104.1	102.5	100.9	107.5	106.2	104.7	109.1	107.9	106.5
	gpm	7.7	9.2	10.7	8.3	10.0	11.6	8.5	10.4	12.1
	WPD	0.4	0.6	0.8	0.5	0.7	0.9	0.5	0.8	1.0
40°F	TC	—	—	114.2	—	109.3	130.3	—	117.1	138.2
	SC	—	—	89.2	—	93.6	93.4	—	96.0	95.4
	gpm	—	—	5.7	—	5.5	6.5	—	5.9	6.9
	WPD	—	—	0.3	—	0.2	0.3	—	0.3	0.4

Notes:

1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 81. Unit size 6 hot water heating capacities, EAT = 60°F

Water Temp. Rise		1 Row of Coil									2 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		2400	3000	3600	2400	3000	3600	2400	3000	3600	2400	3000	3600	2400	3000	3600	2400	3000	3600
10°F	TC	96.0	107.2	116.9	122.2	136.0	148.0	135.1	150.4	163.6	156.5	179.2	198.5	182.3	210.1	233.9	196.4	227.2	253.7
	LAT	96.9	92.9	89.9	106.9	101.8	97.9	111.9	106.2	101.9	120.1	115.1	110.9	130.0	124.6	119.9	135.4	129.8	125.0
	gpm	19.2	21.4	23.3	24.4	27.2	29.6	27.0	30.0	32.7	31.2	35.8	39.6	36.4	42.0	46.7	39.2	45.4	50.7
	WPD	2.7	3.4	4.0	4.4	5.4	6.3	5.3	6.5	7.7	4.3	5.6	6.8	5.7	7.6	9.4	6.6	8.9	11.0
15°F	TC	90.3	100.8	109.9	114.8	127.8	138.9	127.0	141.2	153.5	148.4	169.7	187.7	173.1	199.1	221.2	186.6	215.4	240.1
	SC	94.7	91.0	88.1	104.1	99.3	95.6	108.8	103.4	99.3	117.0	112.2	108.1	126.5	121.2	116.7	131.7	126.2	121.5
	gpm	12.0	13.4	14.6	15.3	17.0	18.5	16.9	18.8	20.4	19.8	22.6	25.0	23.0	26.5	29.5	24.9	28.7	32.0
	WPD	1.1	1.4	1.6	1.8	2.2	2.6	2.2	2.6	3.1	1.7	2.2	2.7	2.3	3.1	3.8	2.7	3.6	4.4
20°F	TC	84.8	94.5	102.9	107.7	119.6	130.0	119.0	132.1	143.5	140.3	160.1	176.9	163.8	188.0	208.6	176.8	203.6	226.5
	SC	92.6	89.1	86.4	101.4	96.8	93.3	105.7	100.6	96.8	113.9	109.2	105.3	122.9	117.8	113.4	127.9	122.6	118.0
	gpm	8.5	9.4	10.3	10.8	12.0	13.0	11.9	13.2	14.3	14.0	16.0	17.7	16.4	18.8	20.8	17.7	20.3	22.6
	WPD	0.6	0.7	0.8	0.9	1.1	1.3	1.1	1.3	1.6	0.9	1.1	1.4	1.2	1.6	1.9	1.4	1.8	2.3
25°F	TC	79.2	88.3	96.1	100.5	111.6	121.1	111.0	123.1	133.6	132.1	150.5	166.1	154.4	176.8	195.9	166.8	191.6	212.8
	SC	90.4	87.1	84.6	98.6	94.3	91.0	102.6	97.8	94.2	110.7	106.3	102.5	119.3	114.4	110.2	124.1	118.9	114.5
	gpm	6.3	7.1	7.7	8.0	8.9	9.7	8.9	9.8	10.7	10.6	12.0	13.3	12.3	14.1	15.7	13.3	15.3	17.0
	WPD	0.3	0.4	0.5	0.5	0.6	0.7	0.6	0.8	0.9	0.5	0.7	0.8	0.7	0.9	1.1	0.8	1.1	1.3
30°F	TC	73.7	82.3	89.5	93.3	103.5	112.4	103.0	114.2	123.8	123.4	140.7	155.1	144.7	165.5	183.0	156.5	179.4	198.8
	SC	88.3	85.3	82.9	95.9	91.8	88.8	99.6	95.1	91.7	107.4	103.2	99.7	115.6	110.9	106.9	120.1	115.1	110.9
	gpm	4.9	5.5	6.0	6.2	6.9	7.5	6.9	7.6	8.2	8.2	9.4	10.3	9.6	11.0	12.2	10.4	12.0	13.2
	WPD	0.2	0.3	0.3	0.3	0.4	0.5	0.4	0.5	0.5	0.3	0.4	0.5	0.4	0.6	0.7	0.5	0.6	0.8
40°F	TC	61.0	68.6	75.0	78.7	87.7	95.3	87.1	96.9	105.1	101.0	116.7	129.6	121.2	139.7	155.1	132.3	152.5	169.3
	SC	83.4	81.1	79.2	90.2	87.0	84.4	93.5	89.8	86.9	98.8	95.9	93.2	106.6	102.9	99.7	110.8	106.9	103.4
	gpm	3.0	3.4	3.8	3.9	4.4	4.8	4.4	4.8	5.3	5.1	5.8	6.5	6.1	7.0	7.8	6.6	7.6	8.5
	WPD	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3

Water Temp. Rise		4 Rows of Coil									6 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		2400	3000	3600	2400	3000	3600	2400	3000	3600	2400	3000	3600	2400	3000	3600	2400	3000	3600
10°F	TC	109.6	128.7	145.5	121.2	143.6	163.6	126.8	151.0	172.8	131.5	157.6	181.3	140.1	169.5	196.8	143.8	174.9	203.9
	LAT	102.1	99.6	97.3	106.6	104.1	101.9	108.7	106.4	104.3	110.5	108.4	106.4	113.8	112.1	110.4	115.2	113.7	112.2
	gpm	22.0	25.8	29.2	24.3	28.8	32.8	25.4	30.3	34.6	26.4	31.6	36.3	28.1	34.0	39.4	28.8	35.0	40.9
	WPD	2.2	2.9	3.7	2.6	3.6	4.6	2.8	4.0	5.1	3.6	5.1	6.7	4.1	5.9	7.8	4.3	6.2	8.4
15°F	TC	101.1	118.3	133.3	112.6	132.7	150.6	118.2	140.0	159.5	125.1	149.2	171.0	134.2	161.6	186.7	138.4	167.3	194.2
	SC	98.8	96.4	94.1	103.2	100.8	98.6	105.4	103.0	100.9	108.0	105.8	103.8	111.6	109.7	107.8	113.2	111.4	109.7
	gpm	13.5	15.8	17.8	15.0	17.7	20.1	15.8	18.7	21.3	16.7	19.9	22.8	17.9	21.6	24.9	18.5	22.4	25.9
	WPD	0.9	1.2	1.5	1.1	1.4	1.8	1.2	1.6	2.0	1.6	2.2	2.8	1.8	2.5	3.3	1.9	2.7	3.6
20°F	TC	90.5	106.2	119.8	101.9	120.3	136.4	107.7	127.5	145.0	117.4	139.7	159.6	127.1	152.4	175.4	131.6	158.5	183.1
	SC	94.8	92.6	90.7	99.2	97.0	94.9	101.4	99.2	97.1	105.1	102.9	100.9	108.8	106.8	104.9	110.5	108.7	106.9
	gpm	9.1	10.6	12.0	10.2	12.1	13.7	10.8	12.8	14.5	11.8	14.0	16.0	12.7	15.3	17.6	13.2	15.9	18.3
	WPD	0.4	0.5	0.7	0.5	0.7	0.9	0.6	0.8	1.0	0.8	1.1	1.4	0.9	1.3	1.7	1.0	1.4	1.9
25°F	TC	75.2	89.8	102.3	86.8	103.7	118.3	92.8	111.0	126.8	107.3	127.9	146.2	117.4	141.0	162.1	122.3	147.3	169.9
	SC	88.9	87.6	86.2	93.4	91.9	90.3	95.6	94.1	92.5	101.2	99.3	97.4	105.1	103.3	101.5	107.0	105.3	103.5
	gpm	6.0	7.2	8.2	7.0	8.3	9.5	7.4	8.9	10.2	8.6	10.2	11.7	9.4	11.3	13.0	9.8	11.8	13.6
	WPD	0.2	0.3	0.3	0.2	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.8	0.5	0.8	1.0	0.6	0.8	1.1
30°F	TC	—	—	—	—	76.1	91.0	—	84.5	99.9	93.1	112.2	128.9	103.8	125.5	144.9	109.1	132.2	152.9
	SC	—	—	—	—	83.4	83.3	—	86.0	85.6	95.8	94.5	93.0	99.9	98.6	97.1	101.9	100.6	99.2
	gpm	—	—	—	—	5.1	6.1	—	5.6	6.7	6.2	7.5	8.6	6.9	8.4	9.7	7.3	8.8	10.2
	WPD	—	—	—	—	0.1	0.2	—	0.2	0.2	0.3	0.4	0.5	0.3	0.4	0.6	0.3	0.5	0.6
40°F	TC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	SC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	gpm	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	WPD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Notes:
1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 81. Unit size 6 hot water heating capacities, EAT = 60°F (continued)

Water Temp. Rise		8 Rows of Coil								
		9 fpi			12 fpi			14 fpi		
		Airflow								
		2400	3000	3600	2400	3000	3600	2400	3000	3600
10°F	TC	142.9	173.7	202.4	148.7	182.2	214.1	150.8	185.7	219.0
	LAT	114.9	113.4	111.8	117.1	116.0	114.8	118.0	117.1	116.1
	gpm	28.6	34.8	40.6	29.8	36.5	42.9	30.2	37.2	43.9
	WPD	5.0	7.1	9.5	5.3	7.8	10.6	5.5	8.1	11.0
15°F	TC	138.3	167.2	194.1	144.9	176.8	206.8	147.6	180.8	212.4
	SC	113.1	111.4	109.7	115.7	114.3	113.0	116.7	115.6	114.4
	gpm	18.5	22.3	25.9	19.4	23.6	27.6	19.7	24.2	28.4
	WPD	2.2	3.1	4.1	2.4	3.5	4.7	2.5	3.6	4.9
20°F	TC	132.5	159.7	184.6	140.0	170.0	198.1	143.1	174.6	204.2
	SC	110.9	109.1	107.3	113.8	112.3	110.7	115.0	113.7	112.3
	gpm	13.3	16.0	18.5	14.0	17.0	19.8	14.3	17.5	20.5
	WPD	1.2	1.7	2.2	1.3	1.9	2.5	1.4	2.0	2.7
25°F	TC	125.0	150.4	173.6	133.2	161.5	187.6	136.9	166.6	194.2
	SC	108.0	106.2	104.5	111.2	109.6	108.1	112.6	111.2	109.7
	gpm	10.0	12.1	13.9	10.7	12.9	15.0	11.0	13.4	15.6
	WPD	0.7	1.0	1.3	0.8	1.1	1.5	0.8	1.2	1.6
30°F	TC	114.7	138.4	159.8	123.8	150.2	174.4	127.9	155.7	181.4
	SC	104.1	102.5	100.9	107.5	106.2	104.7	109.1	107.9	106.5
	gpm	7.7	9.2	10.7	8.3	10.0	11.6	8.5	10.4	12.1
	WPD	0.4	0.6	0.8	0.5	0.7	0.9	0.5	0.8	1.0
40°F	TC	—	—	114.2	—	109.3	130.3	—	117.1	138.2
	SC	—	—	89.2	—	93.6	93.4	—	96.0	95.4
	gpm	—	—	5.7	—	5.5	6.5	—	5.9	6.9
	WPD	—	—	0.3	—	0.2	0.3	—	0.3	0.4

Notes:

1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 82. Unit size 8 hot water heating capacities, EAT = 60°F

Water Temp. Rise		1 Row of Coil									2 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		3200	4000	4800	3200	4000	4800	3200	4000	4800	3200	4000	4800	3200	4000	4800	3200	4000	4800
10°F	TC	127.6	142.5	155.4	162.5	180.9	196.8	179.8	200.1	217.6	209.8	240.3	266.2	244.4	281.6	313.5	263.2	304.5	340.1
	LAT	96.8	92.8	89.8	106.8	101.7	97.8	111.8	106.1	101.8	120.5	115.4	111.1	130.4	124.9	120.2	135.8	130.2	125.3
	gpm	25.5	28.4	31.0	32.4	36.1	39.3	35.9	39.9	43.5	41.9	48.0	53.1	48.8	56.2	62.6	52.6	60.8	67.9
	WPD	3.7	4.6	5.4	5.9	7.3	8.6	7.2	8.9	10.5	6.9	9.0	11.0	9.3	12.3	15.2	10.7	14.3	17.8
15°F	TC	120.4	134.3	146.4	153.2	170.4	185.2	169.4	188.3	204.7	199.4	228.0	252.3	232.6	267.5	297.3	250.8	289.5	322.7
	SC	94.7	91.0	88.1	104.1	99.3	95.6	108.8	103.4	99.3	117.5	112.6	108.5	127.0	121.7	117.1	132.3	126.7	122.0
	gpm	16.0	17.9	19.5	20.4	22.7	24.7	22.6	25.1	27.3	26.6	30.4	33.6	31.0	35.6	39.6	33.4	38.6	43.0
	WPD	1.5	1.9	2.2	2.4	3.0	3.5	2.9	3.6	4.2	2.8	3.6	4.4	3.8	5.0	6.1	4.4	5.8	7.2
20°F	TC	113.3	126.3	137.6	144.0	160.0	173.8	159.1	176.8	192.0	189.0	215.8	238.4	220.7	253.4	281.1	238.2	274.4	305.3
	SC	92.7	89.1	86.4	101.5	96.9	93.4	105.9	100.7	96.9	114.5	109.7	105.8	123.6	118.4	114.0	128.6	123.2	118.6
	gpm	11.3	12.6	13.7	14.4	16.0	17.4	15.9	17.7	19.2	18.9	21.6	23.8	22.1	25.3	28.1	23.8	27.4	30.5
	WPD	0.8	1.0	1.1	1.2	1.5	1.8	1.5	1.8	2.1	1.4	1.9	2.3	1.9	2.5	3.1	2.2	3.0	3.7
25°F	TC	106.2	118.3	128.8	134.8	149.7	162.5	149.0	165.3	179.3	178.5	203.5	224.5	208.7	239.1	264.9	225.4	259.0	287.7
	SC	90.6	87.3	84.7	98.8	94.5	91.2	102.9	98.1	94.5	111.4	106.9	103.1	120.1	115.1	110.9	124.9	119.7	115.3
	gpm	8.5	9.5	10.3	10.8	12.0	13.0	11.9	13.2	14.3	14.3	16.3	17.9	16.7	19.1	21.2	18.0	20.7	23.0
	WPD	0.4	0.6	0.6	0.7	0.9	1.0	0.9	1.0	1.2	0.8	1.1	1.3	1.1	1.5	1.8	1.3	1.7	2.1
30°F	TC	99.3	110.7	120.5	125.7	139.4	151.3	138.8	153.8	166.8	167.7	191.0	210.4	196.4	224.5	248.3	212.3	243.4	269.8
	SC	88.6	85.5	83.1	96.2	92.1	89.1	100.0	95.5	92.0	108.3	104.0	100.4	116.6	111.8	107.7	121.2	116.1	111.8
	gpm	6.6	7.4	8.0	8.4	9.3	10.1	9.2	10.2	11.1	11.2	12.7	14.0	13.1	15.0	16.5	14.1	16.2	18.0
	WPD	0.3	0.3	0.4	0.4	0.5	0.6	0.5	0.6	0.8	0.5	0.7	0.8	0.7	0.9	1.1	0.8	1.1	1.3
40°F	TC	84.0	94.1	102.7	107.6	119.7	129.8	118.8	131.9	142.9	140.9	162.0	179.4	167.9	192.9	213.6	182.8	210.1	232.7
	SC	84.2	81.7	79.7	91.0	87.6	84.9	94.2	90.4	87.5	100.6	97.3	94.5	108.4	104.5	101.0	112.7	108.4	104.7
	gpm	4.2	4.7	5.1	5.4	6.0	6.5	5.9	6.6	7.1	7.0	8.1	9.0	8.4	9.6	10.7	9.1	10.5	11.6
	WPD	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.5	0.3	0.5	0.6

Water Temp. Rise		4 Rows of Coil									6 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		2400	3000	3600	2400	3000	3600	2400	3000	3600	2400	3000	3600	2400	3000	3600	2400	3000	3600
10°F	TC	147.1	172.7	195.3	162.5	192.7	219.6	170.0	202.6	231.9	176.0	210.9	242.7	187.4	226.8	263.3	192.3	233.9	272.8
	LAT	102.4	99.8	97.5	106.8	104.4	102.2	109.0	106.7	104.5	110.7	108.6	106.6	114.0	112.3	110.6	115.4	113.9	112.4
	gpm	29.5	34.6	39.1	32.6	38.6	44.0	34.1	40.6	46.5	35.3	42.3	48.6	37.6	45.5	52.8	38.5	46.9	54.7
	WPD	3.2	4.4	5.5	3.9	5.4	6.9	4.2	5.9	7.7	5.3	7.4	9.7	5.9	8.5	11.4	6.2	9.1	12.1
15°F	TC	136.3	159.4	179.7	151.5	178.7	202.9	159.1	188.5	214.9	167.7	200.1	229.4	179.9	216.7	250.5	185.4	224.3	260.4
	SC	99.3	96.7	94.5	103.7	101.2	99.0	105.8	103.5	101.3	108.3	106.1	104.1	111.8	109.9	108.1	113.4	111.7	110.0
	gpm	18.2	21.3	24.0	20.2	23.9	27.1	21.3	25.2	28.7	22.4	26.7	30.6	24.0	28.9	33.5	24.8	30.0	34.8
	WPD	1.3	1.7	2.2	1.6	2.1	2.7	1.7	2.4	3.1	2.2	3.1	4.0	2.6	3.6	4.8	2.7	3.9	5.1
20°F	TC	123.2	144.4	162.7	138.5	163.2	184.8	146.2	172.9	196.4	158.1	188.0	214.8	170.9	205.0	235.9	176.9	213.0	246.2
	SC	95.5	93.3	91.3	99.9	97.6	95.5	102.1	99.9	97.7	105.5	103.3	101.3	109.3	107.2	105.3	111.0	109.1	107.3
	gpm	12.3	14.5	16.3	13.9	16.4	18.5	14.6	17.3	19.7	15.8	18.8	21.5	17.1	20.5	23.6	17.7	21.3	24.7
	WPD	0.6	0.8	1.0	0.8	1.0	1.3	0.8	1.2	1.5	1.2	1.6	2.1	1.3	1.9	2.5	1.4	2.0	2.7
25°F	TC	105.1	124.6	141.4	120.5	143.2	162.9	128.4	152.9	174.2	145.6	173.4	198.0	159.2	190.8	219.2	165.6	199.2	229.7
	SC	90.3	88.7	87.2	94.7	93.0	91.3	97.0	95.2	93.5	102.0	100.0	98.0	105.9	104.0	102.1	107.7	105.9	104.1
	gpm	8.4	10.0	11.3	9.7	11.5	13.1	10.3	12.3	14.0	11.7	13.9	15.9	12.8	15.3	17.6	13.3	16.0	18.4
	WPD	0.3	0.4	0.5	0.4	0.5	0.7	0.4	0.6	0.8	0.7	0.9	1.2	0.8	1.1	1.4	0.8	1.2	1.6
30°F	TC	—	92.4	109.5	89.7	112.9	131.6	99.0	123.1	143.1	128.6	154.2	176.8	142.8	172.0	198.1	149.7	180.8	208.7
	SC	—	81.3	81.0	85.8	86.0	85.3	88.5	88.4	87.5	97.0	95.6	94.0	101.1	99.7	98.0	103.1	101.7	100.1
	gpm	—	6.2	7.3	6.0	7.5	8.8	6.6	8.2	9.6	8.6	10.3	11.8	9.5	11.5	13.2	10.0	12.1	13.9
	WPD	—	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.5	0.7	0.5	0.6	0.8	0.5	0.7	0.9
40°F	TC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	129.4
	SC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	84.9
	gpm	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.5
	WPD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2

Notes:
1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 82. Unit size 8 hot water heating capacities, EAT = 60°F (continued)

Water Temp. Rise		8 Rows of Coil								
		9 fpi			12 fpi			14 fpi		
		Airflow								
		3200	4000	4800	3200	4000	4800	3200	4000	4800
10°F	TC	191.0	232.2	270.6	198.5	243.5	286.1	201.4	248.0	292.5
	LAT	115.0	113.5	112.0	117.2	116.1	115.0	118.0	117.2	116.2
	gpm	38.3	46.5	54.2	39.8	48.8	57.3	40.4	49.7	58.6
	WPD	7.0	10.1	13.5	7.5	11.1	15.0	7.7	11.5	15.7
15°F	TC	185.0	223.9	259.9	193.7	236.5	276.8	197.3	241.8	284.1
	SC	113.3	111.6	109.9	115.8	114.5	113.2	116.8	115.7	114.6
	gpm	24.7	29.9	34.7	25.9	31.6	37.0	26.4	32.3	38.0
	WPD	3.1	4.4	5.8	3.4	4.9	6.6	3.5	5.1	6.9
20°F	TC	177.8	214.2	247.7	187.6	227.9	265.6	191.8	233.9	273.7
	SC	111.2	109.4	107.6	114.0	112.5	111.0	115.3	113.9	112.6
	gpm	17.8	21.5	24.8	18.8	22.8	26.6	19.2	23.4	27.4
	WPD	1.7	2.4	3.1	1.9	2.7	3.6	1.9	2.8	3.8
25°F	TC	168.4	202.6	233.7	179.3	217.3	252.3	184.1	224.0	261.0
	SC	108.5	106.7	104.9	111.7	110.1	108.5	113.1	111.6	110.1
	gpm	13.5	16.2	18.7	14.4	17.4	20.2	14.8	18.0	20.9
	WPD	1.0	1.4	1.8	1.1	1.6	2.1	1.2	1.7	2.3
30°F	TC	155.9	187.7	216.4	167.7	203.3	235.8	173.2	210.6	245.1
	SC	104.9	103.3	101.6	108.3	106.9	105.3	109.9	108.5	107.1
	gpm	10.4	12.5	14.5	11.2	13.6	15.7	11.6	14.1	16.4
	WPD	0.6	0.9	1.1	0.7	1.0	1.3	0.8	1.1	1.4
40°F	TC	—	137.1	161.8	123.2	156.1	182.8	130.5	163.8	193.1
	SC	—	91.6	91.1	95.5	96.0	95.1	97.6	97.7	97.1
	gpm	—	6.9	8.1	6.2	7.8	9.2	6.5	8.2	9.7
	WPD	—	0.3	0.4	0.2	0.4	0.5	0.3	0.4	0.5

Notes:

1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (ºF)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 83. Unit size 10 hot water heating capacities, EAT = 60°F

Water Temp. Rise		1 Row of Coil									2 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		4000	5000	6000	4000	5000	6000	4000	5000	6000	4000	5000	6000	4000	5000	6000	4000	5000	6000
10°F	TC	165.8	185.4	202.4	211.3	235.6	256.6	233.8	—	—	270.7	310.9	345.2	314.9	364.0	406.2	338.8	393.2	440.2
	LAT	98.2	94.2	91.1	108.7	103.5	99.4	113.9	—	—	122.4	117.3	113.1	132.6	127.1	122.4	138.1	132.5	127.7
	gpm	33.1	37.0	40.4	42.2	47.0	51.2	46.7	—	—	54.0	62.1	68.9	62.9	72.7	81.1	67.6	78.5	87.9
	WPD	6.6	8.2	9.7	10.5	13.0	15.4	12.8	—	—	11.7	15.4	18.9	15.7	20.9	26.0	18.2	24.4	30.5
15°F	TC	157.7	176.2	192.2	200.8	223.7	243.6	222.2	247.4	269.2	259.3	297.4	329.8	302.1	348.6	388.4	325.3	376.9	421.2
	SC	96.3	92.5	89.5	106.3	101.3	97.4	111.2	105.6	101.4	119.8	114.9	110.7	129.6	124.3	119.7	135.0	129.5	124.7
	gpm	21.0	23.5	25.6	26.7	29.8	32.4	29.6	32.9	35.9	34.5	39.6	43.9	40.2	46.4	51.7	43.3	50.2	56.1
	WPD	2.8	3.4	4.0	4.4	5.4	6.4	5.3	6.5	7.7	4.8	6.3	7.8	6.5	8.7	10.7	7.6	10.1	12.6
20°F	TC	149.7	167.1	182.3	190.4	212.0	230.7	210.6	234.3	254.9	247.9	283.9	314.5	289.1	333.1	370.6	311.7	360.4	402.2
	SC	94.5	90.8	88.0	103.9	99.1	95.4	108.5	103.2	99.2	117.1	112.4	108.3	126.7	121.4	117.0	131.9	126.5	121.8
	gpm	15.0	16.7	18.2	19.0	21.2	23.0	21.0	23.4	25.5	24.8	28.4	31.4	28.9	33.3	37.0	31.1	36.0	40.2
	WPD	1.4	1.8	2.1	2.3	2.8	3.3	2.8	3.4	4.0	2.5	3.3	4.0	3.4	4.5	5.5	3.9	5.2	6.5
25°F	TC	141.7	158.1	172.3	180.1	200.4	217.8	199.1	221.4	240.6	236.3	270.3	299.1	276.0	317.4	352.6	297.9	343.6	382.9
	SC	92.7	89.2	86.5	101.5	96.9	93.5	105.9	100.8	97.0	114.5	109.8	106.0	123.6	118.5	114.2	128.7	123.4	118.8
	gpm	11.3	12.6	13.8	14.4	16.0	17.4	15.9	17.7	19.2	18.9	21.6	23.9	22.1	25.4	28.2	23.8	27.5	30.6
	WPD	0.8	1.0	1.2	1.3	1.6	1.9	1.6	2.0	2.3	1.5	1.9	2.3	2.0	2.6	3.2	2.3	3.1	3.8
30°F	TC	133.6	149.3	162.9	169.7	188.7	205.0	187.6	208.4	226.3	224.6	256.4	283.4	262.6	301.4	334.4	283.6	326.5	363.2
	SC	90.8	87.5	85.0	99.1	94.8	91.5	103.2	98.4	94.8	111.8	107.3	103.6	120.5	115.6	111.4	125.4	120.2	115.8
	gpm	8.9	9.9	10.9	11.3	12.6	13.7	12.5	13.9	15.1	15.0	17.1	18.9	17.5	20.1	22.3	18.9	21.8	24.2
	WPD	0.5	0.7	0.8	0.8	1.0	1.2	1.0	1.3	1.5	0.9	1.2	1.5	1.3	1.7	2.0	1.5	2.0	2.4
40°F	TC	118.4	132.1	143.7	149.7	166.5	180.9	165.2	183.4	199.2	199.2	227.7	251.3	234.4	268.3	296.8	253.8	291.0	322.6
	SC	87.3	84.4	82.1	94.5	90.7	87.8	98.1	93.8	90.6	105.9	102.0	98.6	114.0	109.5	105.6	118.5	113.7	109.6
	gpm	5.9	6.6	7.2	7.5	8.3	9.0	8.3	9.2	10.0	10.0	11.4	12.6	11.7	13.4	14.8	12.7	14.6	16.1
	WPD	0.2	0.3	0.4	0.4	0.5	0.6	0.5	0.6	0.7	0.4	0.6	0.7	0.6	0.8	0.9	0.7	0.9	1.1

Water Temp. Rise		4 Rows of Coil									6 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		4000	5000	6000	4000	5000	6000	4000	5000	6000	4000	5000	6000	4000	5000	6000	4000	5000	6000
10°F	TC	189.4	223.1	253.0	208.7	248.2	283.7	217.9	260.5	299.1	223.9	269.2	310.5	237.6	288.4	335.7	243.4	296.9	347.1
	LAT	103.7	101.1	98.9	108.1	105.8	103.6	110.2	108.0	106.0	111.6	109.6	107.7	114.8	113.2	111.6	116.1	114.7	113.3
	gpm	38.0	44.7	50.7	41.8	49.7	56.8	43.7	52.2	59.9	44.9	53.9	62.2	47.6	57.8	67.3	48.8	59.5	69.5
	WPD	5.6	7.7	9.8	6.8	9.4	12.2	7.3	10.3	13.5	9.1	12.9	16.9	10.2	14.7	19.7	10.7	15.6	20.9
15°F	TC	177.6	208.5	235.7	196.9	233.1	265.5	206.4	245.5	280.8	215.0	257.3	295.9	229.8	277.7	321.9	236.3	286.9	334.1
	SC	101.0	98.4	96.2	105.4	103.0	100.8	107.6	105.3	103.1	109.6	107.5	105.5	113.0	111.2	109.5	114.5	112.9	111.3
	gpm	23.7	27.8	31.5	26.3	31.1	35.5	27.6	32.8	37.5	28.7	34.4	39.5	30.7	37.1	43.0	31.6	38.3	44.6
	WPD	2.3	3.1	3.9	2.8	3.9	4.9	3.1	4.3	5.5	3.9	5.5	7.2	4.5	6.4	8.4	4.7	6.8	9.0
20°F	TC	164.6	192.8	217.2	183.8	216.7	245.8	193.4	228.9	260.7	204.8	244.1	279.7	220.5	265.2	306.2	227.6	275.0	318.9
	SC	98.0	95.6	93.4	102.4	100.0	97.8	104.6	102.2	100.1	107.2	105.0	103.0	110.8	108.9	107.1	112.5	110.7	109.0
	gpm	16.5	19.3	21.8	18.4	21.7	24.6	19.4	22.9	26.1	20.5	24.5	28.0	22.1	26.6	30.7	22.8	27.6	32.0
	WPD	1.2	1.6	2.0	1.4	1.9	2.5	1.6	2.2	2.8	2.1	2.9	3.8	2.4	3.4	4.5	2.6	3.6	4.8
25°F	TC	148.2	174.2	196.7	167.5	197.8	224.2	177.2	209.9	238.6	192.6	229.1	261.7	209.1	250.6	288.3	216.8	260.9	301.3
	SC	94.2	92.1	90.2	98.6	96.5	94.5	100.9	98.7	96.7	104.4	102.3	100.2	108.2	106.2	104.3	110.0	108.1	106.3
	gpm	11.9	14.0	15.8	13.4	15.9	18.0	14.2	16.8	19.1	15.4	18.4	21.0	16.8	20.1	23.1	17.4	20.9	24.1
	WPD	0.6	0.8	1.1	0.8	1.1	1.4	0.9	1.2	1.5	1.2	1.7	2.2	1.4	2.0	2.6	1.5	2.2	2.9
30°F	TC	125.0	149.4	170.1	144.8	172.9	197.1	154.9	185.1	211.3	176.8	210.7	240.7	194.1	232.7	267.4	202.4	243.5	280.6
	SC	88.8	87.6	86.1	93.4	91.9	90.3	95.7	94.1	92.5	100.8	98.9	97.0	104.7	102.9	101.1	106.7	104.9	103.1
	gpm	8.4	10.0	11.4	9.7	11.5	13.2	10.3	12.4	14.1	11.8	14.1	16.1	13.0	15.5	17.9	13.5	16.3	18.7
	WPD	0.3	0.4	0.6	0.4	0.6	0.8	0.5	0.7	0.9	0.8	1.0	1.3	0.9	1.3	1.6	1.0	1.4	1.8
40°F	TC	—	—	—	—	—	—	—	—	—	—	149.6	175.9	139.0	173.8	203.4	149.4	185.9	217.3
	SC	—	—	—	—	—	—	—	—	—	—	87.6	87.0	92.0	92.1	91.3	94.4	94.3	93.4
	gpm	—	—	—	—	—	—	—	—	—	—	7.5	8.8	7.0	8.7	10.2	7.5	9.3	10.9
	WPD	—	—	—	—	—	—	—	—	—	—	0.3	0.4	0.3	0.4	0.6	0.3	0.5	0.7

Notes:
1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 83. Unit size 10 hot water heating capacities, EAT = 60°F (continued)

Water Temp. Rise		8 Rows of Coil								
		9 fpi			12 fpi			14 fpi		
		Airflow								
		4000	5000	6000	4000	5000	6000	4000	5000	6000
10°F	TC	241.4	294.1	343.5	250.2	307.4	362.0	253.4	312.6	369.5
	LAT	115.6	114.2	112.8	117.7	116.7	115.6	118.4	117.6	116.8
	gpm	48.4	58.9	68.8	50.1	61.6	72.5	50.8	62.6	74.0
	WPD	12.1	17.5	23.5	12.9	19.0	25.9	13.2	19.6	26.9
15°F	TC	235.0	285.2	332.0	245.3	300.2	352.2	249.3	306.4	360.8
	SC	114.2	112.6	111.0	116.5	115.4	114.1	117.5	116.5	115.5
	gpm	31.4	38.1	44.3	32.8	40.1	47.1	33.3	40.9	48.2
	WPD	5.4	7.7	10.3	5.8	8.5	11.5	6.0	8.9	12.0
20°F	TC	227.4	274.7	318.6	239.0	291.2	340.4	243.8	298.3	350.0
	SC	112.4	110.7	109.0	115.1	113.7	112.3	116.2	115.0	113.8
	gpm	22.8	27.5	31.9	23.9	29.2	34.1	24.4	29.9	35.1
	WPD	3.0	4.2	5.6	3.3	4.7	6.3	3.4	4.9	6.6
25°F	TC	218.0	262.4	303.2	230.9	280.2	326.2	236.5	288.1	336.7
	SC	110.3	108.4	106.6	113.2	111.7	110.1	114.5	113.1	111.7
	gpm	17.5	21.0	24.3	18.5	22.5	26.1	19.0	23.1	27.0
	WPD	1.8	2.6	3.4	2.0	2.9	3.9	2.1	3.1	4.1
30°F	TC	205.9	247.5	285.3	220.0	266.4	309.2	226.4	275.2	320.4
	SC	107.5	105.6	103.9	110.7	109.1	107.5	112.2	110.7	109.2
	gpm	13.7	16.5	19.1	14.7	17.8	20.6	15.1	18.4	21.4
	WPD	1.2	1.7	2.2	1.3	1.9	2.5	1.4	2.0	2.7
40°F	TC	166.0	201.8	234.2	182.8	223.0	259.2	190.8	233.2	271.7
	SC	98.3	97.2	96.0	102.1	101.1	99.8	104.0	103.0	101.8
	gpm	8.3	10.1	11.7	9.2	11.2	13.0	9.6	11.7	13.6
	WPD	0.5	0.7	0.9	0.6	0.8	1.1	0.6	0.9	1.2

Notes:

1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 84. Unit size 12 hot water heating capacities, EAT = 60°F

Water Temp. Rise		1Row of Coil									2 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		4800	6000	7200	4800	6000	7200	4800	6000	7200	4800	6000	7200	4800	6000	7200	4800	6000	7200
10°F	TC	204.7	229.2	250.4	261.2	291.5	317.9	289.0	322.5	—	333.6	384.5	428.1	387.1	449.1	502.6	415.9	484.5	544.0
	LAT	99.3	95.2	92.1	110.2	104.8	100.7	115.5	109.6	—	124.1	119.1	114.8	134.4	129.0	124.4	139.9	134.5	129.7
	gpm	40.9	45.8	50.0	52.1	58.2	63.5	57.7	64.4	—	66.6	76.8	85.5	77.3	89.7	100.4	83.0	96.7	108.6
	WPD	4.9	6.1	7.3	7.9	9.7	11.5	9.6	11.8	—	5.7	7.5	9.3	7.6	10.2	12.6	8.7	11.8	14.8
15°F	TC	194.7	217.9	238.0	248.2	276.9	301.7	274.6	306.2	333.5	319.8	368.0	409.2	371.6	430.3	480.9	399.7	464.6	520.8
	SC	97.4	93.5	90.5	107.7	102.6	98.6	112.8	107.1	102.7	121.4	116.6	112.4	131.4	126.1	121.6	136.8	131.4	126.7
	gpm	25.9	29.0	31.7	33.1	36.9	40.2	36.6	40.8	44.4	42.6	49.0	54.5	49.5	57.3	64.0	53.2	61.9	69.4
	WPD	2.1	2.6	3.1	3.3	4.1	4.8	4.0	4.9	5.8	2.4	3.1	3.9	3.2	4.3	5.3	3.7	4.9	6.2
20°F	TC	184.9	206.7	225.6	235.4	262.4	285.8	260.5	290.1	315.8	305.8	351.5	390.4	356.0	411.4	459.1	383.2	444.6	497.5
	SC	95.5	91.8	88.9	105.2	100.3	96.6	110.0	104.6	100.4	118.8	114.0	110.0	128.4	123.2	118.8	133.6	128.3	123.7
	gpm	18.5	20.6	22.5	23.5	26.2	28.5	26.0	29.0	31.5	30.6	35.1	39.0	35.6	41.1	45.9	38.3	44.4	49.7
	WPD	1.1	1.4	1.6	1.7	2.1	2.5	2.1	2.6	3.0	1.3	1.7	2.0	1.7	2.2	2.8	2.0	2.6	3.2
25°F	TC	175.0	195.6	213.4	222.7	248.0	270.0	246.4	274.1	298.2	291.7	334.7	371.4	340.0	392.2	437.1	366.4	424.2	474.0
	SC	93.6	90.1	87.3	102.8	98.1	94.6	107.3	102.1	98.2	116.0	111.4	107.6	125.3	120.3	116.0	130.4	125.2	120.7
	gpm	14.0	15.6	17.1	17.8	19.8	21.6	19.7	21.9	23.8	23.3	26.8	29.7	27.2	31.4	34.9	29.3	33.9	37.9
	WPD	0.7	0.8	0.9	1.0	1.3	1.5	1.2	1.5	1.8	0.8	1.0	1.2	1.0	1.3	1.6	1.2	1.5	1.9
30°F	TC	165.1	184.6	201.6	209.9	233.6	254.1	232.3	258.1	280.6	277.3	317.7	352.1	323.6	372.7	414.7	349.1	403.3	449.9
	SC	91.7	88.4	85.8	100.3	95.9	92.5	104.6	99.7	95.9	113.3	108.8	105.1	122.2	117.3	113.1	127.1	122.0	117.6
	gpm	11.0	12.3	13.4	14.0	15.6	16.9	15.5	17.2	18.7	18.5	21.2	23.5	21.6	24.8	27.6	23.3	26.9	30.0
	WPD	0.4	0.5	0.6	0.7	0.8	0.9	0.8	1.0	1.1	0.5	0.6	0.8	0.6	0.8	1.0	0.7	1.0	1.2
40°F	TC	146.2	163.4	178.1	185.1	206.2	224.2	203.6	227.0	247.0	245.9	282.1	312.4	289.1	332.1	368.4	312.7	359.9	400.1
	SC	88.1	85.1	82.8	95.6	91.7	88.7	99.1	94.9	91.6	107.2	103.4	100.0	115.5	111.0	107.2	120.1	115.3	111.2
	gpm	7.3	8.2	8.9	9.3	10.3	11.2	10.2	11.4	12.3	12.3	14.1	15.6	14.5	16.6	18.4	15.6	18.0	20.0
	WPD	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.2	0.3	0.3	0.3	0.4	0.5	0.4	0.5	0.6

Water Temp. Rise		4 Rows of Coil									6 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		4800	6000	7200	4800	6000	7200	4800	6000	7200	4800	6000	7200	4800	6000	7200	4800	6000	7200
10°F	TC	231.5	273.5	311.1	254.2	303.2	347.6	264.9	317.7	365.7	271.9	327.7	379.0	287.6	349.9	408.2	294.0	359.5	421.2
	LAT	104.5	102.0	99.8	108.8	106.6	104.5	110.9	108.8	106.8	112.2	110.4	108.5	115.2	113.8	112.3	116.5	115.2	113.9
	gpm	46.4	54.8	62.3	50.9	60.8	69.6	53.1	63.7	73.3	54.5	65.7	76.0	57.6	70.1	81.8	58.9	72.0	84.4
	WPD	3.8	5.2	6.7	4.5	6.3	8.2	4.9	6.9	9.0	6.4	9.1	11.9	7.1	10.3	13.7	7.4	10.8	14.5
15°F	TC	217.4	255.9	290.1	240.2	285.3	325.8	251.3	299.9	343.9	261.4	313.7	361.7	278.5	337.4	392.1	285.9	348.0	406.1
	SC	101.8	99.3	97.1	106.1	103.8	101.7	108.3	106.1	104.0	110.2	108.2	106.3	113.5	111.9	110.2	114.9	113.5	112.0
	gpm	29.0	34.2	38.8	32.1	38.1	43.5	33.6	40.1	45.9	34.9	41.9	48.3	37.2	45.1	52.4	38.2	46.5	54.3
	WPD	1.6	2.2	2.7	1.9	2.6	3.4	2.1	2.9	3.8	2.8	3.9	5.1	3.2	4.5	6.0	3.3	4.8	6.4
20°F	TC	201.5	236.9	267.7	224.5	265.5	302.1	235.8	280.1	319.8	249.3	298.0	342.4	267.6	322.7	373.5	275.8	334.1	388.3
	SC	98.7	96.4	94.3	103.1	100.8	98.7	105.3	103.0	101.0	107.9	105.8	103.8	111.4	109.6	107.8	113.0	111.3	109.7
	gpm	20.2	23.7	26.8	22.5	26.6	30.3	23.6	28.1	32.0	25.0	29.9	34.3	26.8	32.3	37.4	27.6	33.5	38.9
	WPD	0.8	1.1	1.4	1.0	1.4	1.7	1.1	1.5	1.9	1.5	2.1	2.7	1.7	2.4	3.2	1.8	2.6	3.5
25°F	TC	181.2	213.9	242.3	204.4	242.4	275.7	216.0	256.9	293.0	234.6	280.0	320.8	254.0	305.4	352.2	263.0	317.5	367.5
	SC	94.8	92.9	91.0	99.3	97.2	95.3	101.5	99.5	97.5	105.1	103.0	101.1	108.8	106.9	105.1	110.5	108.8	107.1
	gpm	14.5	17.1	19.4	16.4	19.4	22.1	17.3	20.6	23.5	18.8	22.4	25.7	20.4	24.5	28.2	21.1	25.4	29.5
	WPD	0.4	0.6	0.8	0.5	0.8	1.0	0.6	0.8	1.1	0.9	1.3	1.6	1.0	1.5	1.9	1.1	1.6	2.1
30°F	TC	151.8	182.7	209.1	175.9	211.3	242.0	188.1	226.1	259.2	215.1	257.4	295.1	235.7	283.7	327.0	245.5	296.4	342.7
	SC	89.2	88.1	86.8	93.8	92.5	91.0	96.1	94.7	93.2	101.3	99.6	97.8	105.3	103.6	101.9	107.2	105.6	103.9
	gpm	10.1	12.2	14.0	11.7	14.1	16.2	12.6	15.1	17.3	14.4	17.2	19.7	15.7	18.9	21.8	16.4	19.8	22.9
	WPD	0.2	0.3	0.4	0.3	0.4	0.5	0.3	0.5	0.6	0.6	0.8	1.0	0.7	0.9	1.2	0.7	1.0	1.3
40°F	TC	—	—	—	—	—	—	—	—	—	—	180.0	213.8	165.3	209.9	247.4	178.3	224.6	264.3
	SC	—	—	—	—	—	—	—	—	—	—	87.7	87.4	91.8	92.3	91.7	94.3	94.5	93.8
	gpm	—	—	—	—	—	—	—	—	—	—	9.0	10.7	8.3	10.5	12.4	8.9	11.2	13.2
	WPD	—	—	—	—	—	—	—	—	—	—	0.2	0.3	0.2	0.3	0.4	0.2	0.4	0.5

Notes:
1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 84. Unit size 12 hot water heating capacities, EAT = 60°F (continued)

Water Temp. Rise		8 Rows of Coil								
		9 fpi			12 fpi			14 fpi		
		Airflow								
		4800	6000	7200	4800	6000	7200	4800	6000	7200
10°F	TC	291.8	356.3	417.2	301.6	371.3	438.0	305.1	377.0	446.4
	LAT	116.1	114.8	113.4	117.9	117.1	116.1	118.6	117.9	117.2
	gpm	58.5	71.4	83.6	60.4	74.4	87.8	61.1	75.5	89.4
	WPD	8.7	12.6	16.9	9.3	13.6	18.5	9.5	14.0	19.2
15°F	TC	284.5	346.0	403.7	296.1	363.1	426.8	300.6	370.0	436.6
	SC	114.7	113.2	111.7	116.9	115.8	114.7	117.7	116.9	115.9
	gpm	38.0	46.2	53.9	39.6	48.5	57.0	40.2	49.4	58.3
	WPD	4.0	5.7	7.5	4.3	6.2	8.4	4.4	6.4	8.7
20°F	TC	275.6	333.8	388.0	288.8	352.7	413.1	294.3	360.8	424.1
	SC	112.9	111.3	109.7	115.5	114.2	112.9	116.5	115.5	114.3
	gpm	27.6	33.4	38.9	28.9	35.3	41.4	29.5	36.1	42.5
	WPD	2.2	3.1	4.1	2.4	3.5	4.6	2.5	3.6	4.9
25°F	TC	264.5	319.3	369.9	279.4	339.9	396.5	285.8	349.0	408.7
	SC	110.8	109.1	107.4	113.7	112.2	110.8	114.9	113.6	112.3
	gpm	21.2	25.6	29.6	22.4	27.2	31.8	22.9	28.0	32.8
	WPD	1.4	1.9	2.5	1.5	2.2	2.9	1.6	2.3	3.0
30°F	TC	249.8	301.4	348.4	266.4	323.5	376.4	273.8	333.7	389.5
	SC	108.0	106.3	104.6	111.2	109.7	108.2	112.6	111.3	109.9
	gpm	16.7	20.1	23.3	17.8	21.6	25.1	18.3	22.3	26.0
	WPD	0.9	1.3	1.6	1.0	1.4	1.9	1.1	1.5	2.0
40°F	TC	200.4	245.2	285.1	220.5	270.4	315.6	230.1	282.6	330.5
	SC	98.5	97.7	96.5	102.4	101.6	100.4	104.2	103.4	102.3
	gpm	10.0	12.3	14.3	11.0	13.5	15.8	11.5	14.2	16.6
	WPD	0.4	0.5	0.7	0.4	0.6	0.8	0.5	0.7	0.9

Notes:

1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (ºF)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 85. Unit size 14 hot water heating capacities, EAT = 60°F

Water Temp. Rise		1 Row of Coil									2 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		5600	7000	8400	5600	7000	8400	5600	7000	8400	5600	7000	8400	5600	7000	8400	5600	7000	8400
10°F	TC	239.6	268.3	293.1	305.7	—	—	—	—	—	390.8	450.3	501.3	453.5	526.1	588.7	487.3	567.5	—
	LAT	99.5	95.3	92.2	110.3	—	—	—	—	—	124.3	119.3	115.0	134.7	129.3	124.6	140.2	134.8	—
	gpm	47.8	53.6	58.5	61.0	—	—	—	—	—	78.0	89.9	100.1	90.6	105.0	117.5	97.3	113.3	—
	WPD	7.1	8.8	10.4	11.2	—	—	—	—	—	8.0	10.6	13.0	10.7	14.3	17.8	12.3	16.6	—
15°F	TC	228.7	255.9	279.5	291.6	325.3	354.5	322.6	359.8	391.9	375.8	432.4	480.8	436.7	505.7	565.1	469.7	546.1	612.2
	SC	97.7	93.7	90.7	108.0	102.8	98.9	113.1	107.4	103.0	121.9	117.0	112.8	131.9	126.6	122.0	137.3	131.9	127.2
	gpm	30.5	34.1	37.2	38.8	43.3	47.2	43.0	47.9	52.2	50.0	57.6	64.0	58.2	67.3	75.3	62.6	72.7	81.5
	WPD	3.0	3.7	4.4	4.7	5.9	6.9	5.8	7.1	8.3	3.4	4.5	5.5	4.5	6.0	7.5	5.2	7.0	8.7
20°F	TC	217.9	243.7	266.0	277.6	309.5	337.0	307.0	342.1	372.5	360.6	414.4	460.3	419.8	485.2	541.5	452.0	524.4	586.9
	SC	95.9	92.1	89.2	105.7	100.8	97.0	110.6	105.1	100.9	119.4	114.6	110.5	129.1	123.9	119.4	134.4	129.1	124.4
	gpm	21.8	24.3	26.6	27.7	30.9	33.7	30.7	34.2	37.2	36.0	41.4	46.0	41.9	48.5	54.1	45.2	52.4	58.6
	WPD	1.6	2.0	2.3	2.5	3.1	3.6	3.0	3.7	4.4	1.8	2.4	2.9	2.4	3.2	4.0	2.8	3.7	4.6
25°F	TC	207.1	231.5	252.6	263.6	293.7	319.7	291.5	324.6	353.2	345.3	396.2	439.6	402.5	464.4	517.6	433.8	502.3	561.4
	SC	94.1	90.5	87.7	103.4	98.7	95.1	108.0	102.8	98.8	116.9	112.2	108.3	126.3	121.2	116.8	131.4	126.2	121.6
	gpm	16.6	18.5	20.2	21.1	23.5	25.6	23.3	25.9	28.2	27.6	31.7	35.1	32.2	37.1	41.4	34.7	40.2	44.9
	WPD	1.0	1.2	1.4	1.5	1.8	2.2	1.8	2.2	2.6	1.1	1.4	1.7	1.5	1.9	2.4	1.7	2.2	2.8
30°F	TC	196.3	219.4	239.7	249.6	277.9	302.4	276.0	307.1	333.9	329.6	377.7	418.6	384.8	443.2	493.3	415.1	479.8	535.4
	SC	92.3	88.9	86.3	101.1	96.6	93.2	105.4	100.4	96.7	114.3	109.8	106.0	123.4	118.4	114.2	128.3	123.2	118.8
	gpm	13.1	14.6	16.0	16.6	18.5	20.1	18.4	20.5	22.3	22.0	25.2	27.9	25.6	29.5	32.9	27.7	32.0	35.7
	WPD	0.6	0.8	0.9	1.0	1.2	1.4	1.2	1.4	1.7	0.7	0.9	1.1	0.9	1.2	1.5	1.1	1.4	1.8
40°F	TC	175.9	196.3	214.0	222.2	247.8	269.7	244.5	272.9	297.1	297.0	339.6	375.5	347.8	399.2	443.1	375.9	432.8	481.4
	SC	89.0	85.9	83.5	96.6	92.6	89.6	100.3	95.9	92.6	108.9	104.7	101.2	117.3	112.6	108.6	121.9	117.0	112.8
	gpm	8.8	9.8	10.7	11.1	12.4	13.5	12.2	13.6	14.9	14.8	17.0	18.8	17.4	20.0	22.2	18.8	21.6	24.1
	WPD	0.3	0.4	0.4	0.5	0.6	0.7	0.5	0.7	0.8	0.3	0.4	0.5	0.4	0.6	0.7	0.5	0.7	0.8

Water Temp. Rise		4 Rows of Coil									6 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		5600	7000	8400	5600	7000	8400	5600	7000	8400	5600	7000	8400	5600	7000	8400	5600	7000	8400
10°F	TC	271.7	321.1	365.2	298.3	355.9	408.0	310.8	372.8	429.3	318.2	383.6	443.7	336.5	409.5	477.8	343.9	420.6	493.0
	LAT	104.7	102.3	100.1	109.1	106.9	104.8	111.2	109.1	107.1	112.4	110.5	108.7	115.4	113.9	112.5	116.6	115.4	114.1
	gpm	54.4	64.3	73.2	59.8	71.3	81.8	62.3	74.7	86.0	63.8	76.9	88.9	67.4	82.1	95.8	68.9	84.3	98.8
	WPD	5.5	7.5	9.5	6.5	9.1	11.8	7.0	9.9	13.0	9.2	13.0	17.1	10.2	14.7	19.7	10.6	15.5	20.8
15°F	TC	256.3	301.9	342.2	283.2	336.4	384.3	296.2	353.6	405.6	306.8	368.3	424.6	326.7	395.9	460.2	335.2	408.2	476.6
	SC	102.2	99.8	97.6	106.6	104.3	102.2	108.8	106.6	104.5	110.5	108.5	106.6	113.8	112.1	110.5	115.2	113.8	112.3
	gpm	34.2	40.3	45.7	37.8	44.9	51.3	39.6	47.2	54.2	41.0	49.2	56.7	43.6	52.9	61.5	44.8	54.5	63.7
	WPD	2.3	3.1	3.9	2.8	3.8	4.9	3.0	4.2	5.4	4.1	5.7	7.4	4.6	6.5	8.6	4.8	6.9	9.2
20°F	TC	239.6	281.1	317.8	266.3	315.0	358.5	279.5	332.2	379.5	293.6	351.1	403.4	314.9	379.9	440.0	324.4	393.2	457.3
	SC	99.4	97.0	94.9	103.9	101.5	99.4	106.0	103.8	101.7	108.3	106.2	104.3	111.9	110.0	108.3	113.4	111.8	110.2
	gpm	24.0	28.2	31.8	26.7	31.6	35.9	28.0	33.3	38.0	29.4	35.2	40.4	31.5	38.1	44.1	32.5	39.4	45.8
	WPD	1.2	1.6	2.0	1.4	2.0	2.5	1.6	2.2	2.8	2.2	3.1	4.0	2.5	3.6	4.7	2.7	3.8	5.0
25°F	TC	219.3	257.8	291.2	246.3	291.1	330.3	259.8	308.0	350.7	278.2	331.6	379.7	300.7	361.2	416.7	311.1	375.3	434.7
	SC	96.1	94.0	92.0	100.6	98.3	96.3	102.8	100.6	98.5	105.8	103.7	101.7	109.5	107.6	105.7	111.2	109.4	107.7
	gpm	17.6	20.7	23.3	19.7	23.3	26.5	20.8	24.7	28.1	22.3	26.6	30.4	24.1	29.0	33.4	24.9	30.1	34.8
	WPD	0.7	0.9	1.1	0.8	1.1	1.4	0.9	1.3	1.6	1.3	1.8	2.4	1.5	2.2	2.8	1.6	2.3	3.0
30°F	TC	192.2	228.0	258.8	219.6	261.0	297.1	233.5	278.1	317.1	258.7	308.4	352.8	282.4	338.9	389.9	293.7	353.7	408.2
	SC	91.6	90.0	88.4	96.2	94.4	92.6	98.4	96.6	94.8	102.6	100.6	98.7	106.5	104.6	102.8	108.4	106.6	104.8
	gpm	12.8	15.2	17.3	14.7	17.4	19.8	15.6	18.6	21.2	17.3	20.6	23.6	18.9	22.6	26.0	19.6	23.6	27.3
	WPD	0.4	0.5	0.7	0.5	0.7	0.8	0.5	0.7	1.0	0.8	1.2	1.5	1.0	1.4	1.8	1.1	1.5	1.9
40°F	TC	—	—	—	—	—	159.5	—	—	193.8	193.0	236.8	274.5	220.3	269.3	312.4	233.6	285.6	331.6
	SC	—	—	—	—	—	77.5	—	—	81.3	91.8	91.2	90.1	96.3	95.5	94.3	98.5	97.6	96.4
	gpm	—	—	—	—	—	8.0	—	—	9.7	9.7	11.9	13.7	11.0	13.5	15.6	11.7	14.3	16.6
	WPD	—	—	—	—	—	0.2	—	—	0.2	0.3	0.4	0.6	0.4	0.5	0.7	0.4	0.6	0.8

Notes:
1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 85. Unit size 14 hot water heating capacities, EAT = 60°F (continued)

Water Temp. Rise		8 Rows of Coil								
		9 fpi			12 fpi			14 fpi		
		Airflow								
		5600	7000	8400	5600	7000	8400	5600	7000	8400
10°F	TC	341.1	416.6	487.7	352.4	433.9	512.0	356.4	440.5	521.7
	LAT	116.2	114.9	113.5	118.0	117.2	116.2	118.7	118.0	117.3
	gpm	68.3	83.5	97.7	70.6	86.9	102.6	71.4	88.3	104.5
	WPD	12.6	18.2	24.3	13.3	19.6	26.6	13.6	20.2	27.6
15°F	TC	333.1	405.3	472.9	346.5	425.0	499.8	351.6	433.0	511.0
	SC	114.8	113.4	111.9	117.0	116.0	114.9	117.9	117.0	116.1
	gpm	44.5	54.1	63.2	46.3	56.8	66.8	47.0	57.8	68.3
	WPD	5.7	8.2	10.9	6.2	9.0	12.1	6.3	9.3	12.6
20°F	TC	323.4	391.9	455.6	338.7	413.8	484.9	344.9	423.1	497.6
	SC	113.2	111.6	110.0	115.8	114.5	113.2	116.8	115.7	114.6
	gpm	32.4	39.3	45.6	33.9	41.5	48.6	34.6	42.4	49.9
	WPD	3.2	4.6	6.0	3.5	5.1	6.8	3.6	5.3	7.1
25°F	TC	311.5	376.0	435.6	328.7	399.9	466.8	336.0	410.4	480.9
	SC	111.3	109.5	107.8	114.1	112.7	111.2	115.3	114.1	112.8
	gpm	25.0	30.1	34.9	26.3	32.1	37.4	26.9	32.9	38.5
	WPD	2.0	2.8	3.7	2.2	3.2	4.2	2.3	3.3	4.4
30°F	TC	296.5	357.0	412.3	315.5	382.7	444.9	324.0	394.4	460.1
	SC	108.8	107.0	105.3	112.0	110.4	108.8	113.3	111.9	110.5
	gpm	19.8	23.8	27.5	21.1	25.6	29.7	21.6	26.3	30.7
	WPD	1.3	1.9	2.4	1.5	2.1	2.8	1.6	2.2	3.0
40°F	TC	248.4	300.6	347.5	271.1	329.6	382.7	281.8	343.5	399.9
	SC	100.9	99.6	98.1	104.6	103.4	102.0	106.4	105.2	103.9
	gpm	12.4	15.1	17.4	13.6	16.5	19.2	14.1	17.2	20.0
	WPD	0.6	0.8	1.1	0.7	1.0	1.3	0.7	1.0	1.4

Notes:

1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 86. Unit size 17 hot water heating capacities, EAT = 60°F

Water Temp. Rise		1 Row of Coil									2 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow																	
		6800	8500	10200	6800	8500	10200	6800	8500	10200	6800	8500	10200	6800	8500	10200	6800	8500	10200
10°F	TC	285.3	319.2	348.6	363.8	405.9	—	402.6	—	—	470.0	540.8	601.2	545.6	632.0	706.3	586.4	682.0	—
	LAT	98.7	94.6	91.5	109.3	104.0	—	114.6	—	—	123.7	118.7	114.4	134.0	128.6	123.8	139.5	134.0	—
	gpm	57.0	63.7	69.6	72.6	81.0	—	80.4	—	—	93.8	108.0	120.1	108.9	126.2	141.0	117.1	136.2	—
	WPD	6.8	8.4	10.0	10.8	13.4	—	13.2	—	—	9.9	13.0	16.0	13.3	17.7	22.0	15.3	20.5	—
15°F	TC	271.8	303.8	331.6	346.2	386.0	420.3	383.0	426.8	464.7	451.0	518.1	575.4	524.3	606.2	676.5	564.1	654.7	733.0
	SC	96.9	93.0	90.0	107.0	101.9	98.0	111.9	106.3	102.0	121.2	116.2	112.0	131.1	125.8	121.2	136.5	131.0	126.3
	gpm	36.2	40.5	44.2	46.1	51.4	56.0	51.0	56.8	61.9	60.1	69.0	76.6	69.8	80.7	90.1	75.1	87.2	97.6
	WPD	2.8	3.5	4.2	4.5	5.6	6.6	5.5	6.8	8.0	4.1	5.4	6.7	5.5	7.4	9.1	6.4	8.6	10.7
20°F	TC	258.3	288.7	314.9	328.9	366.3	398.7	363.8	405.0	440.6	431.9	495.5	549.6	502.9	580.3	646.7	541.5	627.3	701.1
	SC	95.0	91.3	88.5	104.6	99.7	96.0	109.3	103.9	99.8	118.6	113.7	109.7	128.2	122.9	118.5	133.4	128.0	123.4
	gpm	25.8	28.8	31.5	32.9	36.6	39.8	36.3	40.5	44.0	43.1	49.5	54.9	50.2	58.0	64.6	54.1	62.7	70.0
	WPD	1.5	1.8	2.2	2.4	2.9	3.4	2.9	3.5	4.2	2.2	2.8	3.5	2.9	3.9	4.8	3.4	4.5	5.6
25°F	TC	244.9	273.5	298.3	311.6	346.8	377.2	344.7	383.2	416.7	412.5	472.6	523.6	480.9	554.0	616.6	518.5	599.3	668.9
	SC	93.2	89.7	87.0	102.2	97.6	94.1	106.7	101.6	97.7	115.9	111.3	107.3	125.2	120.1	115.7	130.3	125.0	120.5
	gpm	19.6	21.9	23.8	24.9	27.7	30.2	27.6	30.6	33.3	33.0	37.8	41.9	38.4	44.3	49.3	41.4	47.9	53.5
	WPD	0.9	1.1	1.3	1.4	1.7	2.0	1.7	2.1	2.4	1.3	1.7	2.0	1.7	2.3	2.8	2.0	2.7	3.3
30°F	TC	231.5	258.7	282.3	294.2	327.2	355.8	325.5	361.4	392.8	392.8	449.3	497.2	458.5	527.3	586.0	494.7	570.8	636.0
	SC	91.4	88.1	85.5	99.9	95.5	92.2	104.1	99.2	95.5	113.3	108.7	104.9	122.2	117.2	113.0	127.1	121.9	117.5
	gpm	15.4	17.2	18.8	19.6	21.8	23.7	21.7	24.1	26.2	26.2	29.9	33.1	30.6	35.1	39.0	33.0	38.0	42.4
	WPD	0.6	0.7	0.8	0.9	1.1	1.3	1.1	1.3	1.5	0.8	1.1	1.3	1.1	1.5	1.8	1.3	1.7	2.1
40°F	TC	206.1	230.0	250.4	261.1	290.0	315.3	286.7	319.4	347.3	350.9	401.1	443.1	411.7	471.8	522.7	445.1	511.4	567.9
	SC	87.9	84.9	82.6	95.4	91.5	88.5	98.9	94.6	91.4	107.6	103.5	100.1	115.8	111.2	107.3	120.4	115.5	111.3
	gpm	10.3	11.5	12.5	13.1	14.5	15.8	14.3	16.0	17.4	17.5	20.1	22.2	20.6	23.6	26.1	22.3	25.6	28.4
	WPD	0.3	0.3	0.4	0.4	0.5	0.6	0.5	0.6	0.7	0.4	0.5	0.6	0.5	0.7	0.8	0.6	0.8	1.0

Water Temp. Rise		4 Rows of Coil									6 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow																	
		6800	8500	10200	6800	8500	10200	6800	8500	10200	6800	8500	10200	6800	8500	10200	6800	8500	10200
10°F	TC	327.1	386.1	438.5	359.5	428.3	490.4	374.7	448.9	516.3	384.5	462.9	534.9	406.9	494.7	576.7	416.2	508.5	595.4
	LAT	104.4	101.9	99.6	108.7	106.5	104.3	110.8	108.7	106.7	112.1	110.2	108.4	115.2	113.7	112.1	116.4	115.2	113.8
	gpm	65.5	77.4	87.9	72.0	85.8	98.3	75.1	90.0	103.5	77.0	92.8	107.2	81.5	99.1	115.6	83.4	101.9	119.3
	WPD	4.0	5.4	6.8	4.7	6.5	8.4	5.1	7.1	9.3	6.9	9.7	12.6	7.6	10.9	14.5	7.9	11.5	15.4
15°F	TC	307.6	361.7	409.6	340.2	403.6	460.3	356.0	424.4	486.2	369.9	443.5	510.8	394.4	477.3	554.3	404.9	492.5	574.3
	SC	101.7	99.2	97.0	106.1	103.8	101.6	108.3	106.0	103.9	110.2	108.1	106.2	113.5	111.8	110.1	114.9	113.4	111.9
	gpm	41.1	48.3	54.7	45.4	53.9	61.5	47.6	56.7	64.9	49.4	59.3	68.2	52.7	63.8	74.0	54.1	65.8	76.7
	WPD	1.7	2.2	2.8	2.0	2.8	3.5	2.2	3.0	3.9	3.0	4.2	5.5	3.4	4.9	6.4	3.6	5.2	6.8
20°F	TC	286.2	335.6	378.8	318.7	376.3	427.7	334.7	397.1	453.0	353.2	421.7	484.0	379.2	456.9	528.5	391.0	473.2	549.7
	SC	98.8	96.4	94.2	103.2	100.8	98.7	105.4	103.1	101.0	107.9	105.8	103.8	111.4	109.6	107.8	113.0	111.3	109.7
	gpm	28.7	33.6	38.0	31.9	37.7	42.9	33.5	39.8	45.4	35.4	42.3	48.5	38.0	45.8	53.0	39.2	47.4	55.1
	WPD	0.9	1.2	1.4	1.0	1.4	1.8	1.1	1.6	2.0	1.7	2.3	3.0	1.9	2.7	3.5	2.0	2.8	3.7
25°F	TC	259.6	305.2	344.8	292.2	345.4	391.9	308.7	366.0	416.4	333.3	397.1	454.1	360.9	433.1	499.0	373.6	450.3	520.8
	SC	95.2	93.1	91.2	99.6	97.5	95.4	101.9	99.7	97.6	105.2	103.1	101.1	108.9	107.0	105.1	110.7	108.8	107.1
	gpm	20.8	24.5	27.6	23.4	27.7	31.4	24.7	29.3	33.4	26.7	31.8	36.4	28.9	34.7	40.0	29.9	36.1	41.7
	WPD	0.5	0.6	0.8	0.6	0.8	1.0	0.7	0.9	1.1	1.0	1.4	1.8	1.2	1.6	2.1	1.2	1.7	2.3
30°F	TC	222.6	265.3	301.8	256.1	305.3	348.0	273.0	326.0	372.2	307.7	367.0	419.7	336.7	404.1	464.7	350.5	422.1	487.0
	SC	90.2	88.8	87.3	94.7	93.1	91.5	97.0	95.4	93.7	101.7	99.8	97.9	105.7	103.8	102.0	107.5	105.8	104.0
	gpm	14.9	17.7	20.2	17.1	20.4	23.2	18.2	21.8	24.9	20.5	24.5	28.0	22.5	27.0	31.0	23.4	28.2	32.5
	WPD	0.3	0.4	0.5	0.3	0.5	0.6	0.4	0.5	0.7	0.6	0.9	1.1	0.7	1.0	1.3	0.8	1.1	1.4
40°F	TC	—	—	—	—	—	—	—	—	—	215.4	269.9	315.3	250.6	310.2	361.7	267.4	331.8	385.2
	SC	—	—	—	—	—	—	—	—	—	89.2	89.3	88.5	94.0	93.6	92.7	96.3	96.0	94.8
	gpm	—	—	—	—	—	—	—	—	—	10.8	13.5	15.8	12.5	15.5	18.1	13.4	16.6	19.3
	WPD	—	—	—	—	—	—	—	—	—	0.2	0.3	0.4	0.3	0.4	0.5	0.3	0.4	0.6

Notes:
1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 86. Unit size 17 hot water heating capacities, EAT = 60°F (continued)

Water Temp. Rise		8 Rows of Coil								
		9 fpi			12 fpi			14 fpi		
		Airflow								
		6800	8500	10200	6800	8500	10200	6800	8500	10200
10°F	TC	412.9	503.8	589.3	427.0	525.4	619.4	432.1	533.6	631.5
	LAT	116.0	114.7	113.3	117.9	117.0	116.0	118.6	117.9	117.1
	gpm	82.7	101.0	118.1	85.6	105.3	124.1	86.6	106.9	126.5
	WPD	9.5	13.7	18.3	10.2	14.9	20.1	10.4	15.3	20.9
15°F	TC	402.7	489.4	570.5	419.3	513.9	603.7	425.7	523.8	617.7
	SC	114.6	113.1	111.6	116.9	115.7	114.6	117.7	116.8	115.8
	gpm	53.8	65.4	76.2	56.0	68.6	80.6	56.9	70.0	82.5
	WPD	4.4	6.2	8.2	4.7	6.8	9.2	4.8	7.1	9.5
20°F	TC	390.3	472.4	548.7	409.2	499.5	584.6	417.0	511.0	600.4
	SC	112.9	111.2	109.6	115.5	114.2	112.8	116.5	115.4	114.3
	gpm	39.1	47.3	55.0	41.0	50.0	58.6	41.8	51.2	60.2
	WPD	2.5	3.5	4.6	2.7	3.9	5.1	2.8	4.0	5.4
25°F	TC	375.1	452.2	523.4	396.3	481.6	561.5	405.4	494.6	578.9
	SC	110.9	109.1	107.3	113.7	112.2	110.8	115.0	113.7	112.3
	gpm	30.1	36.2	41.9	31.8	38.6	45.0	32.5	39.6	46.4
	WPD	1.5	2.2	2.8	1.7	2.4	3.2	1.8	2.5	3.4
30°F	TC	355.5	427.9	493.9	378.9	459.4	533.7	389.4	473.8	552.3
	SC	108.2	106.4	104.6	111.4	109.8	108.2	112.8	111.4	109.9
	gpm	23.7	28.6	33.0	25.3	30.7	35.6	26.0	31.6	36.9
	WPD	1.0	1.4	1.8	1.1	1.6	2.1	1.2	1.7	2.2
40°F	TC	291.4	353.9	409.7	319.4	389.3	452.6	332.7	406.4	473.6
	SC	99.5	98.4	97.0	103.3	102.2	100.9	105.1	104.1	102.8
	gpm	14.6	17.7	20.5	16.0	19.5	22.7	16.7	20.4	23.7
	WPD	0.4	0.6	0.8	0.5	0.7	0.9	0.5	0.8	1.0

Notes:

1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (ºF)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 87. Unit size 21 hot water heating capacities, EAT = 60°F

Water Temp. Rise		1 Row of Coil									2 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		8400	10200	12600	8400	10500	12600	8400	10500	12600	8400	10200	12600	8400	10500	12600	8400	10500	12600
10°F	TC	354.0	396.0	—	—	—	—	—	—	—	583.6	671.3	—	677.6	—	—	728.3	—	—
	LAT	98.9	94.8	—	—	—	—	—	—	—	124.1	119.0	—	134.4	—	—	139.9	—	—
	gpm	70.7	79.1	—	—	—	—	—	—	—	116.5	134.0	—	135.3	—	—	145.4	—	—
	WPD	11.0	13.6	—	—	—	—	—	—	—	15.7	20.6	—	21.0	—	—	24.2	—	—
15°F	TC	338.6	378.6	413.2	431.5	481.0	523.9	477.4	532.0	579.3	562.2	645.9	717.2	653.8	755.9	843.5	703.5	816.5	914.1
	SC	97.2	93.2	90.2	107.4	102.2	98.3	112.4	106.7	102.4	121.7	116.7	112.5	131.8	126.4	121.7	137.2	131.7	126.9
	gpm	45.1	50.4	55.0	57.5	64.1	69.8	63.6	70.8	77.1	74.9	86.0	95.5	87.1	100.7	112.3	93.7	108.7	121.7
	WPD	4.7	5.8	6.8	7.4	9.1	10.7	9.0	11.1	13.0	6.6	8.6	10.6	8.9	11.8	14.6	10.2	13.7	17.0
20°F	TC	323.3	361.3	394.3	411.8	458.8	499.4	455.4	507.2	552.0	540.7	620.4	688.1	629.8	726.9	810.1	678.3	785.8	878.4
	SC	95.5	91.7	88.9	105.2	100.3	96.5	110.0	104.5	100.4	119.4	114.5	110.4	129.1	123.8	119.3	134.5	129.0	124.3
	gpm	32.3	36.1	39.4	41.1	45.8	49.9	45.5	50.7	55.1	54.0	62.0	68.7	62.9	72.6	80.9	67.8	78.5	87.8
	WPD	2.5	3.1	3.6	3.9	4.8	5.7	4.7	5.8	6.9	3.5	4.6	5.6	4.7	6.2	7.7	5.4	7.2	9.0
25°F	TC	308.1	344.1	375.3	392.1	436.6	475.0	433.6	482.6	524.9	518.9	594.6	658.8	605.2	697.4	776.3	652.5	754.6	842.3
	SC	93.8	90.2	87.5	103.0	98.3	94.8	107.6	102.4	98.4	117.0	112.2	108.2	126.4	121.2	116.8	131.6	126.3	121.6
	gpm	24.6	27.5	30.0	31.3	34.9	38.0	34.7	38.6	42.0	41.5	47.5	52.7	48.4	55.8	62.1	52.2	60.3	67.3
	WPD	1.5	1.8	2.2	2.3	2.9	3.4	2.8	3.5	4.1	2.1	2.7	3.3	2.8	3.7	4.6	3.3	4.3	5.4
30°F	TC	292.8	327.2	357.2	372.3	414.3	450.6	411.6	458.2	497.7	496.8	568.4	629.2	580.1	667.4	741.9	626.1	722.6	805.5
	SC	92.1	88.7	86.1	100.9	96.4	93.0	105.2	100.2	96.4	114.5	109.9	106.0	123.7	118.6	114.3	128.7	123.5	118.9
	gpm	19.5	21.8	23.8	24.8	27.6	30.0	27.4	30.5	33.2	33.1	37.9	41.9	38.7	44.5	49.4	41.7	48.2	53.7
	WPD	1.0	1.2	1.4	1.5	1.8	2.2	1.8	2.2	2.6	1.4	1.8	2.1	1.8	2.4	2.9	2.1	2.8	3.5
40°F	TC	264.6	294.7	321.1	333.7	372.0	404.7	367.3	409.7	446.0	450.8	514.4	568.1	527.8	605.2	670.9	570.6	656.2	729.2
	SC	89.0	85.9	83.5	96.6	92.7	89.6	100.3	96.0	92.6	109.5	105.2	101.6	117.9	113.1	109.1	122.6	117.6	113.4
	gpm	13.2	14.7	16.1	16.7	18.6	20.2	18.4	20.5	22.3	22.5	25.7	28.4	26.4	30.3	33.5	28.5	32.8	36.5
	WPD	0.5	0.6	0.7	0.7	0.9	1.0	0.9	1.1	1.2	0.6	0.8	1.0	0.9	1.1	1.4	1.0	1.3	1.6

Water Temp. Rise		4 Rows of Coil									6 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		8400	10200	12600	8400	10500	12600	8400	10500	12600	8400	10200	12600	8400	10500	12600	8400	10500	12600
10°F	TC	407.2	480.7	546.0	447.4	533.2	610.6	466.3	558.8	642.9	476.9	574.3	663.7	504.5	613.6	715.4	515.8	630.4	—
	LAT	104.7	102.2	100.0	109.1	106.8	104.7	111.2	109.1	107.0	112.3	110.4	108.6	115.4	113.9	112.4	116.6	115.4	—
	gpm	81.6	96.3	109.4	89.6	106.9	122.4	93.4	112.0	128.8	95.6	115.1	133.0	101.1	123.0	143.4	103.4	126.3	—
	WPD	6.6	8.9	11.3	7.8	10.8	14.0	8.4	11.8	15.4	11.4	16.1	21.0	12.7	18.2	24.1	13.2	19.1	—
15°F	TC	385.3	453.1	513.2	425.9	505.4	576.8	445.5	531.4	609.0	460.4	552.2	636.1	490.5	594.0	690.0	503.4	612.6	714.8
	SC	102.3	99.8	97.6	106.7	104.4	102.2	108.9	106.7	104.6	110.5	108.5	106.5	113.8	112.2	110.5	115.3	113.8	112.3
	gpm	51.5	60.5	68.6	56.9	67.5	77.0	59.5	71.0	81.4	61.5	73.8	85.0	65.5	79.3	92.2	67.2	81.8	95.5
	WPD	2.8	3.8	4.8	3.4	4.6	5.9	3.7	5.1	6.5	5.1	7.1	9.2	5.7	8.1	10.7	6.0	8.6	11.5
20°F	TC	361.4	423.5	478.2	401.8	474.8	540.0	421.8	500.8	571.8	441.4	527.4	605.5	473.6	571.1	660.9	488.0	591.2	687.1
	SC	99.7	97.2	95.0	104.1	101.7	99.5	106.3	104.0	101.8	108.5	106.3	104.3	112.0	110.1	108.4	113.6	111.9	110.3
	gpm	36.2	42.4	47.9	40.3	47.6	54.1	42.3	50.2	57.3	44.2	52.8	60.7	47.5	57.2	66.2	48.9	59.2	68.8
	WPD	1.5	2.0	2.5	1.8	2.4	3.1	2.0	2.7	3.4	2.8	3.9	5.0	3.2	4.5	5.9	3.4	4.8	6.3
25°F	TC	334.2	391.2	440.6	374.5	441.1	499.8	394.7	466.6	530.7	419.7	499.4	571.4	453.4	544.3	627.5	469.0	565.5	654.7
	SC	96.7	94.4	92.2	101.1	98.7	96.6	103.3	101.0	98.8	106.1	103.9	101.8	109.8	107.8	105.9	111.5	109.7	107.9
	gpm	26.8	31.4	35.3	30.0	35.3	40.1	31.6	37.4	42.5	33.6	40.0	45.8	36.3	43.6	50.3	37.6	45.3	52.5
	WPD	0.9	1.1	1.4	1.0	1.4	1.8	1.2	1.6	2.0	1.7	2.4	3.0	2.0	2.8	3.6	2.1	3.0	3.9
30°F	TC	299.5	352.3	397.7	340.0	401.5	454.9	360.7	427.0	484.8	393.3	467.3	533.0	428.7	513.0	589.0	445.5	535.0	616.8
	SC	92.9	90.9	89.1	97.3	95.3	93.3	99.6	97.5	95.5	103.2	101.0	99.0	107.1	105.0	103.1	108.9	107.0	105.1
	gpm	20.0	23.5	26.6	22.7	26.8	30.4	24.1	28.5	32.4	26.3	31.2	35.6	28.6	34.3	39.3	29.7	35.7	41.2
	WPD	0.5	0.7	0.8	0.6	0.9	1.1	0.7	1.0	1.2	1.1	1.5	1.9	1.3	1.8	2.3	1.4	1.9	2.5
40°F	TC	—	—	249.7	—	263.0	313.2	223.4	292.7	344.5	311.0	374.3	429.5	349.9	422.0	485.5	369.1	445.9	514.1
	SC	—	—	78.3	—	83.1	82.9	84.5	85.7	85.2	94.1	92.9	91.4	98.4	97.1	95.5	100.5	99.2	97.6
	gpm	—	—	12.5	—	13.2	15.7	11.2	14.7	17.3	15.6	18.7	21.5	17.5	21.1	24.3	18.5	22.3	25.7
	WPD	—	—	0.2	—	0.2	0.3	0.2	0.3	0.4	0.4	0.6	0.8	0.5	0.8	1.0	0.6	0.8	1.1

Notes:
1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 87. Unit size 21 hot water heating capacities, EAT = 60°F (continued)

Water Temp. Rise		8 Rows of Coil								
		9 fpi			12 fpi			14 fpi		
		Airflow								
		8400	10200	12600	8400	10500	12600	8400	10500	12600
10°F	TC	511.3	624.0	—	528.4	650.4	—	534.6	660.4	—
	LAT	116.1	114.8	—	118.0	117.1	—	118.7	118.0	—
	gpm	102.5	125.0	—	105.9	130.3	—	107.1	132.3	—
	WPD	15.9	22.9	—	16.9	24.8	—	17.3	25.5	—
15°F	TC	499.7	607.5	708.4	519.9	637.5	749.3	527.6	649.6	766.4
	SC	114.9	113.4	111.8	117.1	116.0	114.8	117.9	117.0	116.1
	gpm	66.8	81.2	94.6	69.5	85.2	100.1	70.5	86.8	102.4
	WPD	7.3	10.5	13.8	7.9	11.4	15.3	8.1	11.8	16.0
20°F	TC	485.7	588.1	683.4	508.8	621.4	727.7	518.1	635.4	747.0
	SC	113.3	111.6	110.0	115.8	114.6	113.3	116.9	115.8	114.7
	gpm	48.7	58.9	68.5	51.0	62.3	72.9	51.9	63.7	74.8
	WPD	4.2	5.9	7.7	4.5	6.5	8.6	4.7	6.8	9.1
25°F	TC	468.7	565.2	654.4	494.5	601.3	701.6	505.5	617.2	722.9
	SC	111.4	109.6	107.9	114.3	112.8	111.3	115.5	114.2	112.9
	gpm	37.6	45.3	52.4	39.6	48.2	56.2	40.5	49.5	57.9
	WPD	2.6	3.7	4.8	2.9	4.1	5.4	3.0	4.3	5.7
30°F	TC	447.8	538.1	620.7	476.2	576.7	670.1	488.8	594.2	693.1
	SC	109.2	107.3	105.4	112.3	110.6	109.0	113.7	112.2	110.7
	gpm	29.9	35.9	41.5	31.8	38.5	44.8	32.6	39.7	46.3
	WPD	1.7	2.4	3.1	1.9	2.7	3.6	2.0	2.9	3.8
40°F	TC	384.0	461.6	531.3	417.5	504.7	583.9	433.3	525.4	609.6
	SC	102.1	100.5	98.9	105.8	104.3	102.7	107.6	106.1	104.6
	gpm	19.2	23.1	26.6	20.9	25.3	29.2	21.7	26.3	30.5
	WPD	0.8	1.1	1.4	0.9	1.3	1.7	1.0	1.4	1.8

Notes:

1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 88. Unit size 25 hot water heating capacities, EAT = 60°F

Water Temp. Rise		1 Row of Coil									2 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		10000	12500	15000	10000	12500	15000	10000	12500	15000	10000	12500	15000	10000	12500	15000	10000	12500	15000
10°F	TC	411.0	459.3	—	—	—	—	—	—	—	693.6	797.4	885.9	805.5	932.3	—	865.9	—	—
	LAT	97.9	93.9	—	—	—	—	—	—	—	124.0	118.8	114.5	134.3	128.8	—	139.8	—	—
	gpm	82.1	91.7	—	—	—	—	—	—	—	138.5	159.2	176.9	160.8	186.2	—	172.9	—	—
	WPD	13.3	16.4	—	—	—	—	—	—	—	10.4	13.7	16.7	13.9	18.5	—	16.0	—	—
15°F	TC	393.3	439.4	479.3	501.9	559.0	608.3	555.8	618.6	673.1	668.5	767.5	851.9	777.6	898.5	1002.2	836.7	970.6	1086.2
	SC	96.3	92.4	89.5	106.3	101.2	97.4	111.2	105.6	101.4	121.6	116.6	112.4	131.7	126.3	121.6	137.1	131.6	126.8
	gpm	52.4	58.5	63.8	66.8	74.4	81.0	74.0	82.4	89.6	89.0	102.2	113.4	103.5	119.6	133.4	111.4	129.3	144.6
	WPD	5.6	6.9	8.2	8.9	11.0	12.9	10.9	13.4	15.7	4.5	5.8	7.1	6.0	7.9	9.7	6.9	9.2	11.4
20°F	TC	375.8	419.6	457.6	479.2	533.4	580.2	530.5	590.2	641.7	643.3	737.7	817.8	749.4	864.4	963.0	807.1	934.7	1044.4
	SC	94.6	91.0	88.1	104.2	99.3	95.7	108.9	103.5	99.4	119.3	114.4	110.3	129.1	123.8	119.2	134.4	128.9	124.2
	gpm	37.5	41.9	45.7	47.9	53.3	58.0	53.0	59.0	64.1	64.3	73.7	81.7	74.9	86.4	96.2	80.6	93.4	104.3
	WPD	3.0	3.7	4.3	4.7	5.8	6.8	5.7	7.0	8.3	2.4	3.1	3.8	3.2	4.2	5.2	3.7	4.9	6.1
25°F	TC	358.3	399.9	435.9	456.6	507.9	552.2	505.3	561.8	610.6	617.8	707.4	783.5	720.6	829.9	923.3	776.9	898.0	1002.0
	SC	93.0	89.5	86.8	102.1	97.5	93.9	106.6	101.4	97.5	117.0	112.2	108.2	126.4	121.2	116.8	131.6	126.2	121.6
	gpm	28.6	32.0	34.8	36.5	40.6	44.1	40.4	44.9	48.8	49.4	56.6	62.6	57.6	66.3	73.8	62.1	71.8	80.1
	WPD	1.8	2.2	2.6	2.8	3.5	4.1	3.4	4.2	4.9	1.5	1.9	2.3	1.9	2.6	3.1	2.2	3.0	3.7
30°F	TC	340.7	380.6	415.2	434.2	482.4	524.2	480.0	533.3	579.4	591.7	676.7	748.7	691.1	794.7	883.1	745.9	860.6	958.9
	SC	91.4	88.1	85.5	100.0	95.6	92.2	104.3	99.3	95.6	114.6	109.9	106.0	123.7	118.6	114.3	128.8	123.5	118.9
	gpm	22.7	25.4	27.7	28.9	32.1	34.9	32.0	35.5	38.6	39.4	45.1	49.9	46.1	53.0	58.8	49.7	57.3	63.9
	WPD	1.1	1.4	1.7	1.8	2.2	2.6	2.2	2.7	3.1	0.9	1.2	1.5	1.3	1.7	2.0	1.5	1.9	2.4
40°F	TC	308.4	343.2	373.7	389.7	433.9	471.7	429.3	478.3	520.2	537.8	613.3	677.1	629.8	721.7	799.8	680.8	782.6	869.4
	SC	88.4	85.3	83.0	95.9	92.0	89.0	99.6	95.3	92.0	109.6	105.2	101.6	118.1	113.2	109.2	122.8	117.7	113.4
	gpm	15.4	17.2	18.7	19.5	21.7	23.6	21.5	23.9	26.0	26.9	30.7	33.9	31.5	36.1	40.0	34.0	39.1	43.5
	WPD	0.6	0.7	0.8	0.9	1.1	1.2	1.0	1.3	1.5	0.5	0.6	0.7	0.6	0.8	1.0	0.7	0.9	1.1

Water Temp. Rise		4 Rows of Coil									6 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		10000	12500	15000	10000	12500	15000	10000	12500	15000	10000	12500	15000	10000	12500	15000	10000	12500	15000
10°F	TC	484.5	571.7	649.1	532.4	634.4	726.2	555.0	664.8	764.6	567.5	683.1	789.2	600.5	730.1	851.0	614.0	750.2	878.5
	LAT	104.7	102.2	99.9	109.1	106.8	104.6	111.2	109.0	107.0	112.3	110.4	108.5	115.4	113.9	112.3	116.6	115.3	114.0
	gpm	97.1	114.6	130.1	106.7	127.1	145.5	111.2	133.2	153.2	113.7	136.9	158.1	120.3	146.3	170.5	123.0	150.3	176.0
	WPD	7.4	10.1	12.8	8.9	12.3	15.8	9.6	13.4	17.4	12.9	18.1	23.7	14.3	20.5	27.2	14.9	21.6	28.9
15°F	TC	458.7	539.3	610.5	507.1	601.6	686.3	530.5	632.6	724.8	548.0	657.1	756.6	583.9	707.0	821.0	599.3	729.2	850.6
	SC	102.3	99.8	97.5	106.8	104.4	102.2	108.9	106.7	104.6	110.5	108.5	106.5	113.8	112.1	110.5	115.3	113.8	112.3
	gpm	61.3	72.0	81.6	67.7	80.4	91.7	70.9	84.5	96.8	73.2	87.8	101.1	78.0	94.4	109.7	80.1	97.4	113.6
	WPD	3.2	4.3	5.4	3.8	5.2	6.7	4.2	5.8	7.4	5.7	8.0	10.4	6.5	9.2	12.1	6.8	9.7	12.9
20°F	TC	430.6	504.4	569.4	478.8	565.7	643.1	502.7	596.7	681.1	525.7	627.9	720.6	564.1	679.9	786.7	581.2	703.9	818.0
	SC	99.7	97.2	95.0	104.2	101.7	99.5	106.4	104.0	101.9	108.5	106.3	104.3	112.0	110.2	108.4	113.6	111.9	110.3
	gpm	43.1	50.5	57.0	48.0	56.7	64.4	50.4	59.8	68.2	52.7	62.9	72.2	56.5	68.1	78.8	58.2	70.5	82.0
	WPD	1.7	2.2	2.8	2.0	2.8	3.5	2.2	3.0	3.9	3.2	4.4	5.6	3.6	5.1	6.6	3.8	5.4	7.1
25°F	TC	399.1	466.6	525.2	447.0	526.0	595.8	471.1	556.6	632.8	500.1	594.8	680.4	540.3	648.4	747.4	558.9	673.8	779.9
	SC	96.8	94.4	92.3	101.2	98.8	96.6	103.4	101.1	98.9	106.1	103.9	101.8	109.8	107.8	105.9	111.5	109.7	107.9
	gpm	32.0	37.4	42.1	35.8	42.2	47.8	37.8	44.6	50.7	40.1	47.7	54.5	43.3	52.0	59.9	44.8	54.0	62.5
	WPD	1.0	1.3	1.6	1.2	1.6	2.0	1.3	1.8	2.3	1.9	2.6	3.4	2.2	3.1	4.0	2.4	3.3	4.3
30°F	TC	359.3	421.8	475.5	407.4	480.3	543.5	431.9	510.5	579.1	469.4	557.2	635.2	511.5	611.6	702.1	531.5	637.9	735.2
	SC	93.1	91.1	89.2	97.6	95.4	93.4	99.8	97.7	95.6	103.3	101.1	99.0	107.2	105.1	103.2	109.0	107.1	105.2
	gpm	24.0	28.2	31.8	27.2	32.1	36.3	28.8	34.1	38.7	31.4	37.2	42.4	34.2	40.8	46.9	35.5	42.6	49.1
	WPD	0.6	0.8	1.0	0.7	1.0	1.2	0.8	1.1	1.4	1.2	1.7	2.2	1.5	2.0	2.6	1.6	2.2	2.8
40°F	TC	—	256.3	313.3	251.0	327.7	384.6	285.9	361.1	420.8	375.4	450.3	515.5	421.4	506.7	582.1	444.1	535.1	616.0
	SC	—	78.9	79.3	83.1	84.2	83.6	86.4	86.6	85.9	94.6	93.2	91.7	98.9	97.4	95.8	101.0	99.5	97.9
	gpm	—	12.8	15.7	12.6	16.4	19.3	14.3	18.1	21.1	18.8	22.6	25.8	21.1	25.4	29.1	22.2	26.8	30.8
	WPD	—-	0.2	0.3	0.2	0.3	0.4	0.2	0.3	0.5	0.5	0.7	0.9	0.6	0.9	1.1	0.7	0.9	1.2

Notes:
1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 88. Unit size 25 hot water heating capacities, EAT = 60°F (continued)

Water Temp. Rise		8 Rows of Coil								
		9 fpi			12 fpi			14 fpi		
		Airflow								
		10000	12500	15000	10000	12500	15000	10000	12500	15000
10°F	TC	608.5	742.4	868.3	629.0	774.0	912.6	636.3	786.0	930.3
	LAT	116.1	114.8	113.4	118.0	117.1	116.1	118.7	118.0	117.2
	gpm	121.9	148.8	174.0	126.0	155.1	182.9	127.5	157.5	186.4
	WPD	17.9	25.8	34.4	19.0	27.8	37.7	19.4	28.6	39.1
15°F	TC	594.8	723.0	842.7	618.9	758.8	891.6	628.2	773.2	912.1
	SC	114.8	113.3	111.8	117.1	116.0	114.8	117.9	117.0	116.1
	gpm	79.5	96.6	112.6	82.7	101.4	119.1	83.9	103.3	121.8
	WPD	8.2	11.7	15.5	8.8	12.8	17.2	9.1	13.3	17.9
20°F	TC	578.2	700.1	813.2	605.8	739.7	866.2	617.0	756.5	889.3
	SC	113.3	111.6	110.0	115.9	114.6	113.2	116.9	115.8	114.7
	gpm	57.9	70.1	81.5	60.7	74.1	86.8	61.8	75.8	89.1
	WPD	4.6	6.6	8.6	5.1	7.3	9.7	5.2	7.6	10.2
25°F	TC	558.2	673.0	779.0	589.0	716.1	835.4	602.1	735.1	860.8
	SC	111.5	109.6	107.9	114.3	112.8	111.4	115.5	114.2	112.9
	gpm	44.7	53.9	62.4	47.2	57.4	67.0	48.3	58.9	69.0
	WPD	2.9	4.1	5.3	3.2	4.6	6.1	3.4	4.8	6.4
30°F	TC	533.8	641.0	739.3	567.6	687.1	798.3	582.6	708.0	825.8
	SC	109.2	107.3	105.4	112.3	110.7	109.1	113.7	112.2	110.8
	gpm	35.6	42.8	49.4	37.9	45.9	53.3	38.9	47.3	55.1
	WPD	2.0	2.7	3.5	2.2	3.1	4.0	2.3	3.3	4.3
40°F	TC	460.0	552.2	634.8	499.7	603.3	697.4	518.5	627.9	727.9
	SC	102.4	100.7	99.0	106.1	104.5	102.9	107.8	106.3	104.7
	gpm	23.0	27.7	31.8	25.0	30.2	34.9	26.0	31.4	36.5
	WPD	0.9	1.3	1.6	1.0	1.5	1.9	1.1	1.6	2.1

Notes:

1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 89. Unit size 30 hot water heating capacities, EAT = 60°F

Water Temp. Rise		1 Row of Coil									2 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		12000	15000	18000	12000	15000	18000	12000	15000	18000	12000	15000	18000	12000	15000	18000	12000	15000	18000
10°F	TC	—	—	—	—	—	—	—	—	—	835.4	—	—	—	—	—	—	—	—
	LAT	—	—	—	—	—	—	—	—	—	124.2	—	—	—	—	—	—	—	—
	gpm	—	—	—	—	—	—	—	—	—	166.8	—	—	—	—	—	—	—	—
	WPD	—	—	—	—	—	—	—	—	—	15.8	—	—	—	—	—	—	—	—
15°F	TC	474.9	530.5	578.8	606.1	675.1	—	671.3	—	—	807.5	927.1	1028.9	939.4	1085.5	1210.7	1010.9	1172.8	1312.4
	SC	96.5	92.6	89.7	106.6	101.5	—	111.6	—	—	122.1	117.0	112.7	132.2	126.7	122.0	137.7	132.1	127.2
	gpm	63.2	70.6	77.1	80.7	89.9	—	89.4	—	—	107.5	123.5	137.0	125.1	144.5	161.2	134.6	156.2	174.8
	WPD	8.6	10.6	12.5	13.7	16.8	—	16.6	—	—	6.8	8.9	10.8	9.1	12.0	14.8	10.5	13.9	17.3
20°F	TC	455.2	508.3	554.4	580.6	646.4	703.3	642.8	715.3	778.0	779.5	893.8	990.9	908.1	1047.7	1167.2	978.2	1132.9	1266.0
	SC	95.0	91.2	88.4	104.6	99.7	96.0	109.4	104.0	99.9	119.9	114.9	110.8	129.8	124.4	119.8	135.2	129.6	124.9
	gpm	45.5	50.8	55.4	58.0	64.6	70.3	64.2	71.5	77.7	77.9	89.3	99.0	90.7	104.7	116.6	97.7	113.2	126.5
	WPD	4.6	5.6	6.7	7.3	8.9	10.5	8.8	10.8	12.7	3.7	4.8	5.8	4.9	6.5	8.0	5.7	7.5	9.3
25°F	TC	435.5	486.1	530.0	555.2	617.8	671.8	614.5	683.7	743.0	751.0	860.1	952.6	876.2	1009.3	1123.1	944.7	1092.3	1219.0
	SC	93.5	89.9	87.1	102.7	98.0	94.4	107.2	102.0	98.1	117.7	112.9	108.8	127.3	122.0	117.5	132.6	127.1	122.4
	gpm	34.8	38.9	42.4	44.4	49.4	53.7	49.1	54.7	59.4	60.0	68.8	76.2	70.0	80.7	89.8	75.5	87.3	97.4
	WPD	2.8	3.4	4.0	4.4	5.4	6.3	5.3	6.5	7.6	2.2	2.9	3.5	3.0	3.9	4.8	3.5	4.6	5.7
30°F	TC	415.7	464.3	506.7	529.6	589.0	640.3	586.1	651.4	707.9	721.9	825.8	913.8	843.5	970.1	1078.2	910.4	1050.7	1171.0
	SC	91.9	88.5	86.0	100.7	96.2	92.8	105.0	100.0	96.3	115.5	110.8	106.8	124.8	119.6	115.2	130.0	124.6	120.0
	gpm	27.7	30.9	33.8	35.3	39.2	42.7	39.1	43.4	47.2	48.1	55.0	60.9	56.2	64.6	71.8	60.7	70.0	78.0
	WPD	1.8	2.2	2.6	2.8	3.5	4.1	3.4	4.2	4.9	1.5	1.9	2.3	2.0	2.6	3.2	2.3	3.0	3.7
40°F	TC	378.7	422.5	460.2	479.6	534.4	581.3	528.6	589.2	641.2	661.8	755.1	833.8	775.3	888.9	985.5	838.3	964.2	1071.6
	SC	89.1	86.0	83.6	96.9	92.8	89.8	100.6	96.2	92.8	110.9	106.4	102.7	119.6	114.6	110.5	124.4	119.3	114.9
	gpm	18.9	21.1	23.0	24.0	26.7	29.1	26.4	29.5	32.1	33.1	37.8	41.7	38.8	44.4	49.3	41.9	48.2	53.6
	WPD	0.9	1.1	1.3	1.4	1.7	2.0	1.6	2.0	2.4	0.7	0.9	1.1	1.0	1.3	1.6	1.1	1.5	1.8

Water Temp. Rise		4 Rows of Coil									6 Rows of Coil								
		9 fpi			12 fpi			14 fpi			9 fpi			12 fpi			14 fpi		
		Airflow									Airflow								
		12000	15000	18000	12000	15000	18000	12000	15000	18000	12000	15000	18000	12000	15000	18000	12000	15000	18000
10°F	TC	584.7	689.9	783.3	642.3	765.5	876.4	669.4	802.1	922.7	683.0	822.3	—	722.5	878.6	—	738.5	902.7	—
	LAT	104.9	102.4	100.1	109.4	107.1	104.9	111.4	109.3	107.3	112.5	110.5	—	115.5	114.0	—	116.7	115.5	—
	gpm	117.2	138.2	157.0	128.7	153.4	175.6	134.1	160.7	184.9	136.9	164.8	—	144.8	176.1	—	148.0	180.9	—
	WPD	11.5	15.7	19.9	13.7	19.1	24.5	14.8	20.8	27.0	20.0	28.2	—	22.2	31.9	—	23.2	33.6	—
15°F	TC	555.8	653.6	740.0	614.2	729.1	831.9	642.4	766.4	878.5	661.1	793.0	913.3	704.1	852.8	990.7	722.4	879.3	1026.2
	SC	102.7	100.2	97.9	107.2	104.8	102.6	109.4	107.1	105.0	110.8	108.7	106.8	114.1	112.4	110.8	115.5	114.1	112.6
	gpm	74.2	87.3	98.9	82.1	97.4	111.1	85.8	102.4	117.4	88.3	105.9	122.0	94.1	113.9	132.3	96.5	117.5	137.1
	WPD	5.0	6.7	8.4	6.0	8.2	10.5	6.5	9.0	11.6	9.0	12.6	16.3	10.1	14.4	18.9	10.6	15.2	20.2
20°F	TC	524.4	614.5	693.9	582.9	689.0	783.6	611.7	726.6	829.8	636.1	760.0	872.5	682.1	822.7	952.3	702.5	851.4	989.8
	SC	100.3	97.8	95.5	104.8	102.4	100.1	107.0	104.7	102.5	108.9	106.7	104.7	112.4	110.6	108.8	114.0	112.3	110.7
	gpm	52.5	61.6	69.5	58.4	69.0	78.5	61.3	72.8	83.1	63.7	76.1	87.4	68.3	82.4	95.4	70.4	85.3	99.2
	WPD	2.6	3.5	4.4	3.2	4.4	5.5	3.5	4.8	6.1	5.0	6.9	8.9	5.7	8.0	10.4	6.0	8.5	11.2
25°F	TC	489.9	572.1	644.1	547.7	644.7	730.7	576.8	682.0	776.0	607.3	722.8	827.0	655.7	787.5	908.1	677.9	818.0	947.3
	SC	97.6	95.2	93.0	102.1	99.6	97.4	104.3	101.9	99.8	106.7	104.4	102.4	110.4	108.4	106.5	112.1	110.3	108.5
	gpm	39.3	45.9	51.6	43.9	51.7	58.6	46.2	54.7	62.2	48.7	57.9	66.3	52.6	63.1	72.8	54.3	65.6	75.9
	WPD	1.6	2.1	2.6	1.9	2.6	3.2	2.1	2.8	3.6	3.1	4.2	5.4	3.5	4.9	6.4	3.7	5.3	6.9
30°F	TC	449.6	525.2	590.1	507.2	595.4	672.5	536.4	631.8	716.1	574.0	680.4	775.9	624.3	746.3	857.3	648.0	778.1	897.5
	SC	94.5	92.3	90.2	99.0	96.6	94.4	101.2	98.8	96.7	104.1	101.8	99.7	108.0	105.9	103.9	109.8	107.8	106.0
	gpm	30.0	35.1	39.4	33.9	39.8	44.9	35.8	42.2	47.8	38.3	45.4	51.8	41.7	49.8	57.3	43.3	52.0	59.9
	WPD	1.0	1.3	1.6	1.2	1.6	2.0	1.3	1.8	2.2	2.0	2.7	3.5	2.3	3.2	4.1	2.5	3.5	4.5
40°F	TC	318.9	386.5	442.0	380.3	456.3	520.3	411.4	492.7	561.8	479.6	569.6	648.2	533.7	636.8	727.9	560.3	670.4	768.4
	SC	84.5	83.8	82.6	89.2	88.0	86.7	91.6	90.3	88.8	96.9	95.0	93.2	101.0	99.1	97.3	103.1	101.2	99.4
	gpm	16.0	19.4	22.1	19.0	22.9	26.1	20.6	24.7	28.1	24.0	28.5	32.5	26.7	31.9	36.5	28.1	33.6	38.5
	WPD	0.3	0.4	0.6	0.4	0.6	0.7	0.5	0.7	0.9	0.9	1.2	1.5	1.1	1.5	1.8	1.2	1.6	2.0

Notes:
1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Table 89. Unit size 30 hot water heating capacities, EAT = 60°F (continued)

Water Temp. Rise		8 Rows of Coil								
		9 fpi			12 fpi			14 fpi		
		Airflow								
		12000	15000	18000	12000	15000	18000	12000	15000	18000
10°F	TC	731.4	892.5	—	755.8	930.3	—	764.5	—	—
	LAT	116.2	114.9	—	118.1	117.2	—	118.7	—	—
	gpm	146.6	178.9	—	151.5	186.4	—	153.2	—	—
	WPD	28.0	40.3	—	29.7	43.5	—	30.4	—	—
15°F	TC	716.1	870.6	1015.0	744.7	913.3	1073.5	755.5	930.4	1097.9
	SC	115.0	113.5	112.0	117.2	116.1	115.0	118.1	117.2	116.2
	gpm	95.7	116.3	135.6	99.5	122.0	143.4	100.9	124.3	146.7
	WPD	12.9	18.4	24.4	13.9	20.1	27.0	14.2	20.8	28.2
20°F	TC	697.5	844.8	981.6	730.2	892.1	1045.0	743.3	912.0	1072.5
	SC	113.6	111.9	110.3	116.1	114.8	113.5	117.1	116.1	114.9
	gpm	69.9	84.6	98.3	73.2	89.4	104.7	74.5	91.4	107.5
	WPD	7.3	10.4	13.6	8.0	11.5	15.3	8.2	11.9	16.0
25°F	TC	675.0	814.3	942.9	711.6	865.9	1010.5	727.1	888.4	1040.9
	SC	111.9	110.1	108.3	114.7	113.2	111.8	115.9	114.6	113.3
	gpm	54.1	65.3	75.6	57.0	69.4	81.0	58.3	71.2	83.4
	WPD	4.6	6.5	8.5	5.1	7.3	9.6	5.3	7.6	10.2
30°F	TC	647.8	778.1	897.8	688.0	833.4	968.9	705.7	858.4	1001.9
	SC	109.8	107.8	106.0	112.9	111.2	109.6	114.2	112.8	111.3
	gpm	43.3	52.0	60.0	45.9	55.7	64.7	47.1	57.3	66.9
	WPD	3.1	4.3	5.6	3.5	4.9	6.4	3.6	5.2	6.8
40°F	TC	570.5	682.0	781.8	617.5	742.9	856.7	639.5	772.0	893.3
	SC	103.8	101.9	100.1	107.4	105.7	103.9	109.1	107.5	105.8
	gpm	28.6	34.2	39.2	30.9	37.2	42.9	32.0	38.7	44.7
	WPD	1.5	2.1	2.6	1.7	2.4	3.1	1.8	2.6	3.3

Notes:

1. TC = Total capacity (MBh)
2. LAT = Leaving air temperature (°F)
3. gpm = Water flow rate, gallons per minute
4. WPD = Water pressure drop @ average water density (ft H_2O)
5. Some of the volumetric flow rates listed above are less than the those required for self-venting (see Table 2, p. 19).
6. Blank value means the water flow rate is below the minimum or above the maximum for the application.
7. Capacities calculated with 0.00050 tube-side fouling factor.
8. Use the capacity correction factors listed in Table 90 and Table 91, p. 117 for different entering water conditions.

Shading key: EWT = 180°F EWT = 120°F

Heating Capacities - Capacity Correction Factors

Table 90. Capacity correction factors for data calculated at EWT = 180°F

Capacity Correction Factors																	
EAT - EWT (°F) =	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20
Correction Factor =	1.500	1.417	1.333	1.250	1.167	1.083	1.000	0.917	0.833	0.750	0.667	0.583	0.500	0.417	0.333	0.250	0.167
Water Pressure Drop Correction Factors																	
Average Water Temp. (°F) =	200	190	180	170	160	150	140	130	120	110	100	90	80				
Correction Factor =	0.99	1.00	1.00	1.01	1.01	1.02	1.03	1.04	1.06	1.07	1.09	1.11	1.14				

Table 91. Capacity correction factors for data calculated at EWT = 120°F

Capacity Correction Factors																	
EAT - EWT (°F) =	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20
Correction Factor =	3.000	2.830	2.670	2.500	2.330	2.170	2.000	1.830	1.670	1.500	1.330	1.170	1.000	0.830	0.670	0.500	0.330
Water Pressure Drop Correction Factors																	
Average Water Temp. (°F) =	190	180	170	160	150	140	130	120	110	100	90	80					
Correction Factor =	0.94	0.95	0.95	0.96	0.97	0.98	0.99	1.00	1.01	1.03	1.05	1.07					

Heating Capacities - Steam Coil Capacities

Table 92. Steam heating capacities, EAT = 30°F

		Steam Pressure				
		2 psig	5 psig	10 psig	15 psig	
Unit Size	cfm	TC	TC	TC	TC	Q/ITD
3	1200	64.1	67.0	71.2	74.7	0.340
	1500	70.7	74.0	78.6	82.5	0.375
	1800	76.0	79.5	84.4	88.6	0.403
6	2400	139.7	146.1	155.2	162.8	0.741
	3000	155.5	162.7	172.8	181.3	0.825
	3600	168.3	176.0	187.0	196.2	0.893
8	3200	193.7	202.6	215.2	225.8	1.028
	4000	216.6	226.5	240.6	252.5	1.149
	4800	235.2	246.0	261.3	274.2	1.248
10	4000	247.6	259.0	275.1	288.7	1.314
	5000	277.5	290.2	308.3	323.5	1.472
	6000	301.9	315.8	335.4	352.0	1.602
12	4800	315.8	330.3	350.8	368.2	1.675
	6000	356.4	372.8	396.0	415.6	1.891
	7200	390.1	408.0	433.4	454.8	2.070
14	5600	367.3	384.1	408.0	428.2	1.948
	7000	414.3	433.4	460.3	483.1	2.198
	8400	453.3	474.1	503.6	528.5	2.405
17	6800	437.8	457.9	486.3	510.4	2.323
	8500	492.9	515.5	547.5	574.6	2.615
	10200	538.3	562.9	597.9	627.5	2.855
21	8400	538.6	563.3	598.3	627.9	2.857
	10500	605.9	633.7	673.1	706.4	3.214
	12600	661.3	691.7	734.6	771.0	3.508
25	10000	629.4	658.3	699.2	733.8	3.339
	12500	706.7	739.1	785.0	823.8	3.749
	15000	769.9	805.2	855.3	897.6	4.084
30	12000	754.6	789.2	838.2	879.7	4.003
	15000	846.9	885.8	940.8	987.4	4.493
	18000	922.5	964.8	1024.8	1075.5	4.894

Notes:
1. TC = Total capacity (Bh)
2. ITD = Saturated Steam Temp Entering Coil - Entering Air Temperature
3. Q/ITD = TC / (Sat. Steam Temp. - EAT)

Table 93. Steam properties

Steam Pressure (psig)	2	5	10	15
Saturated Steam Temperature (ºF)	218.50	227.14	239.40	249.76
Latent Heat (Btu/lb)	966.22	960.67	952.67	945.77

Note: To determine heating capacities at different entering steam pressure or a different entering air temperature, compute the new ITD and multiply it by the Q/ITD shown.

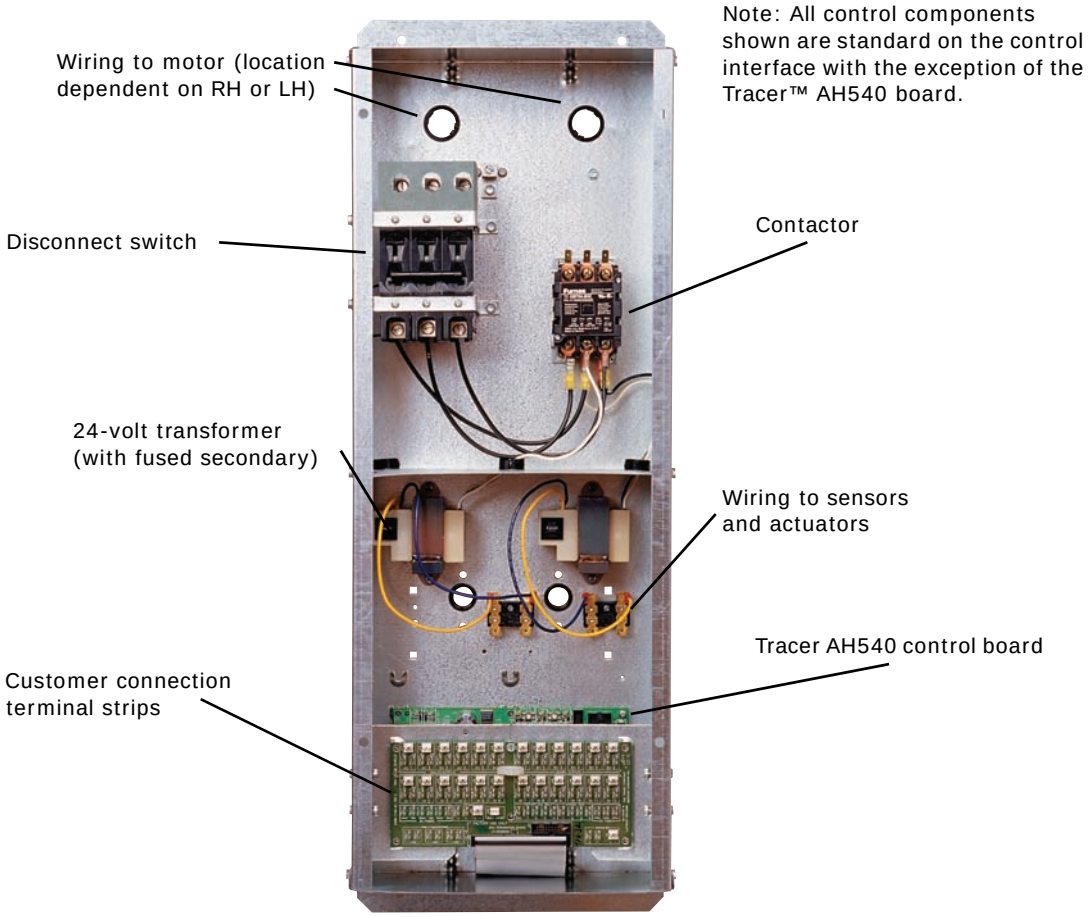
Controls

Control Options

Packaged Climate Changer units are available with two different control options:

- Control interface
- Tracer™ AH540

Figure 47. Packaged climate changer control panel components



Control Interface
Model Number Digit 20 = 1

The control interface option contains a fan motor disconnect switch, fan contactor, fused transformer(s), and customer terminal strip. Various end device options are available factory-mounted on units with the control interface. There are four binary end device options:

1. low limit switch,
2. condensate overflow switch
3. fan status switch
4. filter status switch

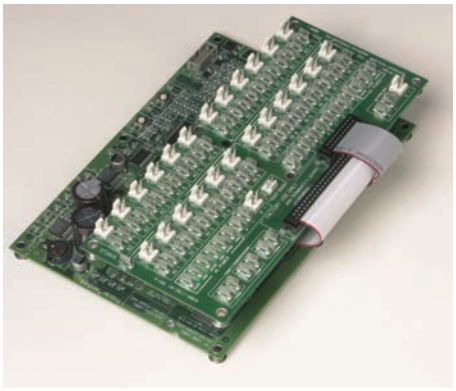
Also there are three analog end device options:

1. discharge air sensor
2. mixed air sensor

3. damper actuator

Figure 48. Tracer AH540 operator display

Figure 49. Tracer AH540 terminal board



Tracer AH540 Controller
Model Number Digit 20 = 2 or 3

The Tracer AH540 controller offers the advantages of simple and dependable operation of Trane-designed controls. Standard control features include options normally available on more elaborate control systems. All control options are available factory-configured or can be field-configured using Rover™ service software. For more detailed information on the Tracer AH540, refer to Trane publication CNT-SVX05B-EN, *Installation & Setup for Tracer AH540 and AH541 Air Handler Controller.*

The Tracer AH540 controller can function as a stand-alone controller or communicate as part of a Trane Integrated Comfort™ System (ICS). In the stand-alone configuration, Tracer AH540 receives operation commands from the:

- space temperature and discharge air temperature for constant volume space temperature control,
- discharge air temperature for constant volume discharge air temperature control, and
- both discharge air temperature and duct static pressure for variable air volume control.

For Tracer AH540 zone sensor options, see "Tracer AH540 Zone Sensor Options," p. 130.

For optimal system performance, Packaged Climate Changer units can operate as part of an Integrated Comfort™ System (ICS) controlled by Tracer Summit®. The controller is linked directly to the Summit control panel via twisted pair communication wire, requiring no additional interface device (i.e., a command unit). The Trane ICS system can monitor or override Tracer AH540 control points. This includes such points as temperature and output positions.

Rover™ Service Software

This windows-based software package option allows field service personnel to easily monitor, save, download, and configure Tracer controllers through a communication link from a portable computer. When connected to the communication link, Rover can view any Tracer controller that is on the same communication link.

Tracer AH540 Controller

The Tracer AH540 is a configurable controller. All control sequences of operation are predefined with no need for field-programming the controller. Configurable parameters are provided to allow user adjustments to the controller's operation. All configuration parameters are set to defaults predetermined through extensive air handling unit testing in several different operating conditions. The factory default settings are also based on the air handling unit configuration and unit order information. For more detailed information on the Tracer AH540 sequence of operations, see the Trane publication number CNT-SVX05B-EN.

The Tracer AH540 controller is configurable to operate in one of three air handling control modes:

1. constant volume space temperature control
2. constant volume discharge air temperature control
3. variable air volume control

Constant Volume Space Temperature Control (CV)

The Tracer AH540 controller resets the discharge air temperature based on space temperature and the effective space temperature setpoint. The controller requires both space temperature and discharge air temperature sensors to operate in this mode.

The space setpoint can be a wired input or a communicated value. The communicated setpoint has precedence over the wired setpoint input. If no communicated or wired setpoint input is present, the controller uses the configured space temperature heating and cooling setpoints.

Constant Volume Discharge Air Temperature Control

Constant volume discharge air temperature control maintains a discharge air temperature at a desired discharge air temperature setpoint regardless of the entering air conditions of the air handling unit.

First the controller determines if a communicated discharge air heating setpoint and cooling setpoint are present. The communicated setpoint has precedence over the configured (default) setpoint. If no communicated value is present, the controller uses the configured discharge air temperature setpoint.

Discharge air temperature setpoint minimum and maximum limits are placed on the discharge air setpoint.

Variable Air Volume Control (VAV)

When the Tracer AH540 controller operates with variable air volume control, it uses both a discharge air temperature control routine and a duct static pressure control routine. The unit's discharge air temperature is controlled using the discharge air temperature control sequence. The air handling unit's duct static pressure is maintained by a duct static pressure control sequence.

Tracer AH540 Control Features

Dehumidification

The Tracer AH540 controller provides both occupied and unoccupied dehumidification control for space temperature control applications when cooling and reheat capacity is available. The dehumidification control sequence is allowed on unit configurations with hydronic or DX cooling and hydronic or electric reheat.

Space dehumidification requires a space relative humidity sensor input hard-wired to the universal analog input IN13 or a communicated RH value. If both a hard-wired relative humidity sensor and a communicated RH value is present, the controller uses communicated value for dehumidification control.

Automatic Heat/Cool Mode Determination

A communicated request of Auto or the controller default operation (Auto) places the unit into heating or cooling mode. The controller automatically determines heating or cooling mode based on the control algorithm, and switches the unit operation to the correct mode.

If the Tracer AH540 controller is operating based on space temperature control, it uses the space temperature and space temperature setpoint to automatically determine heat or cool mode operation. When the controller first powers up or after a reset, it makes an initial determination of what the heat/cool mode should be. If the controller is configured as heating and cooling, the controller determines the appropriate mode.

Two-Pipe Changeover Operation

The Tracer AH540 controller provides a two-pipe changeover option when an air-handling unit has one hydronic coil for heating and cooling operation. Two-pipe changeover allows the controller to provide heating or cooling to the space depending on the entering water temperature.

Entering Water Temperature Sampling

The Tracer AH540 controller samples the entering water condition for space temperature control air handling units with a single hydronic coil. The entering water temperature is important for reliable heating and cooling control. The entering water temperature must be at least 5°F above the space temperature for hydronic heating and 5°F below the space temperature for hydronic cooling for satisfactory capacity control.

Mixed Air Temperature Control

Mixed-air temperature control reduces ventilation, and is maintained above the mixed-air low-limit setpoint (50°F default, configurable) by reducing the outdoor air ventilation below minimum position. The lower percent of outdoor air raises the mixed-air temperature.

Mixed-Air Preheat Control

Mixed-air preheat control preheats before reducing ventilation. Preheat capacity maintains the mixed-air temperature above the mixed-air low-limit setpoint (50°F default, configurable). If 100% preheat capacity does not maintain the mixed-air temperature above the mixed-air low-limit setpoint, outdoor air ventilation is reduced below minimum position.

DX Cooling Operation

The Tracer AH540 controller provides four DX cooling binary outputs to control up to four cooling stages. The controller uses a cascade control algorithm for space temperature control. Valid discharge-air-temperature sensor and space temperature sensor inputs are required for operation. As space temperatures rise above the cooling setpoint, it creates a demand for more discharge-air cooling capacity. Discharge-air-temperature control directly controls DX cooling to provide discharge air temperature at the discharge-air cooling setpoint.

Duct Static Pressure Control

The supply fan variable frequency drive, in a variable air volume system, maintains the duct static pressure setpoint. When the fan is on, the controller reads and compares the duct static pressure input to the duct static pressure setpoint and adjusts the supply fan speed.

Figure 50. Variable frequency drive (VFD) option

The duct static pressure signal can be from a wired sensor or communicated via a network variable. If the controller does not have a valid duct static pressure from a wired sensor or communicated, the controller generates a *duct static pressure sensor* diagnostic and shuts down the unit. The controller does not operate duct static pressure control without a valid duct static pressure input.

The Tracer AH540 controller has a configurable duct static pressure high limit setpoint. If the duct static pressure exceeds the duct static pressure high limit setpoint, the controller shuts down the unit and generates a *duct static pressure high limit* diagnostic.

Morning Warmup and Daytime Warmup Functions

Morning or daytime warmup functions allow the controller to automatically change to heating if space temperature is less than the heating setpoint. These functions can also be initiated through a communicated request. If a space temperature input is provided to the controller, configured as constant volume discharge air control or variable air volume control, the controller uses the space temperature to perform morning warmup and daytime warmup functions.

Economizer Cooling

Economizer cooling requires a mixed air temperature sensor and outdoor air temperature value to be present. If an outdoor temperature is not available, a communicated request from Tracer Summit can enable economizer cooling. Economizer cooling is only possible when the unit is equipped with a mixing box. The mixed air sensor functions as a low temperature limit to keep mixed air temperatures above freezing.

Face & Bypass Damper

The face and bypass damper modulates a percentage of air to the face of the preheat coil and around the preheat coil to maintain the supply air temperature setpoint. The air passing through the heating coil is mixed with the air bypassing the preheat coil to produce a desired discharge air temperature.

The Tracer AH540 controller supports face and bypass operation for low outdoor temperature heating modes of operation only. During low outdoor temperatures, when the outdoor air temperature is lower than the face and bypass heat modulation setpoint, the heating valve fully opens and the face and bypass damper allows heating to prevent the coil from freezing. During cooling mode, the heating face and bypass damper drives to full face and the valve closes.

Note: *You must order an access section with preheat coil with the face and bypass section.*

Electric Heat

The Tracer AH540 controller provides two methods of electric heat control:

1. Direct stage
2. Analog sequencer

Direct-staged electric heat control is provided on four binary outputs. Alternately, the controller's 0–10 Vdc heating output can be wired to an electric heat sequencer using up to six stages. The controller supports electric heat operation in constant volume (CV) and variable air volume (VAV) full airflow modes of operation.

Exhaust Fan Operation

The exhaust fan/damper is coordinated with the unit fan and outdoor damper operation. The exhaust output energizes only when the unit fan is operating and the outdoor damper position is greater than or equal to the configurable exhaust enable point. The exhaust fan output disables when the outdoor air damper position drops 10% (configurable) below the exhaust enable point. If the enable point is less than 10% (configurable), the unit turns on at the enable point and off at zero.

Coil Defrost

DX cooling, low refrigerant temperature operation is managed by one of two methods. One uses the evaporator refrigerant temperature (analog input IN13) to measure suction temperature. The other uses a binary thermostat device (binary input IN7 or IN12) applied to the evaporator suction line.

Tracer AH540 Additional Features

Fan Status

The Tracer AH540 controller monitors the fan output status to determine if the fan is operating.

Maintenance Status

The controller has an adjustable timer that indicates through Tracer Summit or Rover when maintenance is necessary. Maintenance status is based on cumulative fan run hours and can be used to indicate filter maintenance.

Filter Status

Filter status is available as a binary input on the controller. The Tracer AH540 controller reports an informational "dirty filter" diagnostic to Tracer Summit or Rover when the pressure drop across the filter reaches a threshold.

Exhaust Fan Status

Exhaust fan status is a feature of the Tracer AH540 controller. The binary input indicates air flow through an exhaust fan associated with the controlled air handling unit.

Water Valve Override

Using Tracer Summit or Rover, the water valve override function drives all water valves in every unit fully open simultaneously. This helps reduce the time required for waterside balancing.

Manual Output Test

This Tracer AH540 feature is an invaluable tool for troubleshooting a unit. By simply pressing the controller's test button, service personnel can manually exercise outputs in a predefined sequence.

Interoperability

The Tracer AH540 controller can be used with a Tracer Summit system or on other control systems that support LonTalk®, SCC and DAC LonMark® profiles.

End Device Options

Modulating Control Valves
Model Number Digits 33, 34, 35

Modulating control valve options are available with Tracer AH540 for preheat, cooling, and reheat hydronic coils. Valve options are two or three-way, normally open or closed (in de-energized state), spring-return type, and have threaded connections, ranging from 3/4 to 2-inches or 2-1/2-inch flanged connections. The valves respond to a 0–10 Vdc signal. The three-way valve option allows either full water flow through the coil or diverts waterflow through the bypass. If the control valve loses power, the valve returns to its de-energized position. All control valve options are factory-provided for field installation.

Figure 51. Modulating control valve options: model number digits 33, 34, and 35

Field-Supplied Valves
Model Number Digits 33, 34, 35

When using field-supplied valves, this option allows the controller to be factory-configured correctly to control the field-supplied valve. Also, choosing the field-supplied valve option ensures the transformer is sized correctly.

Note: *Trane does not recommend wild coil applications.*

Mixing Section Damper Actuator
Model Number Digit 30 = D or E

This damper actuator uses a 0–10 Vdc signal and is factory-wired and mounted to the damper assembly. It allows zero to 100% fresh air. The damper will drive open to an adjustable minimum stop-position whenever the fan is running during occupied mode and will spring-return closed when the fan turns off.

Note: *Trane recommends using the low temperature detection option with fresh air dampers to detect possible freeze conditions.*

Face & Bypass Damper Actuator
Model Number Digit 27 = B

This option is 0–10 Vdc, spring-return damper actuator that is factory-wired and mounted to the damper assembly.

The face and bypass damper modulates a percentage of air to the heating coil face and around the preheat coil to maintain the supply air temperature setpoint. The air passing through the hot water coil is mixed with the air bypassing the preheat coil to produce a desired discharge air temperature.

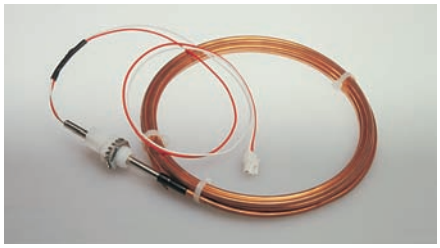
Figure 52. Damper actuator option for mixing section or face & bypass damper, digit 30 = D or E, or digit 27 = B

Low Temperature Detection Model Number Digit 29

When the low temperature detection device senses an entering air temperature of 36°F to the hydronic coil, the normally-closed switch opens a corresponding set of binary input terminals. The fan disables, control valves open, and the fresh air damper closes.

The low temperature detection device is an averaging type capillary tube and will reset when it detects an entering air temperature of at least 44°F.

Figure 53. Low temperature detection device, digit 29 = A



Condensate Overflow Detection Model Number Digit 29 = B

A float switch is factory installed in the drain pan to detect a high condensate water level. This switch is wired in to the run/stop input on the Tracer AH540 controller. When the float switch rises, the normally closed input opens a corresponding set of binary input terminals. This also causes the fan to disable, and the control valve and fresh air damper options to close. Although the float switch will close when the high condensate level recedes, the controller must be manually reset before normal unit operation can occur. Use Rover service software or Tracer Summit to reset units with Tracer AH540.

Figure 54. Field-installed discharge air sensor for use with electric heat, digit 30 = A

Figure 55. Optional end devices (model number digit), clockwise L-R: discharge air sensor (digit 30 = A), duct static pressure transducer (digit 32 = B), condensate overflow switch (digit 29 = B), fan status switch (digit 29 = D)

Tracer AH540 Inputs & Outputs

Table 94. Binary input functions and locations

Tracer AH540			Tracer AH541		
Input Label	**Terminal Label**	**Factory Terminal Label**	**Field Terminal Label**	**Function**	**Power Function**
IN 7	TB37-1 IN TB37-2 GND	J37	IN7	Low-temp detection or coil defrost	24 Vdc ground
IN 8	TB38-1 OUT TB38-2 GND	J38	IN8	Run/stop	24 Vdc ground
IN 9	TB39-1 OUT TB39-2 GND	J39	IN9	Occupancy or generic[a]	24 Vdc ground
IN 10	TB40-1 OUT TB40-2 GND	J40	IN10	Supply fan status	24 Vdc ground
IN 11	TB41-1 OUT TB41-2 GND	J41	IN11	Filter status	24 Vdc ground
IN 12	TB42-1 OUT TB42-2 GND	J42	IN12	Exhaust fan status or coil defrost	24 Vdc ground

(a) When configured as a generic binary input, it has not direct effect on controller operation.

Table 95. Binary outputs functions and locations

Tracer AH540			Tracer AH541			
Output Label	**Terminal Label**	**Factory Terminal Label**	**Field Terminal Label**	**Function**	**Power Function**	**Maximum Output Rating**
BO1	TB21/1 OUT TB21/2 GND	J21	BO1	Supply fan start/stop	24 Vac ground	12 VA
BO2	TB22/1 OUT TB22/2 GND	J22	BO2	Exhaust fan start/stop	24 Vac ground	12 VA
BO3	TB23/1 OUT TB23/2 GND	J23	BO3	DX stage 1 or electric stage 4	24 Vac ground	12 VA
BO4	TB24/1 OUT TB24/2 GND	J24	BO4	DX stage 2 or electric stage 3	24 Vac ground	12 VA
BO5	TB25/1 OUT TB25/2 GND	J25	BO5	DX stage 3 or electric stage 2	24 Vac ground	12 VA
BO6	TB26/1 OUT TB26/2 GND	J26	BO4	DX stage 4 or electric stage 1	24 Vac ground	12 VA

Table 96. Analog input functions and locations

Tracer AH540			Tracer AH541			
Output Label	**Terminal Label**	**Factory Terminal Label**	**Field Terminal Label**	**Function**	**Sensor Type**	**Valid Ranges**
IN 1	TB31/1 IN TB31/2 GND	J31	IN1	Space temperature	10 kΩ thermistor	5 to 122°F
IN 2	TB32/1 IN TB32/2 GND	J32	IN2	Local setpoint	1 kΩ potentiometer	50 to 85°F
IN 3	TB33/1 IN TB33/2 GND	J33	IN3	Fan mode switch	switched resistance	off (4870W± 5%) auto (2320W± 5%)
IN 4	TB34/1 IN TB34/2 GND	J34	IN4	Discharge air temperature	10 kΩ thermistor	-40 to 212°F
IN 5	TB35/1 IN TB35/2 GND	J35	IN5	Outdoor air temperature	10 kΩ thermistor	-40 to 212°F
IN 6	TB36/1 IN TB36/2 GND	J36	IN4	Mixed air temperature	RTD	-40 to 212°F
IN 13	TB43			Space relative humidity	current: 4–20 mA	0 to 100%
				CO_2 sensor	current: 4-20 mA	0 to 2000 ppm
				Entering water temperature	10 kΩ thermistor	-40 to 212°F
				Evaporator refrigerant temperature	10 kΩ thermistor	-40 to 212°F
				Generic temperature	10 kΩ thermistor	-40 to 212°F
duct static		J43	duct static	Duct static pressure	duct static pressure sensor	0 to 1250 Pa 0 to 5.02 in. water

Table 97. Analog output functions and features

Tracer AH540			Tracer AH541			
Output Label	**Terminal Label**	**Factory Terminal Label**	**Field Terminal Label**	**Function**	**Output Range Default Value**	**Maximum Output Rating**
AO1	TB11/1 OUT TB11/2 GND	J11	AO1	Supply fan speed	0 to 10 Vdc ground	20 mA
AO2	TB12/1 OUT TB12/2 GND	J12	AO2	Cool valve output or 2-pipe changeover	2 to 10 Vdc	20 mA
AO3	TB13/1 OUT TB13/2 GND	J13	AO3	Heat output (water, steam, or electric heat sequencer)	2 to 10 Vdc ground	20 mA
AO4	TB14/1 OUT TB14/2 GND	J14	AO4	Face & bypass damper	2 to 10 Vdc ground	20 mA
AO5	TB15/1 OUT TB15/2 GND	J15	AO5	Outdoor air damper	2 to 10 Vdc ground	20 mA
AO6	TB16/1 TB16/2	J16	AO4	Not used	2 to 10 Vdc ground	20 mA

Tracer AH540 Zone Sensor Options

Zone sensors are available wall mounted for design flexibility and have an internal thermistor wired back to the Tracer AH540 controller. Zone sensor options have a zone sensor setpoint adjustment knob, communication jack, and service pin message request. Also, an option is available without a setpoint knob. See Figure 56 through Figure 59.

The zone sensor module is capable of transmitting the following information to the controller:

- Timed override on request
- Zone setpoint
- Current zone temperature
- Fan mode selection

Figure 56. Model number digit 37 = 1 zone sensor with off/auto fan speed switch, Fahrenheit setpoint knob, on/cancel, and communication jack

Figure 57. model number digit 37 = 2 zone sensor with Fahrenheit setpoint knob, on/cancel, and communication jack

Figure 58. Model number digit 37 = 4 zone sensor only

Figure 59. Model number digit 37 = 6 digital zone sensor option

Table 98. Tracer AH540 features and control modes

	Space Temp. Control	VAV
Fan Control	**On/Off**	**Variable**
Duct static pressure		X
Hydronic cooling	X	X
Hydronic heating	X	X
Steam heat	X	X
Face & bypass heating	X	X
Ventilation control	X	X
Economizer damper	X	X
Warmup functions	X	X
Mixed air temperature control	X	X
Exhaust fan (on/off)	X	X
DX cooling	X	X
Electric heat	X	
Dehumidification	X	
2-pipe changeover	X	

Electrical Data

Table 99. LPC Electric heat kW limits (min./max.)

	Unit Size									
Voltage	**3**	**6**	**8**	**10**	**12**	**14**	**17**	**21**	**25**	**30**
208/60/1	6/9	6/18	7/18	8/28	N/A	N/A	N/A	N/A	N/A	N/A
230/60/1	6/11	6/20	7/20	8/30	N/A	N/A	N/A	N/A	N/A	N/A
277/60/1	6/13	6/24	7/24	8/38	N/A	N/A	N/A	N/A	N/A	N/A
208/60/3	6/13	6/26	7/28	8/41	10/50	12/50	14/50	17/50	20/47	20/41
230/60/3	6/13	6/26	7/32	8/41	10/53	12/59	14/59	17/59	20/56	20/50
460/60/3	6/13	6/24	7/32	8/44	10/53	12/63	14/75	17/95	20/95	20/120
575/60/3	6/13	6/26	7/34	8/44	10/53	12/63	14/75	17/95	20/95	20/120
380/50/3	6/13	6/26	7/32	8/44	10/53	12/63	14/75	17/95	20/95	20/95
415/50/3	6/13	6/26	7/32	8/44	10/53	12/63	14/75	17/95	20/95	20/95
Minimum air flow (cfm)	1050	2100	2800	3500	4200	4900	5950	7350	8750	10,500

Notes:
1. Units drawing less than 100 amps are available with or without door interlocking disconnect. Units drawing more than 100 amps are not available with door interlocking disconnect.
2. Units drawing less than 48 amps are available with or without line fusing. Units drawing greater than 48 amps have line fusing as standard.
3. Units with electric heat must not be run below the minimum cfm listed above.
4. Heaters available in the following kW increments: 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 41, 44, 47, 50, 53, 56, 59, 63, 67, 71, 75, 79, 83, 87, 91, 95, 100, 110, 115, 120

Table 100.Electric heat voltage

Unit Voltage	Heater Voltage
208	208
230	240
277	277
460	480
575	600
380	380
415	415

Useful formulas:

kW = (Air Flow x Delta T) / K

Delta T = (kW x K) / Air Flow

K = 3145 (English)

K = 824.7 (SI)

1 Phase Amps = (kW x 1000) / Voltage

3 Phase Amps = (kW x 1000) / (Voltage x 1.73)

MCA = Minimum Circuit Ampacity

MCA = 1.25 x (heater amps + motor FLA)

MFS = Maximum Fuse Size or Maximum Overcurrent Protection Device

MFS = (2.25 x motor FLA) + heater amps

Table 101. Motor electrical characteristics & motor/VFD weight (lb)

	Utilization				Motor		VFD	
hp	Voltage	FLA	LRA	RPM	Weight	Frame Size	Line Input	Weight
0.5	208/60/1	3.7	17.4	1725	23	56		
	230/60/1	3.6	17.3					
	277/60/1	3.2	14.5	1725	23	56		
	208/60/3	2.1	15	1725	21	56		
	230/60/3	2.2	13	1725	23	56		
	460/60/3	1.1	6.5					
0.75	208/60/1	5	28.9	1725	33	56		
	230/60/1	4.9	29					
	277/60/1	4.2	29	1725	33	56		
	208/60/3	3.1	20.5	1725	24	56		
	230/60/3	3	20	1725	27	56		
	460/60/3	1.5	10					
1	208/60/1	5.3	32.9	1725	35	56		
	230/60/1	5	33					
	277/60/1	4.1	30	1725	35	56		
	208/60/3	3.1	20.3	1725	33	56	6.3	27
	230/60/3	2.8	20				6.3	27
	460/60/3	1.4	10				2.5	27
	575/60/3	1.1	8	1725	34	56	2.3	31
	400/50/3	2.1	16.8	1450	39	56	2.8	27
1.5	208/60/3	5	34.4	1740			6.3	27
	230/60/3	4.6	34				6.3	27
	460/60/3	2.3	17				2.5	27
	575/60/3	1.65	12.6	1740	39	56	2.3	31
	400/50/3	2.5	19.7	1450	40	56	2.8	27
2	208/60/3	5.9	42.3				7.3	27
	230/60/3	5.6	42	1725			7.3	27
	460/60/3	2.8	21				3.4	27
	575/60/3	2.2	16.8	1740	45	56	2.6	31
	400/50/3	3.6	31.6	1450	56	56	3.8	27
3	208/60/3	8.7	64.7				10.4	31
	230/60/3	8	64	1725			10.4	31
	460/60/3	4	32				4.8	27
	575/60/3	3.2	25.6	1725	56	56	3.8	31
	400/50/3	5.5	44.6	1450	74	182-4T	5.3	27
5	208/60/3	14	91.8				16.8	31
	230/60/3	13.2	91	1740			16.8	31
	460/60/3	6.6	45.5				8.3	31
	575/60/3	5.3	36.4	1740	74	182-4T	5.9	31
	400/50/3	9.5	68.1	1450	113	213-5T	9.1	31
7.5	208/60/3	22.2	139.4				23.8	76
	230/60/3	21.6	138.8	1760			23.8	76
	460/60/3	10.8	69.4				10.6	31
	575/60/3	8	49	1760	113	213-5T	9.2	31
	400/50/3	13.5	89.5	1450	129	213-5T	15.2	31
10	208/60/3	28	180				32.2	76
	230/60/3	28	180	1760			32.2	76
	460/60/3	14	90				14.2	31
	575/60/3	11	72	1760	131	213-5T	11.1	31
	400/50/3	18.5	148.7	1450	167	254T	24.0	76
15	208/60/3	40.6	301				48.3	84
	230/60/3	40.6	301	1760			48.3	84
	460/60/3	20.3	150.5				21.0	76
	575/60/3	16.2	120	1760	162	254T	16.6	76
	400/50/3	23	148	1465	235	254-6T	24.0	76
20	208/60/3	61	298	1760	198	254-6T	61.9	84
	230/60/3	50	300	1760	235	254-6T	61.9	84
	460/60/3	25	150				27.6	76
	575/60/3	20	135	1760	242	254-6T	21.4	76

Minimum Circuit Ampacity (MCA) and Maximum Fuse Size (MFS) Calculations for Units with Electric Heat

Heater Amps = (Heater kW x 1000)/Heater Voltage

MCA = 1.25 x (heater amps + all motor FLAs)

MFS or HACR Type Circuit Breaker = (2.25 x Largest Motor FLA) + Second Motor FLA) + Heater Amps (If Applicable)

HACR (Heating, Air-Conditioning and Refrigeration) type circuit breakers are required in the branch circuit wiring for all fan-coils with electric heat.

See Table 101, p. 133 for motor FLAs

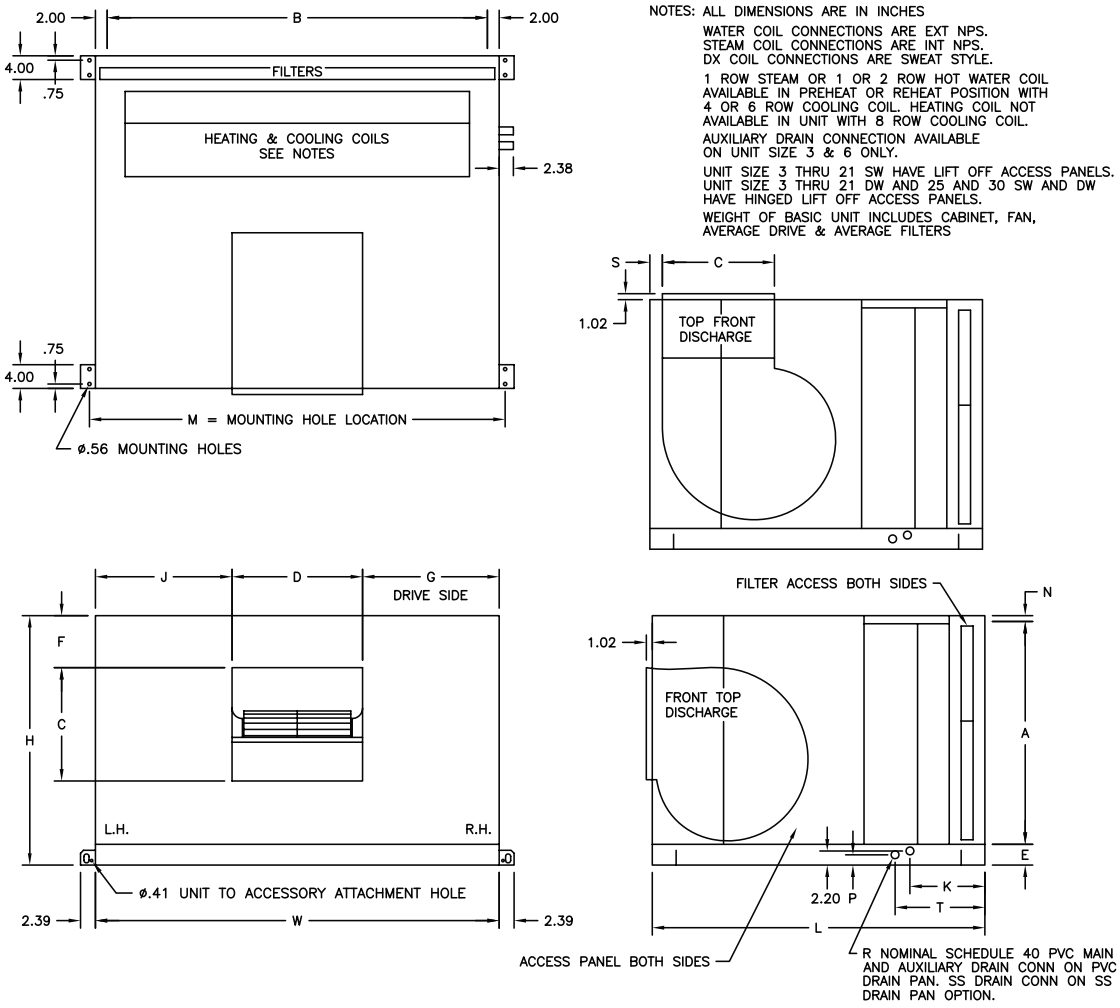
Select a standard fuse size or HACR type circuit breaker equal to the MCA.

Use the next larger standard size if the MCA does not equal a standard size.

Standard fuse sizes are: 15, 20, 25, 30, 35, 40, 45, 50, 60 amps

Dimensions and Weights

Horizontal Unit (in.)

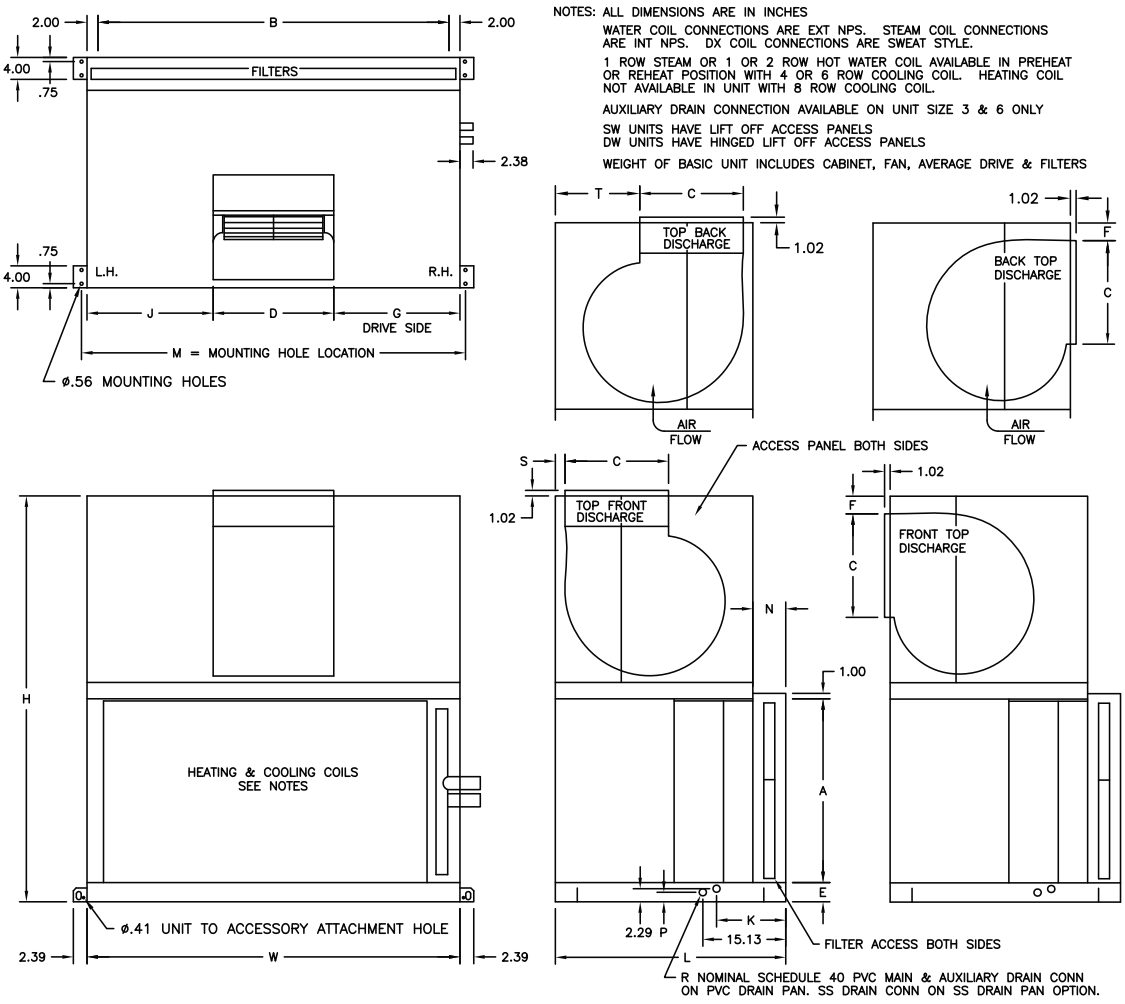


Horizontal packaged climate changer dimensions (in.) and weights (lb)

Unit												K								Weights	
Size	H	W	L	A	B	C	D	E	F	G	J	RH	LH	M	N	P	R	S	T	SW	DW
3	24.5	31.2	54.0	20.5	27.2	10.6	9.4	3.0	2.3	10.9	10.9	12.6	17.6	33.0	1.0	1.6	0.8	2.7	15.1	164	231
6	30.5	44.2	57.0	26.5	40.2	13.8	12.5	3.0	3.3	15.9	15.9	12.6	17.6	46.0	1.0	1.6	0.8	2.0	15.1	232	323
8	34.5	48.2	48.0	30.0	44.2	13.8	15.9	3.5	8.7	18.6	13.6	—	—	50.0	1.0	1.6	1.0	2.4	15.1	240	337
10	34.5	60.2	52.0	30.0	56.2	16.2	18.9	3.5	3.8	20.6	20.6	—	—	62.0	1.0	1.6	1.0	2.0	15.1	277	398
12	42.0	68.2	56.0	37.5	64.2	19.2	19.2	3.5	5.4	24.5	24.5	—	—	70.0	1.0	1.6	1.0	2.1	15.1	462	607
14	42.0	68.2	56.0	37.5	64.2	19.2	22.2	3.5	5.4	23.0	23.0	—	—	70.0	1.0	1.6	1.0	2.1	15.1	476	619
17	52.0	76.2	62.0	47.5	72.2	25.1	20.1	3.5	8.9	28.1	28.1	—	—	78.0	1.0	1.6	1.0	2.1	15.1	594	775
21	52.0	76.2	62.0	47.5	72.2	25.1	25.1	3.5	8.9	25.6	25.6	—	—	78.0	1.0	1.6	1.0	2.1	15.1	636	819
25	59.5	78.2	67.0	53.0	74.2	25.5	23.5	4.5	15.7	27.4	27.4	—	—	80.0	2.0	2.8	1.3	2.0	18.1	771	1000
30	59.5	91.2	72.0	53.0	87.2	28.5	26.5	4.5	11.3	32.4	32.4	—	—	93.0	2.0	2.8	1.3	2.0	18.1	967	1233

Notes:
1. Weight of basic unit includes: cabinet, fan, average drive and filter. Add 9 pounds to basic weight for control box, if applicable
2. For units with factory installed VFD, an additional 11.26 inches needs to be added to the width of the unit to accommodate VFD
3. SW = Single Wall
4. DW = Double Wall

Vertical Unit (in.)

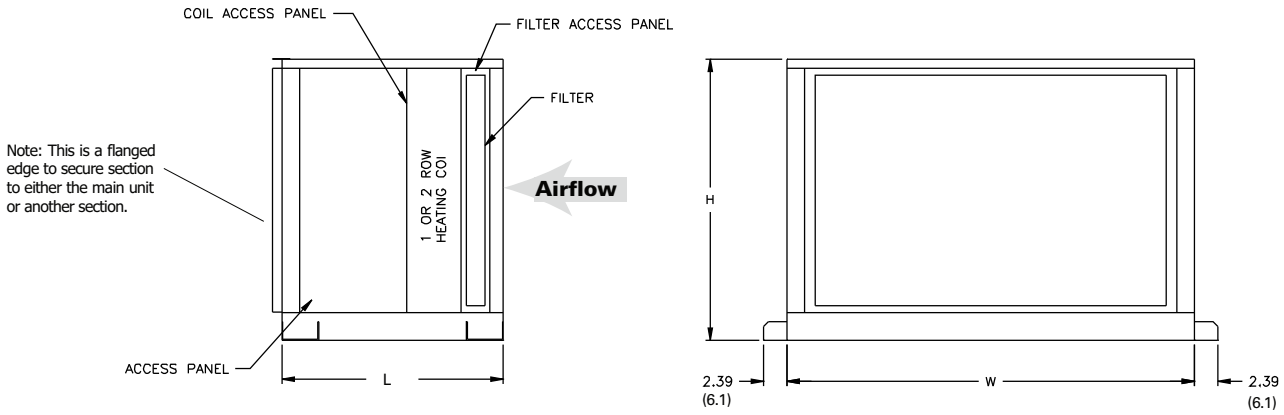


Vertical packaged climate changer dimensions (in.) and weights (lb)

Unit												K			N					Weights	
Size	H	W	L	A	B	C	D	E	F	G	J	RH	LH	M	SW	DW	P	R	S	T	SW	DW
3	47.0	31.2	40.0	20.5	27.2	10.6	9.4	3.0	2.3	10.9	10.9	17.6	12.6	33.0	6.0	6.0	1.6	0.8	2.7	21.0	189	287
6	59.0	44.2	46.0	26.5	40.2	13.8	12.5	3.0	2.3	15.9	15.9	17.6	12.6	46.0	6.0	6.0	1.6	0.8	2.0	24.4	275	419
8	66.5	48.2	34.0	30.0	44.2	13.8	15.9	3.5	8.7	18.6	13.6	—	—	50.0	6.0	6.0	1.7	1.0	2.4	12.1	286	428
10	66.5	60.2	38.0	30.0	56.2	16.2	18.9	3.5	3.8	20.6	20.6	—	—	62.0	6.0	6.0	1.7	1.0	2.0	14.0	316	493
12	82.0	68.2	42.0	37.5	64.2	19.2	19.2	3.5	5.4	24.5	24.5	—	—	70.0	6.0	6.0	1.7	1.0	2.1	15.0	526	751
14	82.0	68.2	42.0	37.5	64.2	19.2	22.2	3.5	5.4	23.0	23.0	—	—	70.0	6.0	6.0	1.7	1.0	2.1	13.0	539	769
17	102.5	76.2	45.0	47.5	72.2	25.1	20.1	3.5	8.9	28.1	28.1	—	—	78.0	6.0	5.0	1.7	1.0	2.1	13.0	709	998
21	102.5	76.2	45.0	47.5	72.2	25.1	25.1	3.5	8.9	25.6	25.6	—	—	78.0	6.0	5.0	1.7	1.0	2.1	13.0	750	1041

Notes:
1. Vertical units are only available in sizes 3–21.
2. For units with factory installed VFD, an additional 11.26 inches needs to be added to the width of the unit to accommodate VFD.
3. SW = Single Wall
4. DW = Double Wall

Access Section (in.)



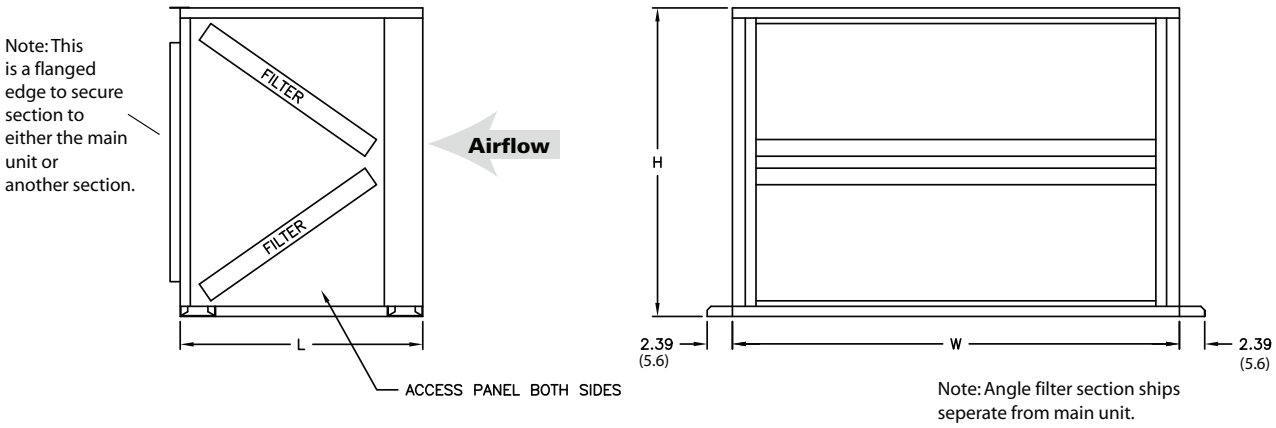
NOTE: ACCESS SECTION IS ONLY AVAILABLE WITH A 1 OR 2-ROW HEATING COIL AND SHIPS SEPARATE FROM MAIN UNIT.

Access section dimensions (in.) and weights (lb)

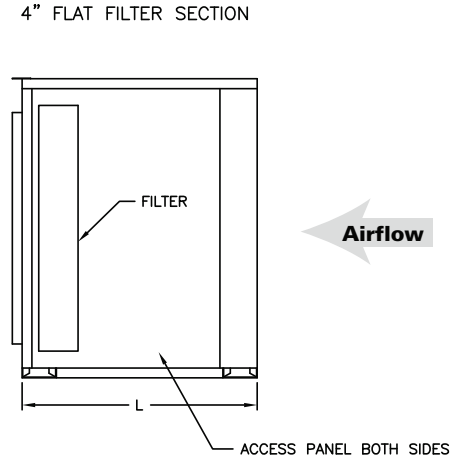
Unit Size	H	L	W	Weights SW	Weights DW
3	24.5	24.3	31.2	69	97
6	30.5	24.3	44.2	100	137
8	34.5	24.3	48.2	106	148
10	34.5	24.3	60.2	119	169
12	42.0	24.3	68.2	162	218
14	42.0	24.3	68.2	157	213
17	52.0	24.3	76.2	204	267
21	52.0	24.3	76.2	196	259
25	59.5	28.3	78.2	248	336
30	59.5	28.3	91.2	271	370

Notes:
1. SW = Single Wall
2. DW = Double Wall

Angle Filter Section (in.)



Flat Filter Section (in.)

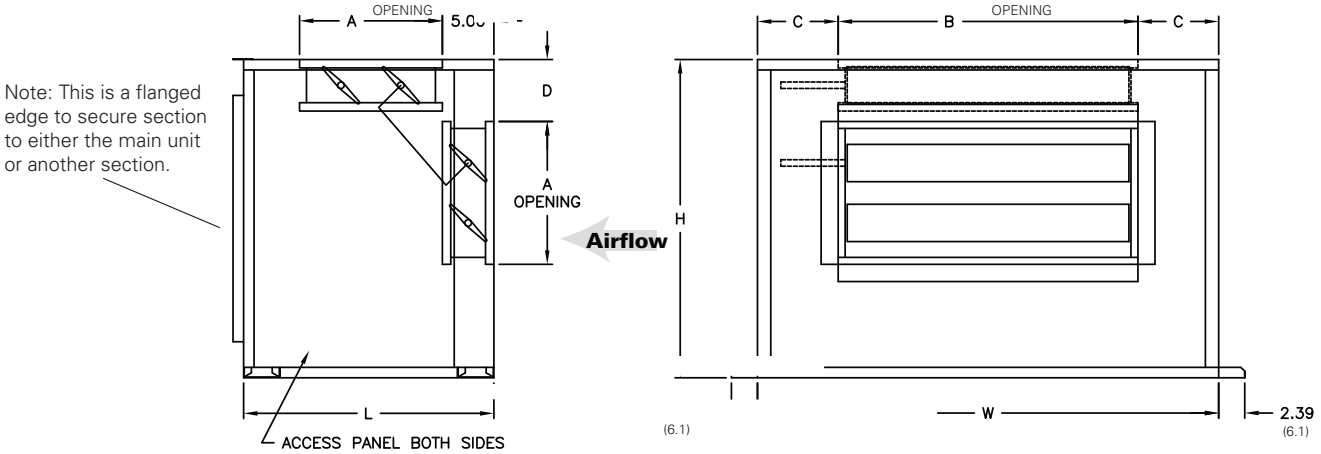


Angle and flat filter section dimensions (in.) and weights (lb)

Unit Size	H	L	W	Flat Filter Weights SW	Flat Filter Weights DW	Angle Filter Weights SW	Angle Filter Weights DW
3	24.5	21.5	31.2	46	60	50	64
6	30.5	24.0	44.2	64	86	68	90
8	34.5	27.3	48.2	78	107	82	111
10	34.5	25.5	60.2	83	115	89	121
12	42.0	27.3	68.2	112	151	126	165
14	42.0	27.3	68.2	112	151	126	165
17	52.0	29.3	76.2	164	209	179	224
21	52.0	29.3	76.2	164	209	179	224
25	59.5	35.0	78.2	184	250	200	266
30	59.5	35.0	91.2	201	275	217	291

Notes:
1. SW = Single Wall
2. DW = Double Wall

Damper Section (in.)



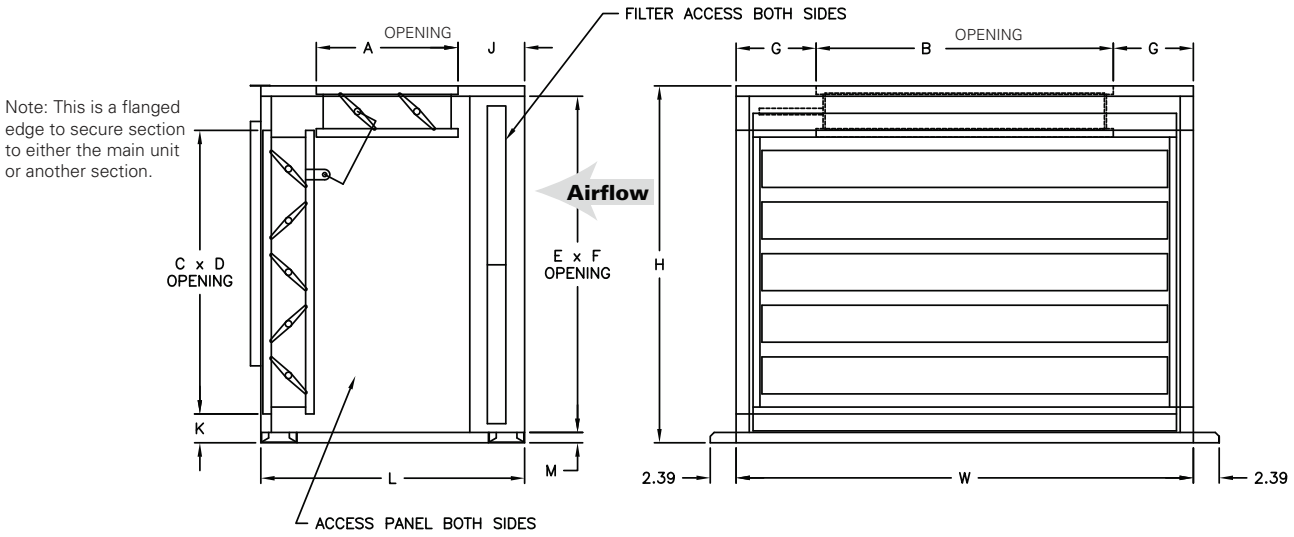
Notes:
All dimensions are in inches.
Damper section ships seperate from main unit.
Linkage between dampers factory installed inside mixing box on drive side.

Damper section dimensions (in.) and weights (lb)

Unit Size	H	L	W	A	B	C	D	Damper Qty. - Size	Weights SW	Weights DW
3	24.5	21.5	31.2	14.0	16.0	7.6	5.8	2 - 14.0 x 16.0	80	98
6	30.5	24.0	44.2	14.0	29.0	7.6	5.8	2 - 14.0 x 29.0	119	147
8	34.5	27.3	48.2	19.7	26.0	11.1	5.8	2 - 19.7 x 26.0	135	170
10	34.5	25.5	60.2	14.0	46.0	7.1	5.8	2 - 14.0 x 46.0	168	208
12	42.0	27.3	68.2	19.7	37.0	15.6	5.8	2 - 19.7 x 37.0	186	237
14	42.0	27.3	68.2	19.7	44.0	12.1	5.8	2 - 19.7 x 44.0	199	248
17	52.0	29.3	76.2	19.7	53.0	11.6	5.8	2 - 19.7 x 53.0	274	340
21	52.0	34.0	76.2	25.5	53.0	11.6	5.8	2 - 25.7 x 53.0	309	376
25	59.5	35.0	78.2	25.5	58.0	10.1	6.0	2 - 25.7 x 58.0	318	399
30	59.5	35.0	91.2	25.5	68.0	11.6	6.0	2 - 25.7 x 68.0	355	447

Notes:
1. SW = Single Wall
2. DW = Double Wall

Face and Bypass Section (in.)



Notes:
All dimensions are in inches.
Damper section ships seperate from main unit.
Linkage between dampers factory installed inside mixing box on drive side.

Face and bypass section dimensions (in.) and weights (lb)

Unit Size	H	L	W	A	B	C	D	E	F	G	J	K	M	Face Damper	Bypass Damper	Weights SW	Weights DW
3	24.5	23.5	31.2	14.0	16.0	14.0	26.0	22.5	28.7	7.6	5.6	5.3	1.0	14.0 x 27.0	14.0 x 16.0	94	111
6	30.5	26.0	44.2	14.0	29.0	19.7	39.0	28.5	41.7	7.6	7.4	4.6	1.0	19.7 x 40.0	14.0 x 29.0	140	165
8	34.5	28.3	48.2	19.7	26.0	25.5	43.0	32.5	45.6	11.1	4.6	3.8	1.0	25.5 x 44.0	19.7 x 26.0	159	188
10	34.5	26.5	60.2	14.0	46.0	25.5	55.0	32.5	57.6	7.1	7.6	3.8	1.0	25.5 x 56.0	14.0 x 49.0	198	231
12	42.0	28.3	68.2	19.7	37.0	31.2	63.0	40.0	65.7	15.6	4.6	4.6	1.0	31.2 x 64.0	19.7 x 37.0	220	260
14	42.0	28.3	68.2	19.7	44.0	31.3	63.0	40.0	65.7	12.1	4.6	4.6	1.0	31.2 x 64.0	19.7 x 44.0	235	274
17	52.0	32.3	76.2	19.7	53.0	42.7	71.0	50.0	73.6	11.6	7.6	3.9	1.0	42 x 72.0	19.7 x 53.0	323	371
21	52.0	35.0	76.2	25.5	53.0	42.7	71.0	50.0	73.6	11.6	4.6	3.9	1.0	42.72 x 72.0	25.5 x 53.0	365	417
25	59.5	37.0	78.2	25.5	58.0	48.5	74.0	53.0	74.0	10.1	5.2	6.4	4.5	48.47 x 74.0	25.5 x 58.0	375	437
30	59.5	37.0	91.2	25.5	68.0	48.5	87.0	53.0	87.0	11.6	5.2	6.4	4.5	48.47 x 87.0	25.5 x 68.0	419	489

Notes:
1. SW = Single Wall
2. DW = Double Wall

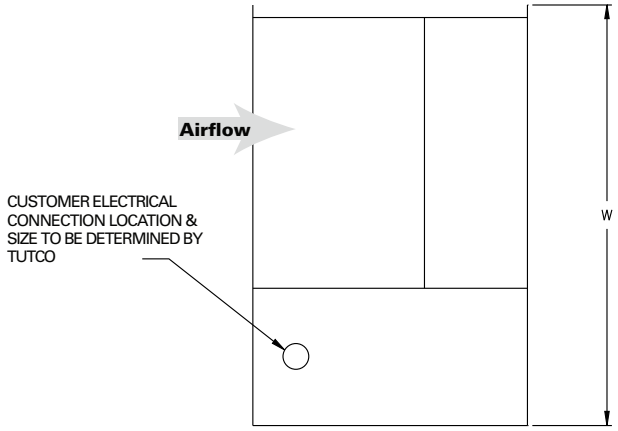
Electric Heat (in.)

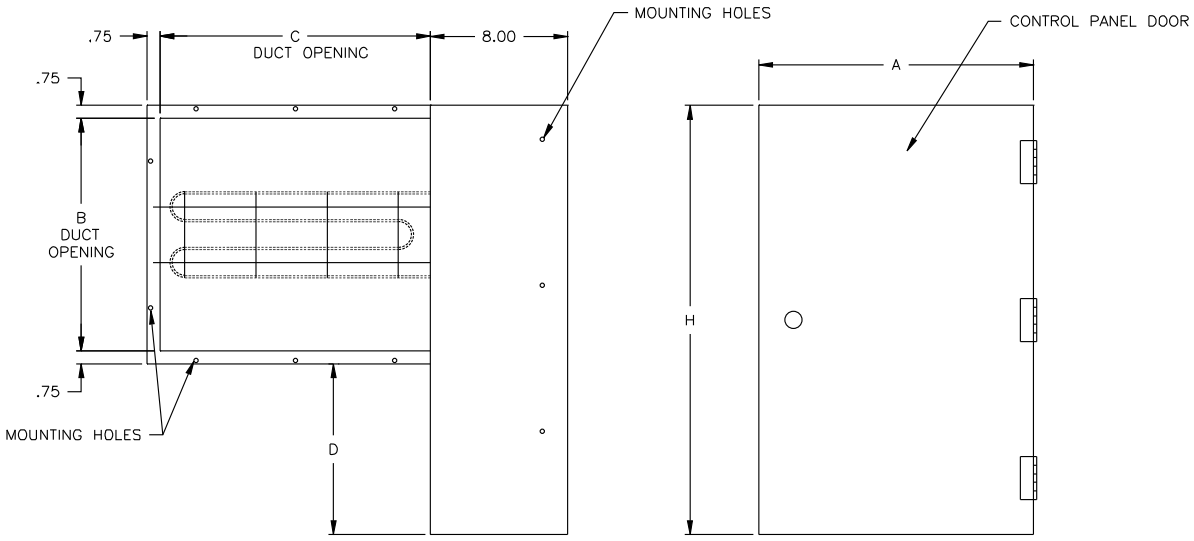
Electric heat section dimensions (in.) and weight (lb)

Unit Size	H	W	A	B	C	D	Weight
3	24.5	18.0	12.0	10.4	9.3	12.1	34
6	30.5	21.0	16.0	13.6	12.3	8.9	38
8	34.5	24.5	16.0	13.6	15.8	9.9	44
10	34.5	27.5	20.0	16.0	18.8	11.5	62
12	42.0	27.8	20.0	19.0	19.0	13.5	66
14	42.0	30.8	20.0	19.0	22.0	13.5	69
17	52.0	28.6	20.0	24.9	19.9	7.6	73
21	52.0	33.6	20.0	24.9	24.9	7.6	77
25	59.5	32.0	20.0	25.3	23.3	7.3	79
30	59.5	35.1	20.0	28.3	26.4	4.2	82

Notes:
1. SW = Single Wall
2. DW = Double Wall

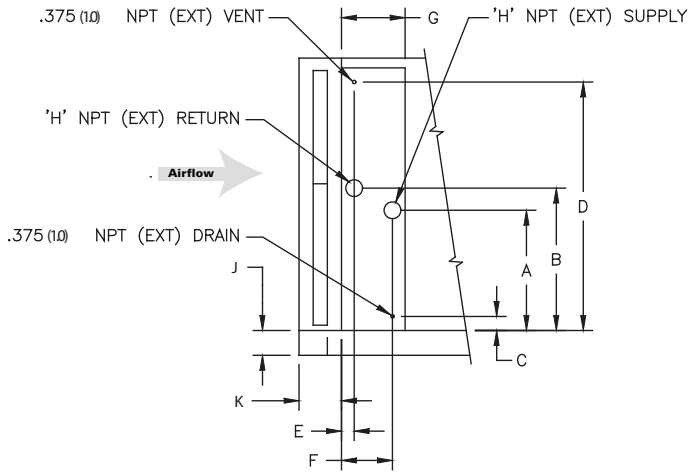
NOTES:
1. ELECTRIC HEATER IS FACTORY MOUNTED ON UNIT DISCHARGE FACE & WIRED TO UNIT CONTROL BOX.
2. LEFT-HAND HEATER SHOWN. RIGHT-HAND HEATER IS MIRROR IMAGE OF LEFT HAND. HEATER MAY BE MOUNTED WITH HORIZONTAL OR VERTICAL UP AIRFLOW.





Water Coil Connections (in.)

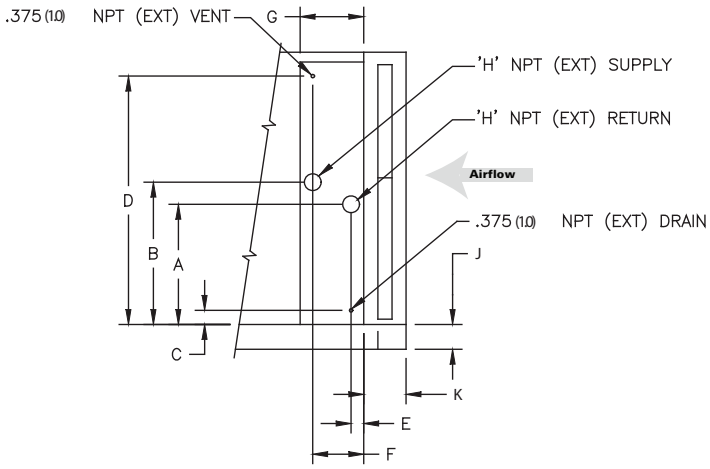
Left Hand



Note: J = 3.1″ on unit sizes 3 and 6
= 3.6″ on unit sizes 8–21
= 4.6″ on unit sizes 25 & 30

K = 6.1″ on unit sizes 3–21
= 8.1″ on unit sizes 25 & 30

Right Hand

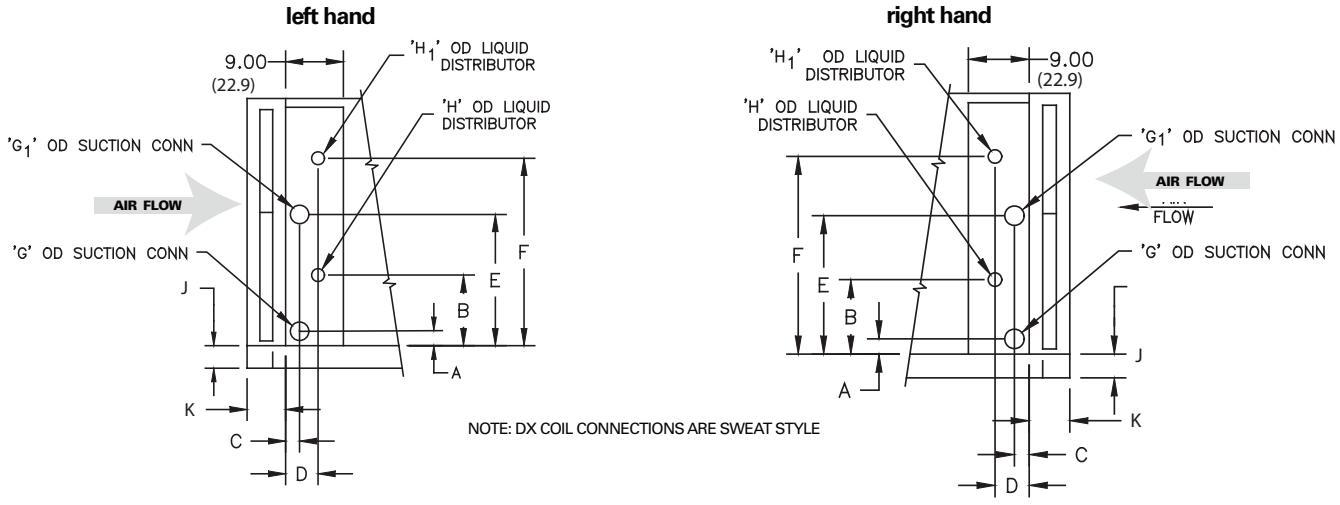


Water coil connections (in.)

	Left-Hand Connections Only				Right-Hand Connections Only							
Unit Size	**A**	**B**	**C**	**D**	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
One-Row Coil												
3	8-5/8	11-11/16	2	18-5/16	7-7/8-	11-1/8	1-3/8	17-5/8	1-11/16	3-11/16	5-3/8	1-1/2
6	11-1/8	14-3/16	2	23-5/16	10-3/8-	13-5/8	1-3/8	22-5/8	1-11/16	3-11/16	5-3/8	1-1/2
8, 10	13-5/8	16-11/16	2	28-5/16	12-7/8-	16-1/8	1-3/8	27-5/8	1-11/16	3-11/16	5-3/8	1-1/2
12, 14	17-5/16	20-3/8	2	35-13/16	16-11/16	19-13/16	1-3/8	35-1/8	1-1/2-	3-7/8	5-3/8	2
17, 21	22-5/16	25-3/8	2	45-13/16	21-11/16	24-13/16	1-3/8	45-1/8	1-1/2-	3-7/8	5-3/8	2
25, 30	25-3/8	28-5/8-	2-5/8	51-3/8-	24-13/16	27-7/8-	2	50-13/16	2	4-1/2	6-1/2	2
Two-Row Coil												
3	7-5/8	10-13/16	1-3/8	1-7-	8-7/8	12	2-5/8	18-5/16	1-13/16	3-5/8	5-3/8	1-1/2
6	10-13/16	13-7/8	2	22-5/8	10-13/16	13-7/8	2	22-5/8	1-13/16	3-5/8	5-3/8	1-1/2
8, 10	13-5/16	16-3/8	2	27-5/8	13-5/16	16-3/8	2	27-5/8	1-13/16	3-5/8	5-3/8	1-1/2
12, 14	17	20-1/8	2	35-1/8	17	20-1/8	2	35-1/8	1-1/2-	3-13/16	5-3/8	2
17, 21	22	25-1/8	2	45-1/8	22	25-1/8	2	45-1/8	1-1/2-	3-13/16	5-3/8	2
25, 30	25-1/8-	28-3/16	2	51-3/8	25-1/8	28-5/16	2	51-3/8	1-7/8-	4-5/8-	6-1/2	2-1/2
Four-Row Coil												
3	7-5/8	10-13/16	2-5/8	18-5/16	8-7/8	12	2-5/8	18-5/16	4	7-3/16	9	1-1/2
6	10-13/16	13-7/8	2	22-5/8	10-13/16	13-7/8	2	22-5/8	4	7-3/16	9	1-1/2
8, 10	13-5/16	16-3/8	2	27-5/8	13-5/16	16-3/8	2	27-5/8	4	7-3/16	9	1-1/2
12, 14	17	20-1/8	2	35-1/8	17	20-1/8	2	35-1/8	4	7-3/16	9	2
17, 21	22	25-1/8	2	45-1/8	22	25-1/8	2	45-1/8	4	7-3/16	9	2-1/2
25, 30	25-1/8	28-3/16	2	51-3/8	25-1/8	28-5/16	2	51-3/8	4	7-3/16	9	2-1/2
Six-Row Coil												
3	7-5/8	10-13/16	2-5/8	18-5/16	8-7/8	12	2-5/8	18-5/16	1-13/16	7-3/16	9	1-1/2
6	10-13/16	13-7/8	2	22-5/8	10-13/16	13-7/8	2	22-5/8	1-13/16	7-3/16	9	1-1/2
8, 10	13-5/16	16-3/8	2	27-5/8	13-5/16	16-3/8	2	27-5/8	1-13/16	7-3/16	9	1-1/2
12, 14	17	20-1/8	2	35-1/8	17	20-1/8	2	35-1/8	1-13/16	7-3/16	9	2
17, 21	22	25-1/8	2	45-1/8	22	25-1/8	2	45-1/8	1-13/16	7-3/16	9	2-1/2
25, 30	25-1/8	28-3/16	2	51-3/8	25-1/8	28-5/16	2	51-3/8	1-13/16	7-3/16	9	2-1/2
Eight-Row Coil												
3	7-5/8	10-13/16	2-5/8	18-5/16	8-7/8	12	2-5/8	18-5/16	1-13/16	9-3/8	11-3/16	1-1/2
6	10-13/16	13-7/8	2	22-5/8	10-13/16	13-7/8	2	22-5/8	1-13/16	9-3/8	11-3/16	1-1/2
8, 10	13-5/16	16-3/8	2	27-5/8	13-5/16	16-3/8	2	27-5/8	1-13/16	9-3/8	11-3/16	1-1/2
12, 14	17	20-1/8	2	35-1/8	17	20-1/8	2	35-1/8	1-13/16	9-3/8	11-3/16	2
17, 21	22	25-1/8	2	45-1/8	22	25-1/8	2	45-1/8	1-13/16	9-3/8	11-3/16	2-1/2
25, 30	25-1/8	28-5/16	2	51-3/8	25-1/8	28-5/16	2	51-3/8	1-13/16	9-3/8	11-3/16	2-1/2

DX Coil Connections (in.)

Single Circuit Coils for Unit Sizes 3–10 and Horizontal Face Split Coils for Unit Sizes 12–25



Single circuit DX coil connections, unit sizes 3–10 (in.)

Unit Size	A	B	C	D LH	D RH	G	H	J	K
Four-row coil, 3/16" distributor									
3	2-3/8	10-5/16	4	5-1/8	7-3/16	1-3/8	5/8	3-1/8	6-1/8
6	2-3/8	17-11/16	4	5-1/8	7-3/16	1-3/8	7/8	3-1/8	6-1/8
8	2-3/8	18-13/16	4	5-1/8	7-3/16	1-3/8	7/8	3-5/8	6-1/8
10	2-1/2	18-3/16	4	5-1/8	7-3/16	1-5/8	7/8	3-5/8	6-1/8
Six-row coil, 1/4" distributor									
3	2-3/8	11	1-13/16	2-7/8	5	1-3/8-	7/8	3-1/8	6-1/8
6	2-3/8	17-11/16	1-13/16	2-7/8	5	1-3/8-	7/8	3-1/8	6-1/8
8	2-3/8	19-5/16	1-13/16	2-7/8	5	1-3/8-	1-1/8	3-5/8	6-1/8
10	2-1/2	19	1-13/16	2-7/8	5	1-5/8-	1-3/8	3-5/8	6-1/8

Note: Single circuit DX coils on unit sizes 3–10 have one distributor.

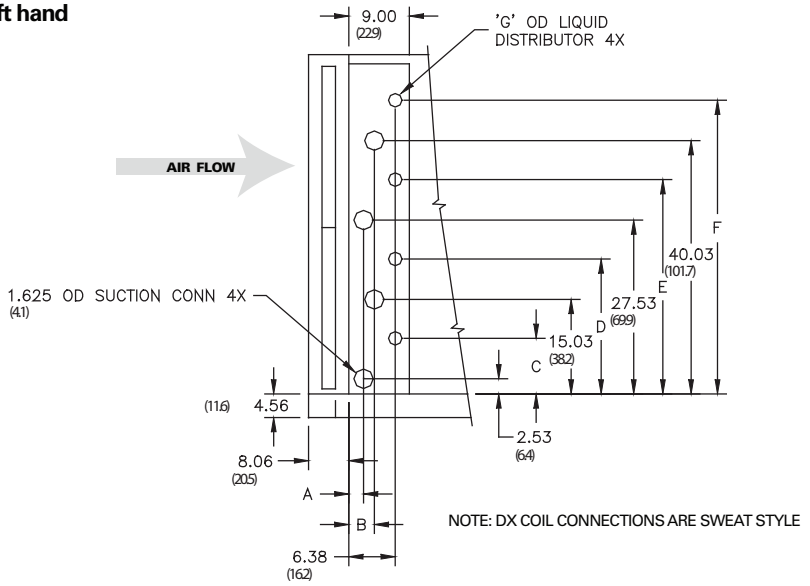
Horizontal face split circuit DX coil connections, unit sizes 8–25 (in.)

Unit Size	A	B	C	D LH	D RH	E	F	G	G_1	H	H_1	J	K
Four-row coil, 3/16" distributor													
8	2-3/8	8-1/8	4	5-1/8	7-3/16	17-3/8	22-13/16	1-3/8	1-3/8	5/8	5/8	3-5/8	6-1/8
10	2-3/8	8-1/8	4	5-1/8	7-3/16	14-7/8	22-3/8	1-3/8	1-3/8	7/8	7/8	3-5/8	6-1/8
12, 14	1-7/8	12-5/8	4	5-1/8	7-3/16	19-7/8	31-1/8	1-3/8	1-3/8	7/8	7/8	3-5/8	6-1/8
17, 21	1-7/8	17-5/8	4	5-1/8	7-3/16	25	41-3/8	1-5/8	1-5/8	7/8	7/8	3-5/8	6-1/8
25	1-7/8	18-5/16	4	5-5/16	7-3/16	27-1/2	43-5/16	1-5/8	1-5/8	7/8	7/8	4-5/8	8-1/8
Six-row coil, 1/4" distributor													
8	2-3/8	8-13/16	1-13/16	2-7/8	5	17-3/8	22-3/8	1-3/8	1-3/8	7/8	7/8	3-5/8	6-1/8
10	2-3/8	8-13/16	1-13/16	2-7/8	5	14-7/8	22-3/8	1-3/8	1-5/8	7/8	7/8	3-5/8	6-1/8
12, 14	2-3/8	13	1-13/16	2-7/8	5	19-7/8	31-3/8	1-3/8	1-3/8	1-1/8	7/8	3-5/8	6-1/8
17, 21	2-3/8	18-3/16	1-13/16	2-7/8	5	25	42	1-5/8	1-5/8	1-1/8	1-1/8	3-5/8	6-1/8

DX Coil Connections (in.)

Horizontal Face Split Circuit Coils for Unit Size 30

left hand



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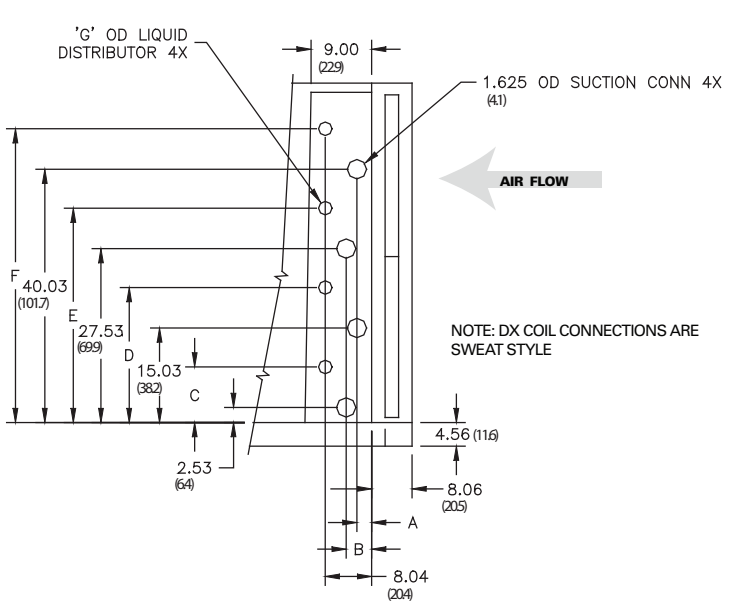


Horizontal face split circuit DX coil connections, unit size 30 (in.)

A	B	C	D	E	F	G
Four-row coil, 3/16" distributor						
3-1/8	4-13/16	11-1/8	23-5/8	36-1/8	48-5/8	7/8
Six-row coil, 1/4" distributor						
1	2-5/8	11-7/8	24-3/8	36-7/8	49-3/8	1-3/8

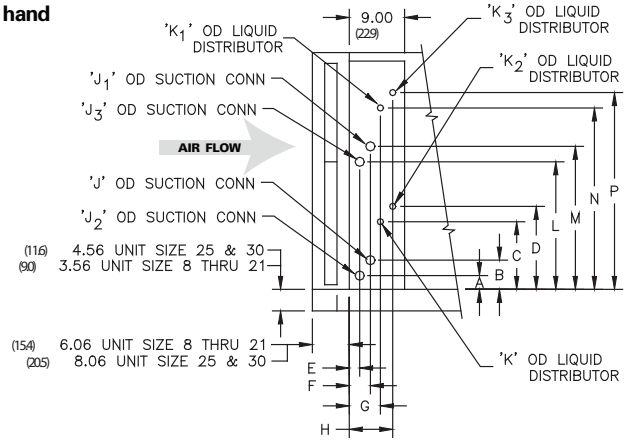
Note: Horizontal face split circuit DX coils on unit size 30 has four distributors.

DX Coil Connections (in.)

Intertwined Coils Unit Sizes 8–30

NOTE: DX COIL CONNECTIONS ARE SWEAT STYLE

left hand



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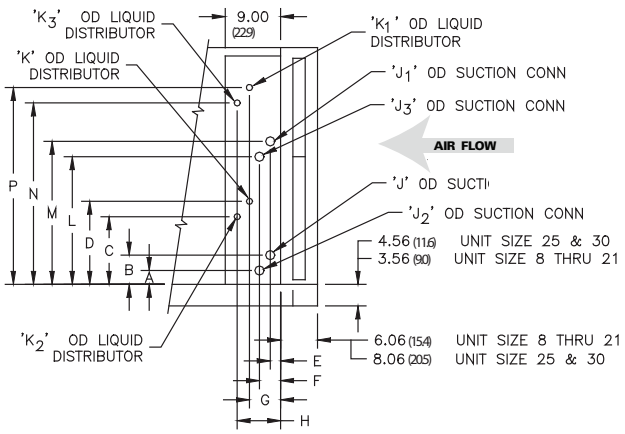


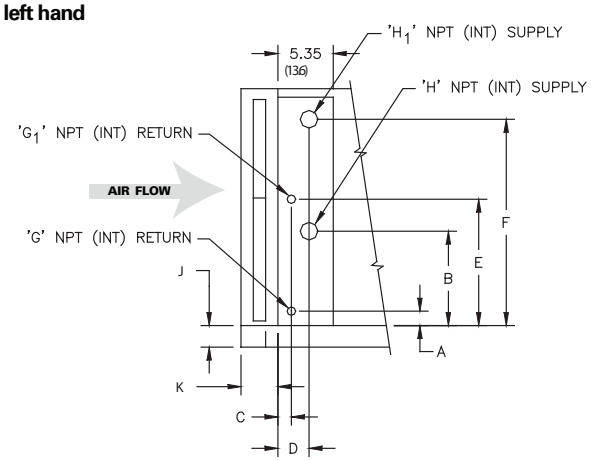
Intertwined circuit DX coil connections, unit sizes 8–30 (in.)

Unit Size	A	B	C	D	E	F	G	H	J	J_1	J_2	J_3	K	K_1	K_2	K_3	L	M	N	P
Four-row coil, 3/16" distributor																				
8	2-3/8	6-3/16	18-3/16	14-1/8	3-3/16	4-11/16	5-5/16	7-5/16	1-3/8	—	1-3/8	—	5/8	—	5/8	—	—	—	—	—
10	2-3/8	4-7/8	20-1/8	22-5/8	3-3/16	4-11/16	5-5/16	7-5/16	1-3/8	—	1-3/8	—	7/8	—	7/8	—	—	—	—	—
12, 14	2-3/8	4-7/8	22-13/16	19-11/16	3-3/16	4-11/16	5-5/16	7-5/16	1-3/8	—	1-3/8	—	7/8	—	7/8	—	—	—	—	—
17, 21	2-3/8	4-7/8	17-1/2	14-7/8	3-3/16	4-11/16	5-5/16	7-5/16	1-3/8	1-3/8	1-3/8	1-3/8	5/8	5/8	7/8	5/8	24-7/8	27-3/8	36-1/8	38-5/8
25	2-3/8	4-7/8	17-1/2	20	3-3/16	4-11/16	5-5/16	7-5/16	7/8	1-3/8	1-3/8	1-3/8	7/8	7/8	7/8	7/8	27-3/8	29-7/8	42-1/2	45
30	2-1/2	3-13/16	18-7/8	20-1/8	3-1/8	4-7/8	6-3/16	8-3/16	1-5/8	1-5/8	1-5/8	1-5/8	7/8	7/8	7/8	7/8	27-1/2	28-13/16	43-7/8	45-1/8
Six-row coil, 1/4" distributor																				
8	2-3/8	6-3/16	18-5/8	14-7/8	1	2-5/8	3-3/16	5-3/16	1-3/8	—	1-3/8	—	7/8	—	7/8	—	—	—	—	—
10	2-3/8	4-7/8	20-1/8	22-5/8	1	2-5/8	3-3/16	5-3/16	1-3/8	—	1-3/8	—	7/8	—	7/8	—	—	—	—	—
12, 14	2-3/8	4-7/8	23-3/16	19-13/16	1	2-5/8	3-3/16	5-3/16	1-3/8	—	1-3/8	—	7/8	—	1-1/8	—	—	—	—	—
17, 21	2-3/8	4-7/8	17-1/2	15-5/16	1	2-5/8	3-3/16	5-3/16	1-3/8	1-3/8	1-3/8	1-3/8	7/8	7/8	7/8	7/8	24-7/8	27-3/8	36-1/2	39
25	2-3/8	4-7/8	17-1/2	20	1	2-5/8	3-3/16	5-3/16	1-3/8	1-3/8	1-3/8	1-3/8	7/8	7/8	7/8	7/8	27-3/8	29-7/8	42-1/2	45
30	2-1/2	3-13/16	19-11/16	20-7/8	1	2-5/8	6-3/16	8-3/16	1-5/8	1-5/8	1-5/8	1-5/8	1-3/8	1-3/8	1-3/8	1-3/8	27-1/2	28-13/16	44-11/16	45-7/8

Note: DX intertwined coils, on unit sizes 8–14 have two distributors. Unit sizes 17–30 have four distributors.

Steam Coil Connections (in.)

left hand



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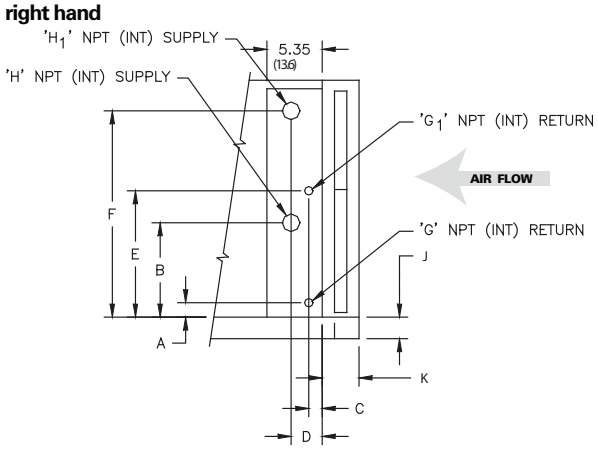

Steam coil connections (in.)

Unit Size	A	B		C	D	E	F		G	G_1	H	H_1	J	K
		LH	RH				LH	RH						
3	4-1/2	10-7/8	7-7/8	1-5/16	2-13/16	—	—	—	1	—	1-1/2	—	3-1/8	6-1/8
6	4	13-3/8	10-3/8	1-5/16	2-1/2	—	—	—	1	—	2	—	3-1/8	6-1/8
8, 10	3-3/16	15-7/8	12-7/8	1-5/16	2-1/2	—	—	—	1-5/16	—	2-1/2	—	3-5/8	6-1/8
12, 14	2-3/8	18-3/16	18-3/16	1-5/16	2-1/2	—	—	—	1-5/16	—	3	—	3-5/8	6-1/8
17, 21	2-3/16	14-7/8	11-7/8	1-5/16	2-1/2	28	37-3/8	34-3/8	1-5/16	1	2-1/2	2	3-5/8	6-1/8
25, 30	2-5/16	15	12	1-5/16	2-1/2	27-13/16	40-1/2	37-1/2	1-5/16	1-5/16	2-1/2	2-1/2	4-5/8	8-1/8

Note: Unit sizes 17–30 with steam coils are two stacked coils.

Mechanical Specifications

General

Packaged Climate Changer, air handlers are UL-listed in the United States and Canada and comply with ARI 410, ARI 430, and NFPA 90A.

Casing

The unit casing is heavy-gage galvanized steel. All unit access panels and the cooling coil casing are double-wall construction with foamed-in-place insulation. All other sections are available with 1-inch; 1-1/2 lb/cu. ft density fiberglass insulation using either matte-facing or foil-facing. Coil access panels are on both sides of the unit and allow easy access to clean the drain pan and remove internal coils. Fan access panels provide access to the fan, motor, and drive from both sides of the unit.

Mounting brackets are on all corners of the unit and optional sections to secure units to the floor or ceiling and connect optional sections.

All units have a drain pan and centrifugal fan with motor and drive mounted in a common cabinet. Motor and drive locations can be on the same side as the unit coil connections or on the opposite side.

Drain Pan

The drain pan is non-corrosive and double sloped to allow condensate drainage. The drain pan construction is a double-wall, foamed-in-place assembly of polymer material or optional stainless steel. Coils mount above the drain pan to allow easy drain pan inspection and cleaning.

The drain pan connection is 3/4" (unthreaded for polymer, threaded for stainless steel) and is positioned at the lowest point of the drain pan. In addition, unit sizes 3 and 6 are equipped with an auxiliary drain connection.

Hydronic Coils

Hydronic coils have 1/2" OD x 0.016" W round seamless copper tubes mechanically bonded to coil fins. Coil fins are aluminum, continuous Delta-Flo™ type H with full fin collars that provide maximum fin-tube contact and accurate spacing. Coils are available with 9, 12, and 14 fins per inch.

Heating coils are available in one or two-row configurations. Cooling coils are available in four, six, or eight-row configurations. Multi-row coils have continuous tube circuits arranged for counterflow (water flow counter to the direction of unit airflow). Coils have galvanized steel casings. A foam sealing strip between casing (top and bottom) channels and fins helps eliminate air bypass and reduce potential water carryover. Coils have round seamless copper pipe headers with NPT external thread steel pipe connections. Coils have one vent and one drain connection consisting of 3/8" NPT internal thread copper adapter with steel square head pipe plug. Supply and return connections are located outside the unit casing (on the same side of the unit) and are clearly labeled to facilitate field piping. Coils are proof tested at 450 psig and leak tested at 300 psig air-under-water. Maximum standard operating conditions are 300 psig at 200°F.

Direct Expansion (DX) Coils

DX coils use refrigerant R-22 or R-410A and have 1/2" OD x 0.016" W round seamless copper tubes expanded into full fin collars for permanent fin-tube bond. Coil fins are continuous Delta-Flo™ H aluminum with full fin collars for maximum fin-tube contact and accurate spacing. Coils are available with 9, 12, and 14 fins per inch, in four and six-row configurations. The coil casing is heavy-duty galvanized steel. A foam sealing strip between the casing (top and bottom) channels and fins helps eliminate air bypass and reduce potential water carryover. Coils have round, seamless, copper pipe liquid lines and suction headers with male sweat connections. Suction headers have bottom connections to aid drainage of any oil that may collect in the coil. Liquid line and suction connections are outside the unit casing (on the same side of the unit) to facilitate field piping. Connections are clearly labeled to ensure coils are piped correctly. Coils have venturi type distributor assemblies designed with a vertical downflow feed for low pressure drops.

Four-row coils have 3/16″ distributor(s) and OD x 0.016″ W round seamless copper tubes. Six-row coils have 1/4″ distributor(s) and OD x 0.025″ W round seamless copper tubes.

Each refrigeration circuit has one distributor. Coil circuiting options are:

- Single refrigeration circuit for unit sizes 3 through 10
- Horizontal face split circuiting (two distributors) for unit sizes 8 through 25
- Horizontal face split circuiting (four distributors) for unit size 30
- Intertwined circuiting (two distributors) for unit sizes 8 through 14
- Intertwined circuiting (four distributors) for unit sizes 17 through 30

Coils are proof tested at 450 psig and leak tested at 300 psig air-under-water. Coils are dehydrated and sealed with nitrogen or dry air. Maximum standard operating conditions at 127°F are 300 psig with R-22 and 480 psig with R-410A.

Steam Coils (Type NS)

A one-row steam distributing coil is available in the pre-heat or reheat position. Steam coils are non-freezing and are pitched to ensure adequate condensate drainage. Coils have 1″ OD x 0.031″ W round seamless copper condensing tubes expanded into full fin collars for permanent fin-tube bond. Coil headers are cast iron for permanent leaktight joints. Coils have continuous Sigma-Flo® aluminum fins with full fin collars for maximum fin-tube contact and accurate spacing at 6 fpi. The coil casing is heavy-duty galvanized steel. Coil headers are gray cast iron with NPT internal thread connections. Supply, return, and vacuum breaker connections are located at the same end of the unit and clearly labeled to ensure coils are piped correctly. Distributor tubes are 11/16″ OD copper. Also, they have die-formed, accurately spaced directional kinetic orifices that discharge steam in the direction of condensate flow (toward the return connection) to ensure even steam distribution across the coil face area and push out condensate. Distributor tubes are located concentrically within condensing tubes using corrosion resistant support clips. Supply header steam deflectors prevent impingement of steam into tubes in supply connection area. Coils are proof tested at 300 psig and leak tested at 200 psig air-under-water. Maximum standard operating conditions are 100 psig at 400°F.

Fan

Units have a single, galvanized, forward curved, centrifugal blower type fan. The fan shaft is supported by permanently lubricated bearings with a 200,000 hour, L50 design life. The fan is dynamically balanced.

Drives

Drives are available either fixed or variable pitch, with V-belt sheaves.

An optional factory mounted and wired variable frequency drive (VFD) is available for fan speed modulation in a VAV application.

Filters

The unit is available with two-inch, MERV 7, flat filters. All filters are standard sizes. An optional accessory filter section is available with either:

- Four-inch, MERV 7, pleated media filter in a flat-faced configuration
- Two-inch, MERV 7, angle filter
- Four-inch, MERV 11 pleated media filter in a flat-faced configuration

Motors

Motors are open drip proof with permanently sealed ball bearings. Single-phase motors are available for 208-230/60/1 or 277/60/1 electrical operation. Three-phase motors are available for 208-230/60/3, 460/60/3, 575/60/3, or 380-415/50/3 electrical operation. All single-phase motors and fractional horsepower three-phase motors have internal current and thermal overload protection, a minimum 1.15 service factor, and 56 frame resilient bases. Three-phase motors, one horsepower

and larger, have a 1.15 minimum service factor and require external current overload protection. Motors are in compliance with EPACT where applicable.

Mixing Section

The mixing section construction is heavy gage galvanized steel and has two low-leak, parallel blade dampers with edge and jamb seals. Dampers are tested and certified in accordance with AMCA511 for air performance and air leakage. Leakage rate does not exceed 3 cfm/ft^2 at one-inch wg. and 8 cfm/ft^2 at four-inch wg.Dampers are Ruskin CD60 type double-skin airfoil design or equivalent. Damper blades and frames are galvanized steel. The damper has a 1/2" drive for use with an optional factory-mounted actuator. The mixing section has two side access panels to allow access of internal components.

Face and Bypass Section

Low-leakage face and bypass dampers are provided as scheduled on drawings. Dampers are tested and certified in accordance with AMCA511 for air performance and air leakage. Leakage rate does not exceed 3 cfm/ft^2 at one-inch wg. and 8 cfm/ft^2 at four-inch wg. Dampers are Ruskin CD60 type double-skin airfoil design or equivalent. Damper blades and frames are galvanized steel. Damper blades are opposed-type blades, with metal compressible jamb seals and extruded vinyl blade edge seals. Blades rotate on stainless steel sleeve bearings. Face and bypass dampers are mechanically linked together and provide end driven control shafts.

Electric Heat

The electric heat is an open-wire resistance heater and factory-installed in the reheat position. The heater has primary and secondary protection circuits, with up to four electric heat stages. The heaters are controlled by magnetic contactors. All heaters are UL recognized and available with an optional airflow switch. Optional line fuses are for units drawing less than 48 amps. Line fuses are standard on units drawing more than 48 amps. Optional door interlocking disconnect switches are available on units drawing less than 100 amps.

Control Interface

An optional control interface is available that includes a fan motor disconnect switch, fused transformer(s), fan contactor, and customer terminal strip for field-provided controls.

Also, various end device options are available with the control interface. Binary end device options are:

- Low limit protection
- Condensate overflow switch
- Fan status switch
- Filter status switch

Analog end device options are:

- Discharge air sensor
- Mixed air sensor
- Damper actuator

Tracer AH540 Controller

The Tracer AH540 is factory-configured per unit configuration and order information. The controller is applied to air handling product configurations supporting analog modulating valves, economizer damper, and face and bypass damper. The controller supports a constant volume, variable air volume supply fan, and mixed air control.

There are 12 analog inputs, five analog outputs, six binary inputs, and six binary outputs. In addition the Tracer AH540 controller follows the LonMark® profiles of Space Comfort Space Comfort Controller (SCC) and Discharge Air Controller (DAC).

Analog inputs are:

1. Space temperature, 5 to 122°F

2. Local setpoint, 50 to 85°F
3. Fan mode switch, off/ auto
4. Discharge air temperature, -40 to 212°F
5. Outdoor air temperature, -40 to 212°F
6. Mixed air temperature, -40 to 212°F
7. Space relative humidity, 0-100%
8. CO_2detection, 0-2000 ppm
9. Entering water temperature, -40 to 212°F
10. Evaporator refrigerant temperature, -40 to 212°F
11. Generic temperature, -40 to 212°F
12. Duct static pressure (VAV), 0 to 1250 Pascals

Analog outputs are:

1. Supply fan speed, VAV units only
2. Cooling valve output or 2-pipe changeover, water
3. Heating valve output: water, steam, or electric heat
4. Face and bypass damper output
5. Outdoor air damper output

Binary inputs are:

1. Low temperature detection or coil defrost
2. Run/stop (smoke, condensate, etc)
3. Occupancy or generic
4. Supply fan status
5. Filter status
6. Exhaust fan status or coil defrost

Binary outputs are:

1. Supply fan start/stop
2. Exhaust fan start/stop
3. DX stage 1 or electric stage 4, 24 Vac
4. DX stage 2 or electric stage 3, 24 Vac
5. DX stage 3 or electric stage 2, 24 Vac
6. DX stage 4 or electric stage 1, 24 Vac

ARI Standard 410

ARI Standard 430

TRANE®

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Literature Order Number	CLCH-PRC007-EN
Date	September 2008
Supersedes	CLCH-PRC007-EN July 2008