



Product Catalog

# Packaged Rooftop Air Conditioners Precedent™ Cooling and Electric Heat

Ultra High Efficiency

12.5 to 25 Tons — 60 Hz





# Introduction

## Packaged Rooftop Air Conditioners

Trane's customers demand products that provide exceptional reliability, meet stringent performance requirements, and are competitively priced. Trane delivers with Precedent™.

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

The Precedent product is designed for comfort cooling, mixed air applications. If the product is being considered for other types of applications, such as process cooling, dedicated outdoor air, indoor agriculture, etc. Consult with your local Trane Sales Representative. Applying the units in an unintended application could result in inadequate performance and/or premature component failures.

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

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

With its sleek, compact cabinet, Precedent™ continues to provide the highest standards in quality and reliability, comfort, ease of service, and the performance of Trane light commercial products.

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## Revision History

- Added FIAS7ADV01A kit to Accessories table in Features and Benefits chapter.
- Streamline Features and Benefits chapter tables.
- Streamline Model Number Description chapter.
- Electrical data corrections to table 30 MCA and max fuse values, and table 32 RLA values for 17.5 and 20 ton 208/230 volt units.



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# Features and Benefits

## Features

*Note: Equipment feature availability is dependent on unit configuration. For more information, see Packaged Rooftop Air Conditioners Precedent™ Quick Reference Support Guide (PREC-PRC001\*-EN), the ordering system, or contact product support.*

**Table 1. Features – standard and optional**

	Standard Features	Options		
		Factory Installed	Factory or Field Installed	Field Installed
3-year Limited Parts Warranty	X			
5-year Limited Compressor Warranty	X			
2 inch Filter	X			
2 inch MERV 8 Filters		X		
2 inch MERV 13 Filters		X		
Access Doors	X			
Access Door (Control Box)	X			
Anti-Short Cycle Timer (Standard with Symbio™)	X			
Barometric Relief			X	
CO <sub>2</sub> Sensor				X
Clogged Filter Switch			X	
Coil guards	X			
CompleteCoat™ Condenser Coil		X		
Condensate Overflow Switch			X	
Convertible Airflow	X			
Colored and Numbered Wiring	X			
Crankcase Heaters	X			
Direct Drive Motors	X			
Direct Drive Plenum Fan	X			
Discharge Air Temperature Sensing Kit — MZVAV, SZVAV, Economizer, HGRH, Mod Gas	X			
Economizer: Low Leak — Downflow (12.5 to 25 Tons)			X	
Economizer: Low Leak — Horizontal (12.5 to 25 Tons)				X
Economizer: Standard — Downflow (12.5 to 25 Tons)			X	
Economizer: Standard — Horizontal (12.5 to 25 Tons)				X
Electric Heater			X	
Expansion Modules			X	
Fault Detection and Diagnostics (FDD)	X			
Filter Removal Tool	X			
Foil-Faced and Edge Protected Insulation	X			
Frostat™	X			
High Pressure Control	X			
High Static/Oversized Motor		X		
High Temperature Sensor				X
IAQ Dual Sloped Composite Drain Pan	X			
Liquid Line Refrigerant Drier	X			
Low Ambient Cooling to 0°F	X			
Low Pressure Control	X			
Microchannel Coils	X			
Modulating Gas Heat (10:1)		X		



## Features and Benefits

**Table 1. Features – standard and optional (continued)**

	Standard Features	Options		
		Factory Installed	Factory or Field Installed	Field Installed
Modulating Hot Gas Reheat (HGRH)		X		
Motorized Outdoor Air Damper			X	
Operating Charge of R-410A	X			
Phase Monitor	X			
Powered Exhaust				X
Powered or Unpowered Convenience Outlet		X		
Reference or Comparative Enthalpy			X	
Remote Potentiometer				X
Roof Curb				X
Single Point Power	X			
Single Side Service	X			
Smoke Detector - Return		X		
Smoke Detector - Supply		X		
Stainless Steel Drain Pan		X		
Standardized Components	X			
Symbio Controls	X			
Thermal Expansion Valve	X			
Through-the-Base Electrical Access		X		
Through-the-Base Electrical with Circuit Breaker		X		
Through-the-Base Electrical with Disconnect Switch		X		
Variable Air Flow (MZVAV)		X		
Variable Air Flow (SZVAV)	X			
Ventilation Override				X

## Control Options

**Note:** Control option availability is dependent on unit configuration. For more information, see *Packaged Rooftop Air Conditioners Precedent™ Quick Reference Support Guide (PREC-PRC001\*-EN)*, the ordering system, or contact product support.

**Table 2. Control options — standard and optional**

	Standard Features	Options		
		Factory Installed	Factory or Field Installed	Field Installed
Dual Thermistor Remote Zone Sensor				X
Symbio Service and Installation App	X			
Symbio 700 Advanced Module			X	
Humidity Sensor/Humidistat				X
Thermostat				X
Wireless Zone Sensor				X
Zone Sensor				X
LonTalk® Communication Interface (LCI)			X	
Trane® Air-Fi® Wireless Communication Interface (WCI)			X	

**Note:** For more information, reference the Controls chapter.

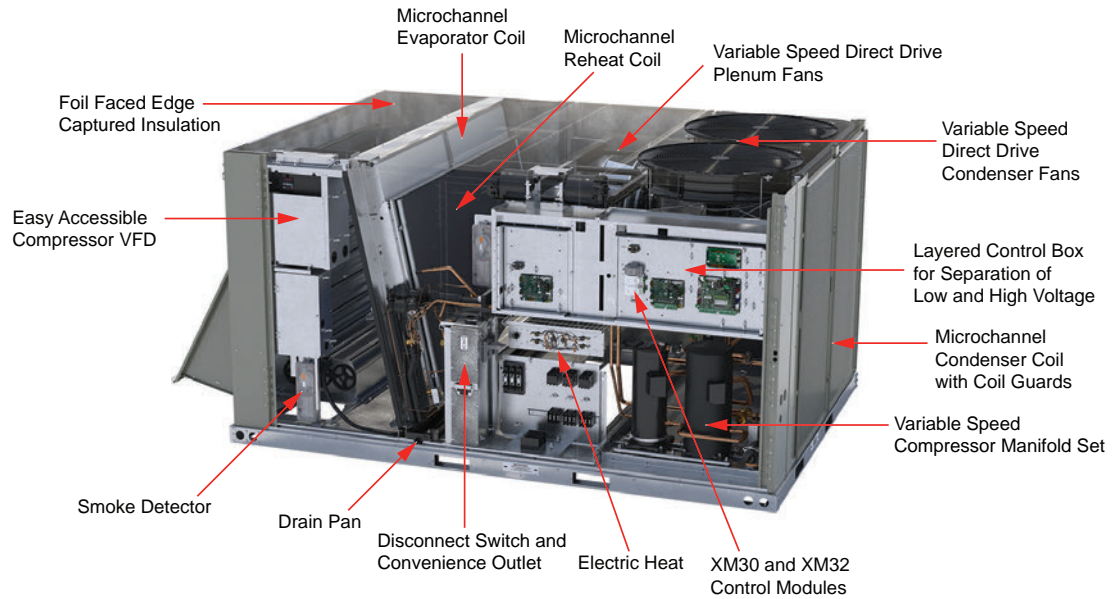
## Accessories

**Note:** Accessory availability is dependent on unit configuration. Some accessories may require additional accessories/options for full functionality. For more information, see *Packaged Rooftop Air Conditioners Precedent™ Quick Reference Support Guide (PREC-PRC001\*-EN)*, the ordering system, or contact product support.

FIA KIT	DESCRIPTION
FIAEHTD318*	18kW, 208-230V Electric Heater
FIAEHTD336*	36kW, 208-230V Electric Heater
FIAEHTD354*	54kW, 208-230V Electric Heater
FIAEHTD372*	72kW, 208-230V Electric Heater
FIAEHTD418*	18kW, 460V Electric Heater
FIAEHTD436*	36kW, 460V Electric Heater
FIAEHTD454*	54kW, 460V Electric Heater
FIAEHTD472*	72kW, 460V Electric Heater
FIAEHTDW18*	18kW, 575V Electric Heater
FIAEHTDW36*	36kW, 575V Electric Heater
FIAEHTDW54*	54kW, 575V Electric Heater
FIAEHTDW72*	72kW, 575V Electric Heater
FIABARM003*	Barometric Relief
FIAC02K001*	CO <sub>2</sub> (DCV) Wall Mounted Sensor
FIAC02K002*	CO <sub>2</sub> (DCV) Duct Mounted Sensor
FIACURB404*	14-inch Full Perimeter Knockdown Curb
FIACLFS003*	Clogged Filter Switch
FIACLFS004*	Clogged Filter Switch (MERV13)
FIADFDB001*	Differential Dry Bulb Economizer Control
FIAECON003*	Dry Bulb Downflow Economizer
FIAECON303*	Dry Bulb Horizontal Economizer
FIAECON103*	Dry Bulb Downflow Low Leak
FIAECON203*	Dry Bulb Horizontal Low Leak
FIAENTH001*	Reference Enthalpy Economizer Control
FIAENTH002*	Comparative Enthalpy Economizer Control
FIAHTST001*	High Temperature (Fire) Duct Mounted Stat
FIAHZDC001*	Horizontal Conversion Panel
FIALTCI001*	LonTalk Communication Interface
FIAOPTN002*	Fresh Air Options Module
FIAOVFL001*	Condensate Overflow Switch
FIAPWRX303*	Power Exhaust 230V
FIAPWRX403*	Power Exhaust 460V
FIAPWRXW03*	Power Exhaust 575V
FIAS7ADV01*	Symbio 700 Advanced Controls and BACnet BAS Upgrade Kit
FIASCCM001*	Symbio Customer Connection Module
FIAXMOD030*	Symbio 700 XM30 Expansion Module
FIAXMOD032*	Symbio 700 XM32 Expansion Module



## Key Benefits



### Airflow Distribution

Airflow is outstanding. Precedent™ can replace an older machine with old ductwork and, in many cases, improve the comfort through better air distribution.

### Cabinet Integrity

For added water integrity, Precedent™ has a raised 1 inch lip around the supply and return of the downflow units to prevent water from blowing into the ductwork.

### Coil Guards

Coil guards protect condenser coil during shipping as well as hail, vandals, wind, etc. Toolless design lends itself to ease of maintenance in cleaning coils.



### CO<sub>2</sub> Sensor — Demand Control Ventilation (DCV)

Demand-controlled ventilation (DCV) is a control strategy that responds to the actual demand (need) for ventilation by regulating the rate at which the HVAC system brings outdoor air into the building. A CO<sub>2</sub> sensor measures the concentration (parts per million, ppm) of CO<sub>2</sub> (carbon dioxide) in the air. As the CO<sub>2</sub> concentration changes, the outside air damper modulates to meet the current ventilation needs of the zone. The CO<sub>2</sub> sensor kit is available as a field installed accessory and wires directly to the Symbio 700 controller.

### CompleteCoat™ Condenser Coil

This optional coated coil provides excellent corrosion resistance as well as uniformity of coverage and coating thickness.



## Controls — Symbio™

### Enhanced BAS Integration and Connectivity

- Open standard communications
  - BACnet® over Zigbee (Air-Fi Wireless)
  - BACnet MS/TP
  - BACnet IP
  - Modbus™ RTU
  - Modbus TCP/IP
  - LonTalk®
- Securely access, troubleshoot, and monitor equipment from anywhere via Trane Connect™

### Serviceability

- Wireless mobile app interface (iPhone and Android) to simplify startup/service
- On-board user interface
- Data Trending
- Real-time, clear language diagnostics
- Historical alarm logs
- Backup and Restore functionality to reduce commissioning and service time

### Flexibility

- Future-ready upgradable software, supporting changing codes and new sequences of operation
- Standard, consistent pre-engineered applications that meet industry standards
- Built-in Schedules (requires Tracer® TU)
- Expandable inputs and outputs (requires Tracer TU)
- Ability to add custom programmed sequences (requires Tracer TU)

### Accessibility

Control box consists of a multilevel design with Symbio Controls located on hinged panels which provide protection from high voltage components for ease of servicing.

## Convenience Outlet

This option is GFCI, 120V/15A, 2 plug, convenience outlet powered or GFCI, 120V/20A, 2 plug convenience outlet unpowered. This option can be ordered when through the base electrical with either the disconnect switch or circuit breaker option is ordered.



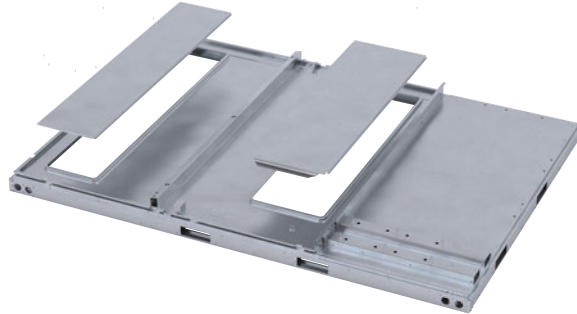


## Features and Benefits

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### Convertible Units

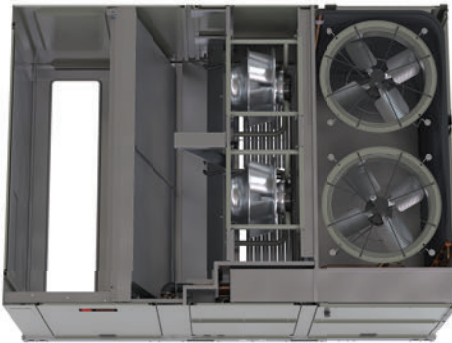
Units ship in a downflow configuration and can be easily converted to horizontal by simply removing the two existing panels and installing the optional field accessory Horizontal Conversion Panel kit.



### Direct Drive Plenum Fans

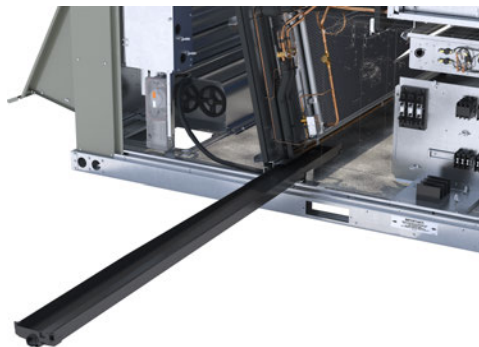
All 12.5 to 25 tons units are equipped with a direct drive plenum fan design with the following features.

- Backward-curved fan wheel
- External rotor direct drive variable speed indoor motor
- Variable speed adjustment available in Symbio controller
- Designed to slide out for ease of maintenance



### Drain Pan

Every Precedent unit has an easy-to-clean, composite removable dual-sloped drain pan (IAQ).



### eFlex™ Variable Speed Scroll Compressor

Variable speed scroll compressors are matched with a specially designed variable frequency drive that modulates capacity. This allows for precise control of leaving air temperatures to meet space loads.

The eFlex™ compressors also include brushless permanent magnet motors designed to operate at higher efficiency resulting in significant part load energy savings. This makes units with eFlex™ compressors the most efficient products in their class at part load.

## **Fault Detection and Diagnostics (FDD)**

This offering meets the mandatory requirement of CA Title 24 of fully configurable diagnostics allowing fault history and reading fault codes at the unit via Symbio™ 700 board or app. This feature provides detection of the following faults: Air temperature sensor failure/fault and notification of acceptable economizer mode. The FDD system shall be certified by the Energy Commission as meeting the requirements.

## **Flexibility**

Precedent™ offers ultimate flexibility. Units are built to order in our standard ship cycle time.

## **High Efficiency Filtration**

Precedent™ units offer a variety of high efficiency filtration options. MERV 8 and MERV 13 filters provide additional filtration beyond the capabilities of typical 2 inches throwaway filters.

## **High Static Motor**

Available on 25 ton models, this high static motor option extends beyond the capability of the standard motor.

## **Hinged Access Doors**

These doors permit easy access to the filter, compressor and control sections. They reduce the potential roof damage from screws or sharp access panel corners.



## **Humidity Control (HGRH)**

All 12.5 to 25 tons Precedent units can be ordered with a factory installed modulating humidity control system designed to provide year around comfort by improving indoor air quality while controlling humidity levels.

## **Humidity Sensor/Humidistat**

The humidity sensor/humidistat, when used in conjunction with our dehumidification (hot gas reheat) units will provide outstanding humidity control and comfort. Humidity sensors can be wall or duct mounted. The humidity deadband can be set between 40% and 60% relative humidity.

## **Low Ambient Cooling**

All Precedent™ ultra high efficiency units have cooling capabilities down to 0°F.

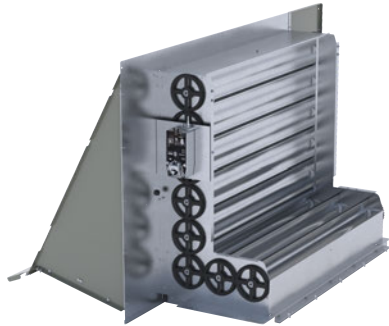
## **Low Leak Economizer**

This accessory meets low leak requirements for ASHRAE 90.1, IECC, and CA Title 24 standards (4 cfm/ft<sup>2</sup>@1" wg exterior air/return air). This option allows 100% outdoor air supply from 0 to 100% modulating dampers and is standard with barometric relief. It can be paired with powered exhaust for additional building pressure relief. This option can be paired with or without fault detection and diagnostics (FDD) to meet current mandatory CA Title 24 requirements.



## Features and Benefits

The economizers come with four control options, dry bulb, reference enthalpy, comparative enthalpy, or differential dry bulb.

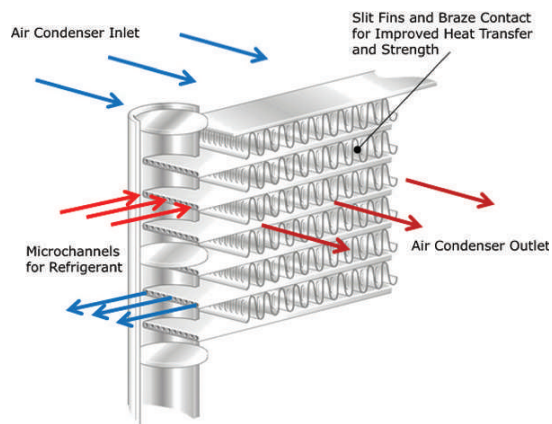


**Note:** Downflow low leak economizer is available as a factory installed option. Horizontal low leak economizer option is only available as a field installed option.

## Microchannel Coils

Microchannel coils are all-aluminum coils with fully-brazed construction. This design reduces risk of leaks and provides increased coil rigidity — making them more rugged on the jobsite. Their flat streamlined tubes with small ports and metallurgical tube-to-fin bond allow for exceptional heat transfer. Microchannel all-aluminum construction provides several additional benefits:

- Light weight (simplifies coil handling)
- Easy to recycle
- Minimize galvanic corrosion



## Multiple-Zone VAV Control

A multiple-zone VAV (MZVAV) system consists of a packaged rooftop unit that serves several individually controlled zones. Each zone is equipped with a VAV terminal unit that varies the quantity of air delivered to maintain the desired temperature in that zone. The rooftop unit controller varies the speed of the indoor fan to maintain the static pressure in the supply ductwork at a setpoint, ensuring that all zones receive the necessary quantity of air. In addition, cooling capacity is cycled to maintain the supply air temperature at the desired setpoint.

## Other Benefits

- Cabinet design ensures water integrity
- Ease of Service, Installation and Maintenance
- Mixed model build enables “fastest in the industry” ship cycle times
- Outstanding Airflow Distribution

- Symbio Controls

## Rigorous Testing

All Precedent™ designs were rigorously tested at the factory to ensure premier quality.

Rain testing is completed to ensure water integrity.

Transportation vibration and forklifting tests are performed to ensure that the unit arrives at the job site in top condition.

Rigging lift and drop tests are completed to assure that the lifting lugs and rails hold up under stress.

During production we perform 100% coil leak test at the factory. The assembled unit is leak tested to 465 psig. All parts are inspected at the point of final assembly. Sub standard parts are identified and rejected immediately. Every unit receives a 100% unit run test before leaving the production line to make sure it meets rigorous requirements.

## Single Zone VAV (SZVAV)

SZVAV is fully integrated into the control system. It provides the simplest and fastest commissioning in the industry through proven factory-installed, wired, and tested system controllers. All control modules, logic boards and sensors are factory installed and tested to ensure the highest quality and most reliable system available. This means no special programming of algorithms, or hunting at the jobsite for field installed sensors, boards, etc. SZVAV is a quick and simple solution for many applications and is available from your most trusted rooftop VAV system solution provider -Trane.

Building system modeling in energy simulation software such as TRACE is recommended to evaluate performance improvements for your application.

## Supply/Return Air Smoke Detector

With this option installed, if smoke is detected, all unit operation will be shut down. Reset will be manual at the unit. In order for the supply air smoke detector or return air smoke detector to properly sense smoke in the supply air stream or the return air stream, the air velocity entering the smoke detector unit must be between 500 to 4000 feet per minute. Equipment covered in this manual will develop an airflow velocity that falls within these limits over the entire airflow range specified in the evaporator fan performance table.



## Through-the-Base Electrical Access

An electrical service entrance shall be provided allowing electrical access for both control and main power connections inside the curb and through-the-base of the unit. Option will allow for field installation of liquid-tight conduit and an external field installed disconnect switch.

## Ventilation Override

Ventilation override allows the unit to be set to transition to up to three different pre-programmed sequences for smoke purge, pressurization, and exhaust. The transition occurs when a binary input on the Customer Connection Module is closed (shorted). This would typically be a hard wired relay output from a smoke detector or fire control panel. The Customer Connection module that allows ventilation override is available as a field installed accessory (FIASCCM001). For more information on functionality, refer to *Symbio™ 700 Controller with Precedent™ Packaged Rooftop Air-Conditioners Application Guide* (ACC-APG002\*-EN).



# Model Number Description

## Digit 1 — Unit Function

T = DX Cooling

## Digit 2 — Cooling Efficiency

Z = Ultra High Efficiency

## Digit 3 — Refrigerant

J = R-410A

## Digit 4,5,6 — Nominal Gross Cooling Capacity (MBh)

150 = 12.5 Ton

180 = 15 Ton

210 = 17.5 Ton

240 = 20 Ton

300 = 25 Ton

## Digit 7 — Design Sequence

## Digit 8 — Voltage Selection

3 = 208–230/60/3

4 = 460/60/3

W = 575/60/3

## Digit 9 — Unit Controls

S = Symbio™ 700

## Digit 10 — Heat Type

0 = Base Model (None or Electric)

## Digit 11 — Heating Capacity

0 = No Heat

G = 18 kW Electric Heat

N = 36 kW Electric Heat

P = 54 kW Electric Heat

R = 72 kW Electric Heat

## Digit 12, 13 — Service Sequence

\*\* = Factory Assigned

## Digit 14 — Fresh Air Selection

0 = No Fresh Air

C = Economizer, Dry Bulb 0–100% without Barometric Relief

D = Economizer, Dry Bulb 0–100% with Barometric Relief

E = Economizer, Reference Enthalpy 0–100% without Barometric Relief

F = Economizer, Reference Enthalpy 0–100% with Barometric Relief

G = Economizer, Comparative Enthalpy 0–100% without Barometric Relief

H = Economizer, Comparative Enthalpy 0–100% with Barometric Relief

K = Downflow Low Leak Economizer, Dry Bulb with Barometric Relief

M = Downflow Low Leak Economizer, Reference Enthalpy with Barometric Relief

P = Downflow Low Leak Economizer, Comparative Enthalpy with Barometric Relief

R = Downflow Low Leak Economizer, Differential Dry Bulb with Barometric Relief

## Digit 15 — Supply Fan/Motor

2 = Single Zone Variable Air Volume with Standard Motor

3 = Single Zone Variable Air Volume with Oversized/High Static Motor

4 = Multiple Zone Variable Air Volume with Standard Motor

5 = Multiple Zone Variable Air Volume with Oversized/High Static Motor

## Digit 16 — Hinged Access/Filters

A = Hinged Access Panels/Standard Filters

C = Hinged Access Panels/2 inch MERV 8 Filters

E = Hinged Access Panels/2 inch MERV 13 Filters

## Digit 17 — Coil Protection

0 = Standard Coil

1 = Condenser with CompleteCoat™

## Digit 18 — Through-the-Base Provisions

0 = No Through-the-Base Provisions

A = Through-the-Base Electric

## Digit 19 — Disconnect/Circuit Breaker

0 = No Disconnect/No Circuit Breaker

1 = Unit Mounted/Non-Fused Disconnect

2 = Unit Mounted Circuit Breaker

## Digit 20— Convenience Outlet

0 = No Convenience Outlet

A = Unpowered 20A Convenience Outlet

B = Powered 15A Convenience Outlet (three-phase only)

## Digit 21— Communications Options

0 = No Communications Interface

1 = Advanced Controller with BACnet® Communications Interface

2 = Advanced Controller with LonTalk® Communications Interface

3 = Advanced Controller with Air-Fi® Communications Interface

## Digit 22— Refrigeration System Option

0 = Standard Refrigeration System

A = Dehumidification Option

## Digit 23— Controls Expansion Module

0 = None

1 = XM-30 Expansion Module

2 = XM-32 Expansion Module

3 = XM-30 and XM-32 Expansion Module

4 = XM-30 Expansion Module (Qty 2)

5 = XM-32 Expansion Module (Qty 2)

## Digit 24— Smoke Detector

0 = No Smoke Detector

A = Return Air Smoke Detector

B = Supply Air Smoke Detector

C = Supply and Return Air Smoke Detectors

**Digit 25— System Monitoring Controls**

- 0 = No Monitoring Control
- 1 = Clogged Filter Switch
- 2 = Condensate Overflow Switch
- 4 = Clogged Filter Switch and Condensate Overflow Switch

**Digit 26— Not Used****Digit 27— Hardware Enhancements**

- 0 = No Enhancements
- 1 = Stainless Steel Drain Pan

**Digit 28— Short Circuit Current Rating**

- 0 = Standard (5k) SCCR Marking
- A = Tier 2 (65K) SCCR Marking

**Digit 29— Low Ambient**

- 0 = None



# General Data

**Table 3. General data— 12.5 to 25 tons — ultra high efficiency**

	12.5 Tons	15 Tons	17.5 Tons	20 Tons	25 Tons
	TZJ150	TZJ180	TZJ210	TZJ240	TZJ300
<b>Cooling Performance</b>					
Gross Cooling Capacity	152000	182000	216000	251000	280000
AHRI Net Cooling Capacity	150000	180000	212000	244000	272000
Nominal cfm/AHRI Rated cfm	4375	5250	6650	8000	9250
EER (208/230/460 Volt)	14.4	12.7	12.2	11	11
EER (575 Volt)	14.2	12.6	11.8	10.8	10.8
IEER (208/230/460 Volt)	26.3	24.8	21.2	21	20.5
IEER (575 Volt)	22.9	22.1	17.9	18.1	18.2
System Power(kW) (208/230/460 Volt)	10.42	14.17	17.38	22.18	24.73
System Power(kW) (575 Volt)	10.56	14.29	17.97	22.59	25.19
<b>Compressor</b>					
Number/Type	1/Scroll	1/Scroll	2/Manifold Scroll	2/Manifold Scroll	2/Manifold Scroll
Minimum Percent Capacity	27%	22%	12%	11%	14%
<b>Sound<sup>(a)</sup></b>					
Outdoor Sound Rating (dBA)	90	91	93	93	93
<b>Outdoor Coil</b>					
Type	Microchannel	Microchannel	Microchannel	Microchannel	Microchannel
Configuration	Full Face	Full Face	Full Face	Full Face	Full Face
Coil Width(in.)	0.7	0.7	1	1	1
Face Area (sq. ft.)	38.85	38.85	38.85	38.85	38.85
Rows/FPI (Fins per inch)	1/23	1/23	1/23	1/23	1/23
<b>Indoor Coil</b>					
Type	Microchannel	Microchannel	Microchannel	Microchannel	Microchannel
Configuration	Full Face	Full Face	Full Face	Full Face	Full Face
Coil Width(in.)	1	1	1	1	1
Face Area (sq. ft.)	28.1	28.1	28.1	28.1	28.1
Rows/FPI (Fins per inch)	2/18	2/18	2/18	2/18	2/18
Refrigerant Control	TXV	TXV	TXV	TXV	TXV
STD. Drain Connection No./Size (in.)	1/1.00 PVC Socket	1/1.00 PVC Socket	1/1.00 PVC Socket	1/1.00 PVC Socket	1/1.00 PVC Socket
Stainless Drain Connection No./Size (in.)	1/1.00 NPT	1/1.00 NPT	1/1.00 NPT	1/1.00 NPT	1/1.00 NPT
<b>Reheat Coil</b>					
Type	Microchannel	Microchannel	Microchannel	Microchannel	Microchannel
Configuration	Full Face	Full Face	Full Face	Full Face	Full Face
Tube Size (in.)	0.6	0.6	0.6	0.6	0.6
Face Area (sq. ft.)	21.83	21.83	21.83	21.83	21.83
Rows/FPI (Fins per inch)	1/23	1/23	1/23	1/23	1/23
<b>Outdoor Fan</b>					
Type	Propeller	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter (in.)	2/26x3	2/26x3	2/28x4	2/28x4	2/28x4
Drive Type/No. Speeds (208/230/460 Volt)	Direct / Variable	Direct / Variable	Direct / Variable	Direct / Variable	Direct / Variable



**Table 3. General data— 12.5 to 25 tons — ultra high efficiency (continued)**

	12.5 Tons	15 Tons	17.5 Tons	20 Tons	25 Tons
	TZJ150	TZJ180	TZJ210	TZJ240	TZJ300
Drive Type/No. Speeds (575 Volt)	Direct / 1	Direct / 1	Direct / 1	Direct / 1	Direct / 1
CFM (208/230/460 Volt)	11340	11340	17030	17030	17030
CFM (575 Volt)	11340	11340	16100	16100	16100
Number Motors/HP (208/230/460 Volt)	2/0.5	2/0.5	2/1.5	2/1.5	2/1.5
Number Motors/HP (575 Volt)	2/0.5	2/0.5	2/1.0	2/1.0	2/1.0
Motor rpm (208/230/460 Volt)	1125	1125	1190	1190	1190
Motor rpm (575 Volt)	1125	1125	1125	1125	1125
<b>Indoor Fan</b>					
Type	BC Plenum	BC Plenum	BC Plenum	BC Plenum	BC Plenum
No. Used/Diameter (in.)/Width (in.)	2/23x6	2/23x6	2/23x6	2/23x6	2/23x6
Drive Type/No. Speeds/RPM	Direct / Variable	Direct / Variable	Direct / Variable	Direct / Variable	Direct / Variable
Motor HP (Standard/Oversized)	3.0 / –	3.0 / –	3.0 / –	3.0 / –	3.0 / 4.6
Max Motor RPM	1850	1850	1850	1850	1850 / 1940
<b>Filters</b>					
Type Furnished	Throwaway	Throwaway	Throwaway	Throwaway	Throwaway
Number Size Recommended	(4) 20 x 24 x 2	(4) 20 x 24 x 2	(4) 20 x 24 x 2	(4) 20 x 24 x 2	(4) 20 x 24 x 2
	(4) 20 x 30 x 2	(4) 20 x 30 x 2	(4) 20 x 30 x 2	(4) 20 x 30 x 2	(4) 20 x 30 x 2
<b>Refrigerant Charge</b>					
lbs of R-410A	15.9	14.8	18.6	18.6	18.6
lbs of R-410A, Hot Gas Reheat	16.4	15.3	19.1	19.1	19.1
<b>Cabinet</b>					
Cabinet Size	D1	D1	D1	D1	D1

<sup>(a)</sup> Outdoor sound rating shown is tested in accordance with AHRI 370-2015. For additional information reference the outdoor sound power level data in the performance section.



# Gross Cooling Capacities

**Table 4. Gross cooling capacities — 12.5 tons, ultra high efficiency**

CFM	Ent DB (°F)	Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC
		<b>Ambient Temperature 85°F</b>						<b>Ambient Temperature 95°F</b>						<b>Ambient Temperature 105°F</b>					
2500 <sup>(a)</sup>	75	123.0	89.1	139.5	73.8	157.1	57.0	117.0	85.7	133.0	70.4	150.0	53.3	110.7	82.2	125.9	66.8	141.7	49.9
	80	122.8	102.4	139.5	87.4	157.1	71.2	116.9	99.0	133.0	84.0	149.7	67.8	110.7	95.5	125.9	80.4	141.8	64.2
	85	122.9	112.5	139.4	100.9	157.1	84.9	117.2	107.7	132.8	97.4	149.8	81.5	111.0	108.4	125.8	93.9	141.8	77.9
	90	125.5	125.5	139.2	114.1	157.0	98.5	120.8	120.8	132.7	110.7	149.8	95.1	115.8	115.8	125.8	107.2	141.9	91.4
3000 <sup>(a)</sup>	75	129.8	98.2	147.2	79.7	164.5	59.1	123.3	94.6	140.0	76.2	156.4	55.6	116.4	90.9	132.2	72.4	147.7	51.8
	80	129.7	114.1	147.2	95.9	164.6	76.1	123.3	110.5	139.9	92.4	156.5	72.5	116.5	104.9	132.2	88.7	147.8	68.7
	85	130.0	129.2	146.8	111.9	164.6	92.5	123.9	123.9	139.7	108.3	156.6	88.9	118.5	118.5	132.0	104.5	147.9	85.1
	90	136.4	136.4	146.8	127.8	164.6	108.7	131.2	131.2	139.7	123.9	156.6	105.2	125.6	125.6	132.1	117.6	148.0	101.4
3500 <sup>(a)</sup>	75	135.1	106.7	153.0	85.1	169.8	60.7	128.2	103.1	145.3	81.4	161.2	57.2	120.8	99.2	137.0	77.6	151.8	53.3
	80	135.1	120.7	152.9	104.0	169.9	80.5	128.1	120.7	145.1	100.3	161.3	76.8	120.8	116.8	136.8	96.2	152.0	73.0
	85	137.5	137.5	152.6	122.4	170.0	99.5	132.0	132.0	144.9	118.7	161.5	95.9	126.0	126.0	136.7	114.8	152.3	92.1
	90	145.5	145.5	152.5	134.9	170.1	118.4	139.8	139.8	144.8	136.2	161.6	114.7	133.6	133.6	136.6	132.2	152.3	110.8
4000	75	139.3	114.9	157.6	90.2	173.7	62.2	132.0	111.1	149.4	86.4	164.6	58.5	124.3	107.2	140.7	82.4	154.8	55.1
	80	139.1	134.6	157.3	111.4	173.9	84.6	131.9	130.7	149.1	107.5	164.9	80.9	124.3	124.3	140.4	103.6	155.1	77.0
	85	144.7	144.7	157.0	132.5	174.2	106.4	138.7	138.7	148.9	128.6	165.2	102.8	132.3	132.3	140.3	121.7	155.6	98.8
	90	153.2	153.2	156.6	151.9	174.2	127.8	147.0	147.0	148.6	148.6	165.3	124.0	140.3	140.3	140.5	140.5	155.6	120.0
4500	75	142.7	122.8	161.2	95.0	176.7	64.1	135.1	117.1	152.7	91.2	167.2	60.3	127.0	110.4	143.6	87.2	157.6	53.8
	80	142.4	142.4	160.8	118.7	177.0	88.6	135.8	135.8	152.3	114.8	167.7	84.9	129.3	129.3	143.3	110.7	157.6	80.9
	85	150.8	150.8	160.5	138.1	177.5	112.9	144.5	144.5	151.9	137.3	168.2	109.1	137.7	137.7	142.9	133.0	158.1	105.1
	90	159.6	159.6	159.9	159.9	177.5	136.9	153.0	153.0	153.3	153.3	168.2	133.1	145.8	145.8	146.0	146.0	158.1	129.0
5000	75	145.4	125.5	164.1	99.7	179.0	64.4	137.3	125.2	155.4	95.5	169.3	61.5	128.9	120.9	145.9	91.4	158.8	56.8
	80	146.9	146.9	163.7	125.8	179.5	92.5	140.5	140.5	154.9	121.8	170.0	88.7	133.6	133.6	145.6	117.7	159.6	84.8
	85	156.1	156.1	162.9	150.1	180.1	119.3	149.5	149.5	154.2	146.0	170.5	115.4	142.2	142.2	144.8	141.7	160.0	111.3
	90	165.1	165.1	165.3	165.3	180.1	145.9	158.1	158.1	158.3	158.3	170.5	140.3	150.4	150.4	150.6	150.6	160.1	132.9
5500	75	147.3	136.2	166.5	103.9	181.1	65.9	139.2	132.0	157.5	99.9	170.9	62.6	130.6	127.6	147.9	95.7	160.6	56.6
	80	151.2	151.2	166.0	132.7	181.7	96.4	144.5	144.5	157.0	125.1	172.0	92.6	137.3	137.3	147.5	123.6	161.5	88.6
	85	160.7	160.7	164.8	158.7	182.2	125.6	153.7	153.7	155.8	155.8	172.3	121.7	146.1	146.1	146.3	146.2	161.6	117.6
	90	169.7	169.7	169.9	169.9	182.2	149.4	162.3	162.3	162.5	162.5	172.1	149.1	154.1	154.1	154.2	154.2	161.0	144.6
6000	75	148.9	142.8	168.6	108.2	182.6	66.9	140.6	140.6	159.3	104.1	172.3	63.7	131.9	131.9	149.5	99.9	161.3	57.4
	80	155.0	155.0	168.0	138.8	183.8	100.3	148.1	148.1	158.8	131.8	174.0	96.2	140.6	140.6	148.7	129.7	163.1	92.0
	85	164.7	164.7	166.2	166.2	184.0	131.8	157.4	157.4	157.5	157.5	173.9	127.9	149.4	149.4	149.5	149.5	163.0	123.7
	90	173.6	173.6	173.7	173.7	183.3	161.1	165.8	165.8	165.9	165.9	172.8	156.8	157.1	157.1	157.2	157.2	161.5	152.2
CFM	Ent DB (°F)	Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC
		<b>Ambient Temperature 115°F</b>						<b>Ambient Temperature 120°F</b>											
2500 <sup>(a)</sup>	75	104.0	78.4	118.4	63.1	133.1	46.5	100.4	76.5	114.4	61.1	128.4	44.2						
	80	104.0	91.8	118.4	76.7	133.2	60.4	100.5	89.9	114.4	74.7	128.5	58.3						
	85	104.5	104.5	118.3	90.0	133.3	74.0	101.4	101.4	114.3	88.1	128.6	72.0						
	90	110.4	110.4	118.3	103.4	133.4	87.6	107.5	107.5	114.4	101.5	128.7	85.6						
3000 <sup>(a)</sup>	75	109.1	87.0	124.0	68.5	138.3	47.9	105.3	85.0	119.6	66.4	133.1	46.1						
	80	109.3	98.3	124.0	84.7	138.4	64.7	105.4	100.4	119.6	82.7	133.3	62.6						
	85	112.6	112.6	123.9	100.6	138.6	81.2	109.5	109.5	119.5	98.6	133.5	79.1						
	90	119.5	119.5	123.9	116.0	139.0	97.4	116.3	116.3	119.6	113.8	133.6	95.2						
3500 <sup>(a)</sup>	75	113.0	95.2	128.2	73.5	141.7	49.7	109.0	93.1	123.5	71.4	136.3	47.5						
	80	113.1	112.6	128.0	92.1	142.0	68.9	109.2	109.2	123.4	89.9	136.5	66.7						
	85	119.6	119.6	128.0	110.8	142.3	88.0	116.2	116.2	123.4	107.7	136.9	85.9						
	90	127.0	127.0	128.0	128.0	142.4	106.7	123.3	123.3	123.5	123.5	137.0	104.5						

**Table 4. Gross cooling capacities — 12.5 tons, ultra high efficiency (continued)**

CFM	Ent DB (°F)	Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73	
		MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC
		Ambient Temperature 115°F						Ambient Temperature 120°F					
4000	75	116.1	101.5	131.4	78.3	144.2	50.9	111.8	97.9	126.5	76.2	138.5	48.7
	80	117.7	117.7	131.2	99.4	144.6	72.8	114.1	114.1	126.3	97.2	138.9	70.6
	85	125.4	125.4	131.0	119.6	145.1	94.4	121.7	121.7	126.1	117.3	139.4	92.2
	90	133.0	133.0	133.2	133.2	145.1	115.8	129.0	129.0	129.2	129.2	139.4	113.5
4500	75	118.3	109.6	134.1	82.7	146.5	50.4	113.8	107.3	128.8	80.4	140.1	49.8
	80	122.3	122.3	133.7	106.5	146.7	76.6	118.5	118.5	128.6	104.3	141.2	72.8
	85	130.3	130.3	133.3	128.5	147.2	100.8	126.3	126.3	128.2	126.2	141.3	98.5
	90	137.9	137.9	138.1	138.1	147.2	123.3	133.6	133.6	133.7	133.7	141.3	118.4
5000	75	120.1	116.4	136.0	87.1	147.5	53.1	115.5	114.1	130.7	84.8	141.4	50.9
	80	126.2	126.2	135.7	113.4	148.6	80.6	122.2	122.2	130.5	106.1	142.6	78.3
	85	134.4	134.4	134.9	134.9	148.8	107.0	130.1	130.1	130.3	130.3	142.7	104.7
	90	141.9	141.9	142.0	142.0	148.5	132.0	137.1	137.1	137.3	137.3	142.2	129.4
5500	75	121.6	121.6	137.7	91.3	148.7	54.2	117.0	117.0	132.2	89.0	142.4	51.9
	80	129.6	129.6	137.4	114.2	150.3	84.1	125.4	125.4	131.7	116.5	144.1	81.7
	85	137.8	137.8	138.0	138.0	150.2	113.2	133.3	133.3	133.4	133.4	143.9	111.2
	90	145.0	145.0	145.1	145.1	149.0	139.8	139.9	139.9	140.0	140.0	142.5	137.2
6000	75	123.7	123.7	139.1	95.5	149.7	55.3	119.6	119.6	133.5	93.2	143.3	53.0
	80	132.5	132.5	138.2	125.0	151.4	87.6	128.1	128.1	132.6	122.5	145.1	85.2
	85	140.7	140.7	140.8	140.8	151.3	115.5	135.9	135.9	136.0	136.0	144.9	116.5
	90	147.4	147.4	147.5	147.5	149.3	147.4	142.0	142.0	142.1	142.1	142.6	142.6

**Notes:**

1. All capacities shown are gross.
2. MBh = Total gross capacity.
3. SHC = Sensible heat capacity.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat.



**Table 5. Gross cooling capacities — 15 tons, ultra high efficiency (continued)**

CFM	Ent DB (°F)	Entering Wet Bulb (°F)						Entering Wet Bulb (°F)									
		61		67		73		61		67		73					
		MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC				
						<b>Ambient Temperature 115°F</b>						<b>Ambient Temperature 120°F</b>					
5400	75	143.9	130.3	161.4	99.5	172.9	62.1	138.6	127.6	155.3	96.9	165.7	59.4				
	80	146.3	146.3	161.1	126.5	173.8	90.8	142.0	142.0	155.0	123.8	166.9	88.2				
	85	155.2	155.2	160.1	151.4	174.5	118.8	150.5	150.5	154.0	154.0	167.4	116.0				
	90	163.4	163.4	163.6	163.6	174.4	145.9	158.2	158.2	158.4	158.4	167.3	138.1				
6000	75	145.8	137.8	163.7	103.7	174.3	63.2	140.4	135.1	157.4	101.0	166.9	60.5				
	80	150.7	150.7	163.2	132.3	175.7	95.3	146.1	146.1	157.0	126.5	168.6	92.9				
	85	159.6	159.6	161.6	161.6	176.1	125.7	154.6	154.6	155.4	155.4	168.8	122.9				
	90	167.5	167.5	167.7	167.7	175.7	154.1	161.9	161.9	162.0	162.0	168.0	151.0				
6600	75	147.3	147.3	165.5	108.4	175.4	64.3	141.7	141.7	159.1	105.6	167.9	61.6				
	80	154.4	154.4	164.9	130.5	177.7	99.8	149.5	149.5	158.4	136.6	170.6	98.2				
	85	163.2	163.2	163.4	163.4	177.4	133.1	157.9	157.9	158.0	158.0	169.9	127.2				
	90	170.7	170.7	170.9	170.9	176.0	162.5	164.6	164.6	164.8	164.8	168.2	159.4				
7200	75	148.4	148.4	167.0	112.9	176.4	65.5	143.3	143.3	160.5	110.2	168.8	62.8				
	80	157.6	157.6	165.8	146.5	179.0	102.7	152.5	152.5	159.1	143.5	171.4	99.9				
	85	166.3	166.3	166.4	166.4	178.5	131.6	160.6	160.6	160.7	160.7	170.9	125.0				
	90	173.2	173.2	173.3	173.3	176.1	170.7	166.7	166.7	166.8	166.8	168.2	167.6				

**Notes:**

1. All capacities shown are gross.
2. MBh = Total gross capacity.
3. SHC = Sensible heat capacity.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat.



**Table 6. Gross cooling capacities — 17.5 tons, ultra high efficiency (continued)**

CFM	Ent DB (°F)	Entering Wet Bulb (°F)						Entering Wet Bulb (°F)									
		61		67		73		61		67		73					
		MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC				
						<b>Ambient Temperature 115°F</b>						<b>Ambient Temperature 120°F</b>					
6300	75	163.7	143.9	186.6	112.0	200.9	70.0	156.7	141.6	178.7	108.5	190.3	65.8				
	80	164.6	164.6	186.1	142.2	202.1	102.5	159.2	159.2	178.3	138.6	191.9	98.5				
	85	176.0	176.0	184.8	169.9	203.2	134.1	170.3	170.3	177.1	166.0	193.0	130.0				
	90	187.0	187.0	187.2	187.2	203.4	165.7	180.7	180.7	180.8	180.8	193.4	160.8				
7000	75	165.8	153.2	189.5	116.6	201.9	71.0	158.9	149.5	181.4	112.9	191.3	67.0				
	80	170.0	170.0	188.8	150.9	203.7	107.7	164.4	164.4	180.7	143.3	193.1	103.5				
	85	181.7	181.7	186.9	180.0	204.7	141.5	175.6	175.6	178.8	178.8	194.1	137.3				
	90	192.6	192.6	192.7	192.7	205.1	169.2	185.6	185.6	185.7	185.7	194.4	169.2				
7700	75	167.6	161.0	192.1	121.8	203.0	72.2	160.4	160.4	183.6	118.0	192.8	68.3				
	80	174.7	174.7	191.0	149.4	205.1	112.4	168.8	168.8	182.7	151.7	194.6	107.4				
	85	186.5	186.5	188.3	188.3	205.8	151.6	180.0	180.0	180.1	180.1	194.9	143.5				
	90	197.0	197.0	197.1	197.1	205.4	182.7	189.2	189.2	189.3	189.3	194.4	178.1				
8400	75	168.9	168.9	193.9	126.9	204.4	73.5	161.6	161.6	185.2	123.0	193.9	69.6				
	80	178.8	178.8	192.3	164.3	206.6	115.0	172.6	172.6	183.5	160.2	195.5	110.7				
	85	190.6	190.6	190.7	190.7	206.8	151.2	183.6	183.6	183.7	183.7	195.6	143.0				
	90	200.3	200.3	200.4	200.4	205.5	191.5	191.7	191.7	191.8	191.8	194.1	186.8				

**Notes:**

1. All capacities shown are gross.
2. MBh = Total gross capacity.
3. SHC = Sensible heat capacity.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat.





**Table 7. Gross cooling capacities — 20 tons, ultra high efficiency (continued)**

CFM	Ent DB (°F)	Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73	
		MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC
		<b>Ambient Temperature 115°F</b>						<b>Ambient Temperature 120°F</b>					
7200	75	190.4	164.8	216.4	129.9	234.5	82.3	179.8	161.5	204.2	124.5	218.6	76.2
	80	189.9	189.9	215.6	166.7	235.6	120.0	181.8	181.8	203.6	157.9	220.2	114.1
	85	202.6	202.6	214.0	194.7	236.5	154.5	193.9	193.9	202.0	188.7	221.2	148.3
	90	215.1	215.1	215.3	215.3	236.2	190.0	205.5	205.5	205.7	205.7	221.2	182.8
8000	75	192.7	176.1	219.6	134.4	236.2	83.7	182.1	170.4	207.1	128.7	219.6	77.4
	80	196.0	196.0	218.8	169.4	237.9	125.5	187.4	187.4	206.2	158.9	222.1	119.6
	85	209.1	209.1	216.3	205.9	238.6	162.8	199.8	199.8	203.8	203.8	222.7	156.5
	90	221.6	221.6	221.8	221.8	238.4	195.2	211.1	211.1	211.2	211.2	222.3	192.3
8800	75	194.6	184.6	222.7	140.3	237.4	85.0	183.6	183.6	209.6	134.4	220.4	78.6
	80	201.3	201.3	221.3	169.6	240.0	131.1	192.2	192.2	208.4	172.2	224.1	123.7
	85	214.6	214.6	217.8	217.8	240.1	176.8	204.7	204.7	205.1	205.1	223.7	164.0
	90	226.9	226.9	227.1	227.1	239.1	209.2	215.4	215.4	215.5	215.5	222.5	202.2
9600	75	195.9	195.9	225.0	145.9	238.3	86.2	184.7	184.7	211.5	139.9	221.1	79.9
	80	206.0	206.0	105.0	-752.7	242.1	133.1	196.4	196.4	209.2	181.8	225.4	126.6
	85	219.3	219.3	219.5	219.5	241.4	175.5	208.7	208.7	208.9	208.9	224.8	172.5
	90	231.2	231.2	231.3	231.3	239.4	219.1	218.6	218.6	218.7	218.7	222.5	212.0

**Notes:**

1. All capacities shown are gross.
2. MBh = Total gross capacity.
3. SHC = Sensible heat capacity.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat.



# Gross Cooling Capacities

**Table 8. Gross cooling capacities — 25 tons, ultra high efficiency**

CFM	Ent DB (°F)	Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC
		<b>Ambient Temperature 85°F</b>						<b>Ambient Temperature 95°F</b>						<b>Ambient Temperature 105°F</b>					
5000 <sup>(a)</sup>	75	222.1	161.5	253.3	134.0	286.8	102.9	212.1	155.6	241.9	127.9	273.3	96.8	201.2	149.4	229.5	121.4	258.3	89.9
	80	221.4	184.7	253.2	158.6	286.9	130.1	211.2	177.2	241.8	153.0	273.5	123.6	200.3	168.9	229.4	146.5	258.5	116.5
	85	220.4	204.9	252.9	183.6	286.9	154.8	210.6	194.9	241.7	177.5	273.5	148.4	199.6	192.8	229.2	170.4	258.6	141.4
	90	221.3	221.3	252.1	206.6	286.7	180.0	213.7	213.7	240.6	198.2	273.4	173.0	205.2	205.2	228.2	188.7	258.6	166.6
6000 <sup>(a)</sup>	75	235.3	176.7	268.2	144.7	301.8	107.6	224.2	170.4	255.4	138.1	286.3	100.9	212.1	171.5	241.5	131.1	269.0	93.5
	80	233.5	204.1	267.9	174.2	301.9	139.0	222.3	187.9	255.2	167.7	286.5	131.9	210.4	190.1	241.3	160.0	269.2	124.2
	85	231.3	226.5	267.6	201.8	301.8	168.1	220.4	220.4	254.7	195.1	286.5	161.1	208.8	208.8	240.4	193.9	269.3	154.2
	90	238.8	238.8	265.2	229.2	301.6	197.4	230.3	230.3	252.6	217.2	286.3	190.2	220.9	220.9	238.9	214.3	269.3	183.1
7000 <sup>(a)</sup>	75	245.5	191.0	279.7	154.1	312.6	111.4	233.2	184.2	265.7	147.2	295.3	104.2	219.9	180.6	250.5	139.8	275.9	97.2
	80	242.4	218.8	279.3	187.1	312.7	146.7	230.4	207.6	265.3	180.2	295.5	139.2	216.5	216.5	250.1	172.4	276.2	130.9
	85	239.1	239.1	277.5	225.7	312.6	181.1	230.1	230.1	263.6	211.8	295.5	173.7	220.3	220.3	248.2	200.0	276.5	164.5
	90	253.5	253.5	274.7	241.5	312.3	212.8	244.2	244.2	260.3	239.1	295.5	205.3	233.9	233.9	245.0	245.0	276.4	197.0
8000	75	252.8	204.0	288.8	162.7	320.4	115.8	239.7	197.0	273.7	155.5	301.6	107.8	225.7	189.5	257.3	148.7	280.4	99.0
	80	247.4	247.4	288.2	199.3	320.6	153.6	234.7	234.7	273.4	198.0	301.8	145.7	221.1	221.1	256.8	184.1	280.9	137.0
	85	250.7	250.7	285.0	234.7	320.5	192.5	241.1	241.1	270.1	227.5	302.0	185.0	230.5	230.5	253.9	215.6	281.5	174.3
	90	266.0	266.0	280.0	263.4	319.8	227.6	255.9	255.9	265.4	255.6	301.4	219.6	244.7	244.7	249.5	247.2	281.0	211.1
9000	75	258.2	218.8	296.0	170.7	326.2	118.0	244.6	207.2	280.0	164.3	306.0	109.7	230.0	200.3	262.6	156.3	283.2	100.5
	80	251.5	251.5	294.9	210.8	326.5	160.0	238.2	238.2	278.6	215.8	306.4	151.7	224.4	224.4	261.3	194.9	284.1	143.9
	85	260.7	260.7	290.5	249.7	326.7	201.1	250.5	250.5	274.9	236.4	306.9	192.8	239.2	239.2	256.8	229.8	285.0	183.7
	90	276.7	276.7	283.8	279.2	325.0	241.5	265.9	265.9	268.4	268.4	305.6	233.4	253.7	253.7	253.9	253.9	284.3	224.6
10000	75	262.4	227.4	301.8	179.4	330.6	119.9	248.2	215.3	285.0	172.0	309.1	111.3	231.8	208.5	266.7	161.7	285.1	101.8
	80	254.0	254.0	299.5	234.6	331.0	166.0	242.7	242.7	282.7	219.3	309.9	158.6	231.4	231.4	264.5	204.7	286.6	149.6
	85	269.5	269.5	292.9	259.1	331.2	210.8	258.6	258.6	276.5	250.6	310.4	202.2	246.6	246.6	258.6	258.6	287.3	192.9
	90	286.0	286.0	286.2	286.2	328.9	255.1	274.4	274.4	274.6	274.6	308.9	246.9	261.3	261.3	261.4	261.4	286.8	235.9
11000	75	263.9	234.4	306.4	185.3	333.9	121.7	249.2	226.1	289.0	176.7	311.3	112.7	233.3	233.3	270.2	168.1	287.1	103.3
	80	260.2	260.2	303.1	236.3	334.6	171.8	249.4	249.4	285.8	220.4	312.7	163.8	237.5	237.5	267.1	205.5	288.7	153.8
	85	277.2	277.2	294.6	294.6	334.5	220.0	265.8	265.8	277.8	277.8	312.9	211.3	253.0	253.0	259.7	259.7	289.0	212.4
	90	294.1	294.1	294.3	294.3	331.9	268.3	281.8	281.8	281.9	281.9	311.3	252.7	267.6	267.6	267.8	267.8	287.2	245.6
12000	75	265.5	243.1	310.6	191.4	336.4	123.2	250.4	234.7	292.7	183.2	312.9	114.1	234.2	234.2	273.1	174.4	289.5	105.2
	80	266.6	266.6	305.9	237.3	337.5	179.6	255.3	255.3	288.1	220.9	315.1	168.7	242.9	242.9	269.1	205.6	290.7	158.4
	85	284.0	284.0	295.7	295.7	337.0	229.1	272.0	272.0	278.6	278.6	314.9	220.3	258.5	258.5	260.1	260.1	290.6	212.5
	90	301.2	301.2	301.4	301.4	332.6	276.1	288.1	288.1	288.2	288.2	311.0	266.5	272.9	272.9	273.0	273.0	287.3	256.1
CFM	Ent DB (°F)	Entering Wet Bulb (°F)						Entering Wet Bulb (°F)											
		61		67		73		61		67		73							
		MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC						
		<b>Ambient Temperature 115°F</b>						<b>Ambient Temperature 120°F</b>											
5000 <sup>(a)</sup>	75	189.4	142.7	215.8	114.4	241.3	82.5	183.0	138.7	208.4	110.7	231.7	78.4						
	80	188.5	161.0	215.8	139.5	241.5	108.8	182.2	154.0	208.4	135.2	232.0	104.5						
	85	188.0	185.6	215.7	163.1	241.7	133.6	181.8	181.8	208.2	159.3	232.2	129.4						
	90	196.0	196.0	214.6	181.8	241.8	158.7	190.9	190.9	207.3	183.1	232.4	154.5						
6000 <sup>(a)</sup>	75	199.0	156.3	226.1	123.6	249.2	86.3	191.8	157.1	217.8	119.6	238.1	81.6						
	80	197.4	179.6	226.0	153.3	249.5	115.7	190.2	177.4	217.6	149.4	238.5	111.1						
	85	198.2	198.2	225.2	180.3	249.8	145.9	192.8	192.8	216.7	173.7	238.9	141.4						
	90	210.5	210.5	223.9	200.8	250.1	173.7	204.8	204.8	215.2	200.6	239.3	169.0						
7000 <sup>(a)</sup>	75	205.6	172.6	233.6	132.6	253.8	88.1	198.0	161.7	224.5	128.3	241.3	83.0						
	80	202.5	202.5	233.5	164.4	254.3	121.8	195.1	195.1	224.4	160.2	242.0	116.8						
	85	209.4	209.4	231.7	196.1	254.9	156.9	203.5	203.5	222.7	187.8	242.9	152.2						
	90	222.3	222.3	228.9	222.2	255.0	188.0	215.9	215.9	220.1	217.6	243.1	183.0						
8000	75	210.6	181.7	239.2	140.5	256.2	89.3	202.6	177.5	229.4	136.0	242.8	84.1						
	80	206.4	206.4	238.6	175.6	257.2	127.4	199.1	199.1	228.8	171.0	243.9	123.4						
	85	218.7	218.7	236.4	204.7	258.3	164.7	212.2	212.2	226.1	203.3	245.3	159.4						
	90	231.9	231.9	232.3	232.3	258.2	201.7	224.8	224.8	224.9	224.9	245.6	196.6						

**Table 8. Gross cooling capacities — 25 tons, ultra high efficiency (continued)**

CFM	Ent DB (°F)	Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73	
		MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC	MBh	SHC
		<b>Ambient Temperature 115°F</b>						<b>Ambient Temperature 120°F</b>					
9000	75	214.3	186.7	243.5	148.1	257.9	90.6	204.9	185.5	233.1	143.6	245.3	85.8
	80	212.6	212.6	242.2	190.6	259.1	134.3	206.1	206.1	231.9	181.0	245.9	129.4
	85	226.5	226.5	237.9	237.9	260.2	173.8	219.4	219.4	227.9	227.9	246.6	168.4
	90	239.7	239.7	239.9	239.9	260.5	215.1	231.7	231.7	231.9	231.9	247.4	205.2
10000	75	215.2	215.2	246.8	152.6	260.4	92.3	206.6	206.6	236.0	147.8	247.2	87.4
	80	218.9	218.9	244.8	184.4	261.1	139.5	212.1	212.1	234.2	179.2	248.4	135.5
	85	233.0	233.0	239.4	239.4	261.7	182.8	225.4	225.4	229.1	229.1	248.0	177.5
	90	246.0	246.0	246.1	246.1	261.3	223.8	237.1	237.1	237.2	237.2	247.4	217.7
11000	75	216.5	216.5	249.6	158.9	262.3	94.0	207.6	207.6	238.3	153.9	248.7	88.9
	80	224.4	224.4	246.9	190.9	263.3	144.3	217.2	217.2	236.1	194.7	250.4	138.3
	85	238.5	238.5	240.1	240.1	262.8	192.0	230.3	230.3	230.4	230.4	249.3	181.8
	90	250.9	250.9	251.1	251.1	261.3	234.4	241.0	241.0	241.1	241.1	247.1	228.3
12000	75	217.2	217.2	251.5	164.9	263.9	95.6	208.1	208.1	239.9	159.8	249.8	90.4
	80	229.2	229.2	247.1	212.0	265.3	148.5	221.5	221.5	235.8	206.6	251.7	143.2
	85	243.1	243.1	243.3	243.3	264.0	191.0	234.3	234.3	234.4	234.4	250.6	195.4
	90	254.7	254.7	254.8	254.8	261.0	244.8	243.8	243.8	243.9	243.9	246.7	238.8

**Notes:**

1. All capacities shown are gross.
2. MBh = Total gross capacity.
3. SHC = Sensible heat capacity.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat.



# Reheat Temperature Rise

Table 9. Reheat temperature rise — 12.5 tons

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
<b>Ambient DB 60°F</b>													
2500 <sup>(a)</sup>	60	29.9 <sup>(b)</sup>	32.9 <sup>(b)</sup>	44.8	56.4	33.8 <sup>(b)</sup>	38.1	49.6	59.6	37.8	43.2	54.7	62.6
	65	30.0 <sup>(b)</sup>	32.9 <sup>(b)</sup>	44.8	56.4	33.7 <sup>(b)</sup>	38.1	49.6	59.6	37.8	43.2	54.6	62.6
	70	30.1 <sup>(b)</sup>	34.0 <sup>(b)</sup>	44.9	57.1	33.8 <sup>(b)</sup>	38.1	49.6	59.6	37.8	43.2	54.6	62.6
	75	32.2 <sup>(b)</sup>	38.5	47.5	59.7	33.7 <sup>(b)</sup>	38.2	49.5	59.6	37.8	43.2	54.5	62.6
3000 <sup>(a)</sup>	60	32.9 <sup>(b)</sup>	34.6 <sup>(b)</sup>	45.9	57.1	36.9	39.7	50.7	60.3	40.9	44.8	55.7	63.3
	65	33.0 <sup>(b)</sup>	34.6 <sup>(b)</sup>	45.9	57.2	36.9	39.8	50.7	60.3	40.9	44.9	55.7	63.3
	70	33.9 <sup>(b)</sup>	37.0	46.9	58.5	36.9	39.8	50.7	60.3	40.9	44.9	55.7	63.4
	75	36.8	41.7	50.4	61.4	37.2	41.8	51.0	61.4	41.0	44.9	55.7	63.4
3500 <sup>(a)</sup>	60	35.3	35.9	46.8	57.5	39.2	41.0	51.5	60.7	43.2	46.1	56.4	63.7
	65	35.4	36.0	46.8	57.5	39.3	41.1	51.5	60.8	43.3	46.2	56.4	63.8
	70	37.4	39.5	49.1	59.6	39.3	41.2	51.6	60.8	43.3	46.3	56.4	63.8
	75	40.4	44.4	52.7	62.6	40.6	44.6	52.8	62.7	43.4	46.3	56.4	63.9
4000	60	37.1	37.1	47.4	57.6	41.0	42.1	52.1	60.9	45.1	47.2	56.9	64.0
	65	37.5	37.4	47.7	57.8	41.1	42.2	52.2	61.0	45.1	47.2	57.0	64.0
	70	40.3	41.7	50.9	60.5	41.2	42.6	52.2	61.2	45.2	47.4	57.0	64.1
	75	43.5	46.8	54.7	63.6	43.6	46.9	54.8	63.7	45.3	47.8	57.0	64.3
4500	60	38.6	38.1	48.0	57.4	42.5	43.0	52.6	61.0	46.5	48.0	57.3	64.1
	65	39.1	38.6	48.4	57.8	42.6	43.2	52.6	61.1	46.6	48.1	57.4	64.2
	70	42.7	43.6	52.4	61.2	43.1	43.7	53.0	61.4	46.7	48.3	57.4	64.3
	75	46.0	48.8	56.3	64.4	46.1	48.9	56.4	64.5	47.1	48.9	57.7	64.5
5000	60	39.8	39.2	48.4	57.2	43.7	43.8	52.9	61.0	47.7	48.8	57.6	64.2
	65	41.2	39.8	49.8	57.6	43.9	44.0	53.0	61.2	47.8	48.9	57.7	64.3
	70	44.7	45.3	53.7	61.8	44.4	44.7	53.5	61.5	48.0	49.1	57.8	64.4
	75	48.1	50.6	57.7	65.1	48.2	50.7	57.8	65.2	48.5	50.9	58.2	65.3
5500	60	40.8	40.2	48.7	56.9	44.7	44.6	53.2	61.0	48.7	49.4	57.8	64.2
	65	42.9	42.0	50.8	58.5	44.9	44.8	53.3	61.1	48.8	49.6	57.9	64.4
	70	46.5	46.8	54.9	62.3	46.5	46.9	55.0	62.4	49.0	49.8	58.0	64.5
	75	50.0	52.2	58.9	65.8	50.1	52.3	59.0	65.8	49.7	52.4	58.6	65.9
6000	60	41.7	41.0	49.0	56.6	45.6	45.3	53.4	60.9	49.5	50.0	58.0	64.2
	65	44.3	43.4	51.8	58.9	45.8	45.5	53.6	61.1	49.7	50.2	58.1	64.4
	70	48.0	48.2	55.9	62.7	48.1	48.3	55.9	62.8	49.9	50.4	58.2	64.5
	75	51.6	53.7	59.9	66.3	51.7	53.8	60.0	66.4	51.8	53.9	60.1	66.4
<b>Ambient DB 65°F</b>													
2500 <sup>(a)</sup>	60	30.3 <sup>(b)</sup>	32.1 <sup>(b)</sup>	45.3	58.2	34.2 <sup>(b)</sup>	37.3	50.2	61.4	38.2	42.5	55.3	64.5
	65	30.3 <sup>(b)</sup>	32.1 <sup>(b)</sup>	45.3	58.2	34.2 <sup>(b)</sup>	37.3	50.1	61.4	38.2	42.5	55.2	64.4
	70	30.5 <sup>(b)</sup>	32.2 <sup>(b)</sup>	45.4	58.3	34.2 <sup>(b)</sup>	37.4	50.1	61.4	38.2	42.5	55.2	64.4
	75	32.8 <sup>(b)</sup>	37.2	48.3	61.2	34.1 <sup>(b)</sup>	37.5	50.1	61.4	38.2	42.5	55.1	64.5

Table 9. Reheat temperature rise — 12.5 tons (continued)

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
3000 <sup>(a)</sup>	60	33.3 <sup>(b)</sup>	33.6 <sup>(b)</sup>	46.3	58.7	37.3	38.9	51.2	62.0	41.3	44.1	56.3	65.2
	65	33.3 <sup>(b)</sup>	33.7 <sup>(b)</sup>	46.4	58.7	37.3	38.9	51.2	62.1	41.3	44.1	56.2	65.2
	70	34.4 <sup>(b)</sup>	35.4	47.5	59.8	37.3	39.0	51.2	62.1	41.3	44.2	56.2	65.2
	75	37.3	40.2	51.1	62.7	37.6	40.4	51.5	62.8	41.4	44.2	56.2	65.2
3500 <sup>(a)</sup>	60	35.6	35.0	47.2	58.6	39.6	40.2	52.0	62.4	43.6	45.4	56.9	65.5
	65	35.7	35.1	47.2	58.7	39.6	40.3	52.0	62.4	43.6	45.4	56.9	65.6
	70	37.9	37.9	49.7	60.7	39.7	40.3	52.0	62.5	43.7	45.5	56.9	65.6
	75	41.0	42.8	53.4	63.9	41.1	43.0	53.5	64.0	43.8	45.6	56.9	65.7
4000	60	37.4	36.6	47.8	58.3	41.3	41.3	52.5	62.5	45.4	46.4	57.4	65.8
	65	37.8	36.9	48.1	58.5	41.5	41.4	52.6	62.5	45.5	46.5	57.4	65.8
	70	40.8	40.2	51.5	61.5	41.8	41.8	52.8	62.7	45.6	46.6	57.4	65.9
	75	44.0	45.1	55.4	64.8	44.1	45.3	55.5	64.9	45.7	47.0	57.5	66.1
4500	60	38.9	38.0	48.3	57.8	42.8	42.4	52.9	62.5	46.8	47.3	57.7	65.9
	65	39.4	38.4	48.8	58.2	42.9	42.5	53.0	62.5	46.9	47.4	57.8	65.9
	70	43.2	42.3	53.0	62.1	43.4	43.0	53.4	62.8	47.1	47.6	57.8	66.0
	75	46.5	47.2	57.0	65.6	46.6	47.3	57.1	65.7	47.5	48.1	58.2	66.2
5000	60	40.1	39.2	48.7	57.4	44.0	43.2	53.3	62.3	48.0	48.1	58.0	65.9
	65	41.7	39.8	50.3	57.9	44.1	43.4	53.4	62.4	48.1	48.2	58.0	66.0
	70	45.2	44.1	54.3	62.7	44.7	44.1	53.9	62.8	48.3	48.4	58.1	66.1
	75	48.7	49.0	58.4	66.2	48.8	49.1	58.4	66.3	48.8	49.1	58.6	66.4
5500	60	41.1	40.2	49.0	57.0	45.0	44.1	53.5	62.0	49.0	48.8	58.2	65.9
	65	43.3	41.9	51.3	58.7	45.2	44.4	53.7	62.1	49.1	49.0	58.3	66.0
	70	46.9	45.7	55.4	63.1	47.0	45.8	55.5	63.2	49.3	49.2	58.4	66.1
	75	50.5	50.7	59.5	66.8	50.6	50.8	59.6	66.9	50.7	50.9	59.7	67.0
6000	60	41.9	41.1	49.3	56.7	45.8	45.0	53.8	61.6	49.8	49.4	58.4	65.9
	65	44.7	43.4	52.2	59.1	46.0	45.2	53.9	61.7	50.0	49.6	58.4	66.0
	70	48.5	47.1	56.4	63.5	48.5	47.2	56.5	63.6	50.2	49.9	58.6	66.1
	75	52.1	52.2	60.6	67.4	52.2	52.3	60.6	67.4	52.3	52.4	60.7	67.5
<b>Ambient DB 70°F</b>													
2500 <sup>(a)</sup>	60	30.7 <sup>(b)</sup>	31.2 <sup>(b)</sup>	45.8	59.8	34.6 <sup>(b)</sup>	36.6	50.7	63.2	38.7	41.9	55.9	66.3
	65	30.7 <sup>(b)</sup>	31.2 <sup>(b)</sup>	45.8	59.8	34.6 <sup>(b)</sup>	36.5	50.7	63.1	38.7	41.9	55.9	66.3
	70	30.9 <sup>(b)</sup>	31.4 <sup>(b)</sup>	45.9	59.9	34.6 <sup>(b)</sup>	36.6	50.7	63.2	38.6	41.8	55.8	66.3
	75	33.4 <sup>(b)</sup>	35.8	49.0	62.6	34.6 <sup>(b)</sup>	36.7	50.6	63.2	38.7	41.9	55.8	66.3
3000 <sup>(a)</sup>	60	33.7 <sup>(b)</sup>	32.8 <sup>(b)</sup>	46.8	59.6	37.7	38.1	51.7	63.7	41.7	43.4	56.8	67.0
	65	33.7 <sup>(b)</sup>	32.8 <sup>(b)</sup>	46.8	59.6	37.7	38.1	51.7	63.7	41.7	43.4	56.8	67.0
	70	34.9 <sup>(b)</sup>	33.9 <sup>(b)</sup>	48.2	60.5	37.7	38.2	51.7	63.7	41.7	43.4	56.8	67.0
	75	37.9	38.7	51.9	64.0	38.0	38.5	52.0	63.9	41.8	43.5	56.8	67.0
3500 <sup>(a)</sup>	60	36.0	34.9	47.6	59.1	39.9	39.4	52.4	63.9	44.0	44.7	57.4	67.3
	65	36.0	34.9	47.6	59.1	40.0	39.5	52.4	63.9	44.0	44.7	57.4	67.3
	70	38.4	37.0	50.4	61.2	40.1	39.6	52.5	63.9	44.1	44.8	57.4	67.4
	75	41.6	41.4	54.2	65.0	41.7	41.5	54.3	65.1	44.2	44.8	57.5	67.4



# Reheat Temperature Rise

**Table 9. Reheat temperature rise — 12.5 tons (continued)**

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
4000	60	37.8	36.6	48.2	58.5	41.7	40.7	53.0	63.6	45.8	45.8	57.9	67.5
	65	38.1	36.9	48.5	58.7	41.8	40.9	53.0	63.7	45.8	45.8	57.9	67.5
	70	41.3	39.6	52.1	61.9	42.1	41.0	53.3	63.7	45.9	45.9	57.9	67.6
	75	44.6	43.9	56.1	66.0	44.7	44.1	56.2	66.1	46.0	46.0	58.0	67.6
4500	60	39.2	38.1	48.7	57.9	43.1	42.0	53.3	63.1	47.2	46.7	58.2	67.6
	65	39.7	38.5	49.1	58.3	43.3	42.2	53.4	63.2	47.3	46.8	58.2	67.7
	70	43.7	41.9	53.6	62.4	43.7	42.6	53.8	63.5	47.4	47.0	58.3	67.7
	75	47.1	45.9	57.7	66.7	47.2	46.0	57.8	66.8	47.8	47.5	58.6	67.9
5000	60	40.4	39.3	49.0	57.4	44.3	43.2	53.6	62.6	48.3	47.5	58.4	67.5
	65	42.1	39.9	50.8	57.9	44.4	43.4	53.7	62.7	48.4	47.6	58.4	67.6
	70	45.7	43.9	54.9	62.9	45.8	43.9	55.0	63.1	48.6	47.8	58.5	67.7
	75	49.3	47.7	59.0	67.2	49.3	47.8	59.1	67.3	49.2	48.4	59.1	68.0
5500	60	41.3	40.4	49.3	57.0	45.2	44.2	53.9	62.2	49.3	48.3	58.6	67.2
	65	43.7	42.1	51.8	58.8	45.4	44.4	54.0	62.2	49.4	48.4	58.6	67.2
	70	47.4	45.7	56.0	63.4	47.5	45.8	56.1	63.4	49.6	48.6	58.7	67.3
	75	51.1	49.4	60.2	67.7	51.2	49.5	60.3	67.8	51.3	49.3	60.4	67.8
6000	60	42.3	41.3	49.7	56.7	46.1	45.1	54.1	61.7	50.1	49.0	58.7	66.7
	65	45.2	43.6	52.7	59.2	46.3	45.3	54.2	61.8	50.2	49.2	58.8	66.8
	70	48.9	47.2	57.0	63.7	49.0	47.3	57.0	63.8	50.4	49.5	58.9	66.9
	75	52.7	50.9	61.2	68.1	52.8	51.0	61.3	68.2	52.9	51.1	61.4	68.3

**Note:** MIN, MAX: The leaving evaporator temperature is affected by the modulating valve position. The MIN and MAX numbers represent modulating valve position impact on both the leaving evaporator temperature and the leaving reheat coil temperature. MAX represents wide open, MIN represents closed to minimum position.

- (a) Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat.
- (b) The unit might be tripped by Froststat at these conditions due to low leaving evaporator air temperature.

**Table 10. Reheat temperature rise — 15 tons**

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
<b>Ambient DB 60°F</b>													
3000 <sup>(a)</sup>	60	30.3 <sup>(b)</sup>	32.0 <sup>(b)</sup>	47.2	57.8	34.1 <sup>(b)</sup>	37.3	52.1	61.0	38.1	42.5	57.2	64.1
	65	30.5 <sup>(b)</sup>	32.2 <sup>(b)</sup>	47.3	57.9	34.1 <sup>(b)</sup>	37.3	52.1	61.0	38.1	42.6	57.2	64.1
	70	30.8 <sup>(b)</sup>	32.7 <sup>(b)</sup>	47.7	58.1	34.3 <sup>(b)</sup>	37.5	52.2	61.1	38.2	42.7	57.2	64.2
	75	33.0 <sup>(b)</sup>	37.3	50.3	60.9	34.4 <sup>(b)</sup>	38.0	52.3	61.3	38.3	42.9	57.3	64.3
3600 <sup>(a)</sup>	60	33.4 <sup>(b)</sup>	33.8 <sup>(b)</sup>	48.1	58.4	37.2	39.0	53.0	61.6	41.1	44.3	58.0	64.8
	65	33.6 <sup>(b)</sup>	34.1 <sup>(b)</sup>	48.3	58.5	37.3	39.2	53.1	61.7	41.2	44.4	58.0	64.9
	70	34.2 <sup>(b)</sup>	35.9	48.9	59.5	37.5	39.4	53.2	61.8	41.3	44.6	58.1	65.0
	75	37.7	40.8	53.0	62.5	38.1	40.2	53.7	62.2	41.6	44.8	58.2	65.1
4200 <sup>(a)</sup>	60	35.7	35.5	48.9	58.8	39.5	40.5	53.6	62.1	43.4	45.6	58.5	65.3
	65	36.0	34.9	49.1	58.2	39.8	40.7	53.7	62.2	43.6	45.8	58.6	65.4
	70	38.2	38.8	51.4	60.6	40.0	41.0	53.9	62.3	43.8	46.1	58.7	65.5
	75	41.3	43.8	55.2	63.8	40.8	43.9	54.7	63.9	44.1	46.4	58.9	65.6

Table 10. Reheat temperature rise — 15 tons (continued)

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
4800	60	37.6	36.8	49.4	58.7	41.4	41.6	54.0	62.4	45.3	46.6	58.9	65.6
	65	38.3	37.5	49.9	59.1	41.7	42.0	54.2	62.5	45.4	46.9	59.0	65.7
	70	41.1	41.1	53.1	61.6	41.9	41.5	54.4	64.1	45.7	47.3	59.2	65.9
	75	44.4	46.3	56.9	64.9	44.5	46.4	57.0	65.0	46.0	48.0	59.4	66.2
5400	60	39.1	38.2	49.8	58.3	42.8	42.5	54.4	62.5	46.7	47.5	59.1	65.8
	65	40.0	39.0	50.5	58.9	43.2	43.0	54.6	62.7	46.9	47.7	59.3	65.9
	70	43.5	43.1	54.5	62.4	43.9	43.9	55.2	63.1	47.3	48.2	59.5	66.1
	75	46.9	48.3	58.4	65.7	47.0	48.4	58.5	65.8	48.0	49.1	60.0	66.5
6000	60	40.4	39.5	50.2	57.9	44.0	43.4	54.6	62.6	47.9	48.2	59.3	65.9
	65	41.4	40.4	51.0	58.7	44.5	43.9	54.9	62.8	48.2	48.5	59.5	66.0
	70	45.5	44.7	55.7	63.0	45.4	45.0	55.7	63.3	48.6	49.0	59.7	66.2
	75	49.0	50.0	59.7	66.4	49.1	50.1	59.8	66.5	49.4	50.1	60.5	66.7
6600	60	41.4	40.6	50.4	57.6	45.1	44.2	54.8	62.3	48.9	48.8	59.4	65.9
	65	43.6	41.7	52.6	58.5	45.5	44.7	55.2	62.6	49.2	49.2	59.6	66.1
	70	47.3	46.3	56.7	63.4	47.3	45.9	56.8	63.3	49.7	49.8	59.9	66.3
	75	50.8	51.5	60.8	67.0	50.9	51.6	60.9	67.1	50.7	51.0	60.8	66.9
7200	60	42.3	41.5	50.7	57.3	46.0	45.1	55.0	62.0	49.7	49.4	59.5	65.9
	65	45.1	43.8	53.4	59.4	46.4	45.6	55.3	62.3	50.1	49.9	59.8	66.2
	70	48.8	47.6	57.6	63.8	48.8	47.7	57.7	63.9	50.6	50.4	60.1	66.4
	75	52.4	52.9	61.8	67.6	52.5	53.0	61.8	67.6	52.6	53.1	61.9	67.7
<b>Ambient DB 65°F</b>													
3000 <sup>(a)</sup>	60	30.7 <sup>(b)</sup>	31.2 <sup>(b)</sup>	47.8	59.5	34.5 <sup>(b)</sup>	36.4	52.8	62.8	38.5	41.8	57.9	66.0
	65	30.9 <sup>(b)</sup>	31.4 <sup>(b)</sup>	47.9	59.6	34.6 <sup>(b)</sup>	36.5	52.8	62.8	38.6	41.9	58.0	66.1
	70	31.3 <sup>(b)</sup>	31.8 <sup>(b)</sup>	48.3	59.8	34.7 <sup>(b)</sup>	36.7	52.9	62.9	38.6	42.0	58.0	66.1
	75	33.6 <sup>(b)</sup>	35.9	51.2	62.3	34.8 <sup>(b)</sup>	37.1	52.9	63.1	38.8	42.2	58.0	66.2
3600 <sup>(a)</sup>	60	33.7 <sup>(b)</sup>	33.0 <sup>(b)</sup>	48.7	59.9	37.6	38.3	53.6	63.5	41.6	43.5	58.6	66.8
	65	34.0 <sup>(b)</sup>	33.3 <sup>(b)</sup>	48.8	60.0	37.7	38.4	53.7	63.5	41.7	43.7	58.7	66.8
	70	34.6 <sup>(b)</sup>	34.0 <sup>(b)</sup>	49.5	60.5	38.0	38.7	53.8	63.6	41.8	43.9	58.8	66.9
	75	38.3	39.4	53.9	63.9	38.5	39.4	54.3	64.0	42.0	44.1	58.9	67.0
4200 <sup>(a)</sup>	60	36.1	35.0	49.4	59.5	39.9	39.6	54.2	64.0	43.9	44.8	59.1	67.3
	65	36.4	35.2	49.5	59.7	40.2	39.9	54.3	64.1	44.0	45.0	59.2	67.4
	70	38.8	37.4	52.1	61.7	40.4	40.2	54.5	64.2	44.3	45.3	59.3	67.5
	75	42.0	42.2	56.0	65.2	42.1	42.3	56.1	65.3	44.5	45.5	59.5	67.6
4800	60	38.0	36.8	49.9	59.0	41.7	40.8	54.6	64.0	45.7	45.8	59.4	67.6
	65	38.6	37.4	50.4	59.4	42.0	41.1	54.7	64.1	45.9	46.0	59.6	67.7
	70	41.7	40.1	53.8	62.3	42.6	41.4	55.2	64.3	46.2	46.4	59.7	67.8
	75	45.0	44.5	57.8	66.2	45.1	44.6	57.9	66.3	46.4	46.7	59.9	67.9
5400	60	39.5	38.3	50.3	58.5	43.2	42.0	54.8	63.5	47.1	46.6	59.7	67.7
	65	40.3	39.1	51.0	59.1	43.5	42.4	55.1	63.8	47.3	46.9	59.8	67.8
	70	44.0	42.4	55.2	62.8	44.3	43.2	55.7	64.3	47.7	47.4	60.0	68.0
	75	47.5	46.5	59.3	67.0	47.6	46.7	59.3	67.1	48.4	48.2	60.6	68.4



## Reheat Temperature Rise

Table 10. Reheat temperature rise — 15 tons (continued)

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
6000	60	40.7	39.6	50.6	58.1	44.4	43.2	55.1	63.1	48.3	47.4	59.8	67.7
	65	42.5	40.6	52.2	58.8	44.8	43.7	55.4	63.3	48.5	47.7	60.0	67.9
	70	46.1	44.4	56.4	63.3	45.8	44.6	56.2	64.0	49.0	48.2	60.2	68.1
	75	49.6	48.3	60.5	67.6	49.7	48.4	60.6	67.7	49.9	49.3	61.0	68.5
6600	60	41.7	40.7	50.8	57.7	45.4	44.3	55.2	62.6	49.3	48.2	59.9	67.5
	65	44.1	42.6	53.2	59.3	45.8	44.8	55.6	62.9	49.6	48.6	60.1	67.7
	70	47.8	46.1	57.4	63.7	47.9	45.9	57.5	63.7	50.0	49.1	60.4	67.9
	75	51.5	49.9	61.6	68.1	51.5	50.0	61.7	68.2	51.1	50.2	61.3	68.6
7200	60	42.6	41.7	51.0	57.3	46.3	45.2	55.4	62.2	50.1	49.0	60.0	67.1
	65	45.5	44.0	54.0	59.6	46.7	45.7	55.7	62.5	50.5	49.4	60.2	67.3
	70	49.3	47.6	58.3	64.1	49.4	47.7	58.4	64.2	50.9	49.9	60.5	67.6
	75	53.0	51.4	62.6	68.5	53.1	51.5	62.6	68.6	53.2	51.1	62.7	68.4
<b>Ambient DB 70°F</b>													
3000 <sup>(a)</sup>	60	31.2 <sup>(b)</sup>	30.4 <sup>(b)</sup>	48.5	61.0	35.0	35.7	53.5	64.6	39.0	41.2	58.7	68.0
	65	31.3 <sup>(b)</sup>	30.6 <sup>(b)</sup>	48.5	61.1	35.1	35.8	53.5	64.6	39.1	41.3	58.7	68.0
	70	31.7 <sup>(b)</sup>	31.0 <sup>(b)</sup>	48.9	61.4	35.2	35.9	53.6	64.7	39.1	41.3	58.8	68.1
	75	34.3 <sup>(b)</sup>	34.7 <sup>(b)</sup>	52.1	63.8	35.3	36.0	53.6	64.8	39.3	41.5	58.8	68.1
3600 <sup>(a)</sup>	60	34.2 <sup>(b)</sup>	32.8 <sup>(b)</sup>	49.2	60.4	38.1	37.4	54.2	65.3	42.1	42.7	59.4	68.8
	65	34.4 <sup>(b)</sup>	33.0 <sup>(b)</sup>	49.4	60.5	38.2	37.5	54.3	65.4	42.2	42.9	59.4	68.8
	70	35.8	33.6 <sup>(b)</sup>	50.9	61.1	38.4	37.8	54.4	65.5	42.3	43.0	59.5	68.9
	75	38.9	37.8	54.7	65.3	39.0	38.5	55.0	65.9	42.5	43.3	59.6	69.0
4200 <sup>(a)</sup>	60	36.5	35.1	49.9	59.8	40.4	39.0	54.7	65.0	44.4	44.0	59.8	69.2
	65	36.8	35.3	50.1	59.9	40.6	39.3	54.9	65.1	44.5	44.1	59.9	69.3
	70	39.4	37.4	52.9	62.0	40.8	39.5	55.0	65.3	44.7	44.4	60.0	69.4
	75	42.6	40.8	56.9	66.2	42.7	40.4	57.0	65.9	45.0	44.7	60.1	69.5
4800	60	38.3	37.0	50.3	59.1	42.1	40.7	55.1	64.4	46.1	45.0	60.1	69.4
	65	39.0	37.6	50.9	59.6	42.4	41.0	55.3	64.6	46.3	45.2	60.2	69.5
	70	42.2	40.2	54.6	62.6	43.0	41.3	55.8	64.8	46.6	45.6	60.3	69.6
	75	45.6	43.6	58.6	66.9	45.7	43.7	58.7	67.0	46.9	45.9	60.5	69.8
5400	60	39.8	38.5	50.7	58.6	43.6	42.2	55.3	63.9	47.5	46.2	60.2	69.0
	65	40.7	39.3	51.5	59.2	43.9	42.6	55.6	64.1	47.8	46.4	60.4	69.1
	70	44.6	42.6	55.9	63.2	44.7	43.3	56.3	64.6	48.1	46.8	60.6	69.3
	75	48.2	46.0	60.1	67.5	48.2	46.1	60.2	67.6	48.9	47.5	61.2	69.8
6000	60	41.0	39.8	51.0	58.1	44.7	43.4	55.5	63.3	48.7	47.3	60.4	68.4
	65	43.0	40.8	52.9	58.9	45.2	43.9	55.8	63.5	48.9	47.5	60.5	68.6
	70	46.6	44.6	57.1	63.6	46.2	44.8	56.7	64.2	49.4	48.0	60.8	68.8
	75	50.3	48.1	61.4	68.0	50.4	48.2	61.5	68.1	50.3	48.9	61.6	69.4
6600	60	42.0	40.9	51.2	57.7	45.7	44.5	55.6	62.8	49.7	48.3	60.4	67.9
	65	44.6	42.9	53.8	59.5	46.2	45.0	56.0	63.0	50.0	48.6	60.6	68.1
	70	48.4	46.4	58.1	64.1	48.4	46.1	58.2	63.9	50.4	49.1	60.9	68.4
	75	52.1	49.9	62.5	68.5	52.2	50.0	62.5	68.6	52.3	50.1	62.6	69.1



**Table 10. Reheat temperature rise — 15 tons (continued)**

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
7200	60	42.9	41.8	51.4	57.4	46.6	45.4	55.8	62.3	50.4	49.2	60.5	67.5
	65	46.0	44.3	54.6	59.8	47.0	45.9	56.1	62.6	50.8	49.6	60.7	67.7
	70	49.9	48.0	59.0	64.4	49.9	48.0	59.1	64.5	51.3	50.0	61.0	68.0
	75	53.7	51.5	63.4	69.0	53.8	51.6	63.5	69.0	53.9	51.2	63.6	68.8

Note: MIN, MAX: The leaving evaporator temperature is affected by the modulating valve position. The MIN and MAX numbers represent modulating valve position impact on both the leaving evaporator temperature and the leaving reheat coil temperature. MAX represents wide open, MIN represents closed to minimum position.

(a) Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat.

(b) The unit might be tripped by Froststat at these conditions due to low leaving evaporator air temperature.

**Table 11. Reheat temperature rise — 17.5 tons**

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
<b>Ambient DB 60°F</b>													
3500 <sup>(a)</sup>	60	29.8 <sup>(b)</sup>	30.2 <sup>(b)</sup>	41.5	55.9	33.4 <sup>(b)</sup>	34.9 <sup>(b)</sup>	45.9	59.1	37.3	39.8	50.6	62.3
	65	30.1 <sup>(b)</sup>	30.6 <sup>(b)</sup>	41.7	56.0	33.6 <sup>(b)</sup>	35.1	46.0	59.2	37.4	39.9	50.8	62.4
	70	30.2 <sup>(b)</sup>	30.8 <sup>(b)</sup>	41.9	56.1	33.8 <sup>(b)</sup>	35.4	46.2	59.3	37.6	40.1	50.9	62.5
	75	32.4 <sup>(b)</sup>	34.0 <sup>(b)</sup>	44.2	58.2	34.0 <sup>(b)</sup>	35.6	46.4	59.4	37.7	40.4	51.0	62.6
4200 <sup>(a)</sup>	60	32.9 <sup>(b)</sup>	32.5 <sup>(b)</sup>	43.1	55.9	36.6	37.1	47.5	59.9	40.5	41.8	52.2	63.1
	65	33.2 <sup>(b)</sup>	32.9 <sup>(b)</sup>	43.3	56.1	36.8	37.3	47.7	60.0	40.7	42.1	52.4	63.3
	70	34.0 <sup>(b)</sup>	33.8 <sup>(b)</sup>	44.1	56.8	37.1	37.7	47.9	60.2	40.9	42.4	52.6	63.4
	75	37.0	37.8	47.4	59.9	37.8	38.6	48.5	60.6	41.2	42.8	52.8	63.6
4900 <sup>(a)</sup>	60	35.3	34.6	44.3	55.5	39.1	38.8	48.7	60.2	42.9	43.5	53.3	63.6
	65	35.7	35.1	44.6	55.9	39.3	39.2	49.0	60.4	43.1	43.8	53.5	63.8
	70	37.6	36.2	46.5	56.8	39.7	39.7	49.3	60.7	43.4	44.1	53.8	63.9
	75	40.8	41.0	50.1	61.3	40.7	40.8	50.2	61.3	43.9	44.7	54.1	64.2
5600	60	37.2	36.5	45.3	55.3	40.9	40.3	49.6	60.0	44.7	44.8	54.1	63.8
	65	37.7	37.0	45.7	55.6	41.3	40.8	50.0	60.4	45.0	45.2	54.4	64.0
	70	40.6	39.8	48.6	58.4	41.8	41.3	50.4	60.7	45.4	45.7	54.7	64.3
	75	43.9	43.7	52.4	62.3	44.0	43.8	52.5	62.4	45.9	46.2	55.1	64.6
6300	60	38.8	38.1	46.2	55.0	42.4	41.7	50.4	59.8	46.1	46.0	54.7	63.9
	65	39.8	39.1	47.0	55.8	42.9	42.2	50.8	60.2	46.5	46.4	55.1	64.1
	70	43.0	42.1	50.4	59.1	43.8	42.8	51.6	60.6	47.0	47.0	55.5	64.5
	75	46.4	46.0	54.2	63.2	46.5	46.1	54.3	63.3	47.5	47.6	55.9	64.8
7000	60	40.1	39.4	46.9	54.9	43.6	42.9	50.9	59.5	47.3	47.0	55.2	63.8
	65	41.3	40.6	47.9	55.8	44.2	43.5	51.4	60.0	47.8	47.5	55.6	64.2
	70	45.0	44.1	51.9	59.8	45.3	44.6	52.4	60.9	48.3	48.1	56.1	64.6
	75	48.5	48.0	55.7	63.9	48.6	48.1	55.8	64.0	49.4	49.3	57.0	65.2
7700	60	41.2	40.5	47.4	54.7	44.6	43.9	51.4	59.3	48.3	47.8	55.7	63.8
	65	42.6	41.9	48.6	55.8	45.3	44.6	52.0	59.8	48.8	48.4	56.1	64.1
	70	46.8	45.8	53.1	60.3	46.6	45.9	53.1	60.8	49.5	49.1	56.6	64.6
	75	50.3	49.8	57.0	64.6	50.4	49.9	57.1	64.6	50.7	50.5	57.7	65.4



# Reheat Temperature Rise

**Table 11. Reheat temperature rise — 17.5 tons (continued)**

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
8400	60	42.1	41.5	47.9	54.6	45.5	44.8	51.8	59.1	49.2	48.6	56.0	63.6
	65	44.6	43.7	50.2	56.5	46.2	45.6	52.4	59.7	49.7	49.2	56.5	64.0
	70	48.2	47.3	54.2	60.9	47.7	46.7	53.7	60.4	50.4	49.9	57.0	64.5
	75	51.9	51.3	58.2	65.1	51.9	51.4	58.2	65.2	51.8	51.5	58.2	65.5
<b>Ambient DB 65°F</b>													
3500 <sup>(a)</sup>	60	30.9 <sup>(b)</sup>	30.9 <sup>(b)</sup>	35.8	58.7	34.7 <sup>(b)</sup>	35.7	40.0	62.0	38.7	40.7	44.3	65.2
	65	31.2 <sup>(b)</sup>	31.2 <sup>(b)</sup>	36.0	58.9	34.9 <sup>(b)</sup>	35.9	40.1	62.1	38.8	40.9	44.4	65.3
	70	31.7 <sup>(b)</sup>	31.8 <sup>(b)</sup>	36.5	59.2	35.1	36.2	40.3	62.2	39.0	41.1	44.6	65.4
	75	34.0 <sup>(b)</sup>	35.1	39.0	61.3	35.3	36.4	40.5	62.3	39.2	41.4	44.7	65.5
4200 <sup>(a)</sup>	60	34.0 <sup>(b)</sup>	32.8 <sup>(b)</sup>	38.2	58.7	37.7	37.6	42.3	62.6	41.7	42.5	46.6	65.9
	65	34.3 <sup>(b)</sup>	33.2 <sup>(b)</sup>	38.5	59.0	38.0	37.9	42.5	62.7	41.9	42.8	46.8	66.0
	70	35.2	34.1 <sup>(b)</sup>	39.4	59.6	38.3	38.3	42.8	62.9	42.1	43.1	47.0	66.1
	75	38.7	38.7	43.0	62.8	39.0	39.2	43.5	63.4	42.4	43.5	47.3	66.3
4900 <sup>(a)</sup>	60	36.3	34.8 <sup>(b)</sup>	40.0	58.1	40.0	39.2	44.1	62.8	43.9	44.0	48.3	66.2
	65	36.7	35.3	40.4	58.5	40.3	39.6	44.4	63.0	44.2	44.3	48.6	66.4
	70	39.1	36.4	42.8	59.4	40.7	40.1	44.8	63.2	44.5	44.7	48.9	66.5
	75	42.2	41.6	46.2	64.0	41.8	41.3	45.8	63.9	44.9	45.2	49.2	66.8
5600	60	38.1	36.6	41.5	57.6	41.8	40.5	45.5	62.5	45.7	45.2	49.7	66.3
	65	38.9	37.2	42.3	58.0	42.2	41.0	45.9	62.8	46.0	45.6	50.0	66.5
	70	41.8	40.0	45.3	60.8	42.7	41.5	46.3	63.1	46.4	46.1	50.4	66.8
	75	45.2	44.1	48.8	64.9	45.3	44.3	48.9	65.0	46.8	46.6	50.7	67.0
6300	60	39.6	38.2	42.7	57.2	43.2	41.8	46.6	62.1	47.1	46.2	50.8	66.2
	65	40.6	39.1	43.7	58.0	43.7	42.3	47.0	62.5	47.4	46.7	51.1	66.5
	70	44.1	42.3	47.3	61.3	44.7	42.9	47.9	62.8	47.9	47.2	51.5	66.8
	75	47.6	46.3	51.0	65.5	47.7	46.4	51.1	65.6	48.8	47.8	52.3	67.1
7000	60	40.8	39.5	43.6	56.9	44.4	43.0	47.5	61.6	48.2	47.1	51.6	66.1
	65	42.1	40.7	44.8	57.8	44.9	43.6	48.0	62.1	48.6	47.6	52.0	66.4
	70	46.1	44.2	49.0	61.8	46.1	44.8	49.1	62.9	49.2	48.3	52.5	66.8
	75	49.7	48.2	52.8	66.1	49.8	48.3	52.9	66.2	50.3	49.4	53.5	67.5
7700	60	41.8	40.6	44.4	56.6	45.3	44.0	48.2	61.3	49.2	47.9	52.3	65.9
	65	44.1	42.0	46.6	57.6	46.0	44.7	48.8	61.8	49.6	48.4	52.8	66.2
	70	47.8	45.9	50.5	62.2	47.4	46.0	50.1	62.7	50.3	49.2	53.3	66.7
	75	51.5	49.9	54.4	66.6	51.6	50.0	54.5	66.7	51.5	50.6	54.5	67.5
8400	60	42.7	41.6	45.1	56.3	46.2	44.9	48.9	61.0	50.0	48.7	53.0	65.6
	65	45.5	43.8	47.9	58.2	46.9	45.7	49.5	61.5	50.5	49.2	53.4	66.0
	70	49.3	47.4	51.8	62.7	49.3	47.2	51.9	62.6	51.2	50.0	54.0	66.5
	75	53.1	51.4	55.8	67.1	53.2	51.5	55.9	67.1	52.6	51.5	55.4	67.4
<b>Ambient DB 70°F</b>													
3500 <sup>(a)</sup>	60	31.5 <sup>(b)</sup>	30.1 <sup>(b)</sup>	36.4	59.9	35.2	35.0	40.5	63.9	39.2	40.1	44.9	67.2
	65	31.7 <sup>(b)</sup>	30.4 <sup>(b)</sup>	36.6	60.0	35.4	35.2	40.6	64.0	39.3	40.3	45.0	67.3
	70	32.2 <sup>(b)</sup>	30.6 <sup>(b)</sup>	37.1	60.2	35.6	35.5	40.9	64.1	39.5	40.5	45.2	67.4
	75	34.8 <sup>(b)</sup>	34.0 <sup>(b)</sup>	39.8	62.8	35.8	35.7	41.0	64.2	39.7	40.8	45.3	67.5

**Table 11. Reheat temperature rise — 17.5 tons (continued)**

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
4200 <sup>(a)</sup>	60	34.4 <sup>(b)</sup>	32.7 <sup>(b)</sup>	38.7	59.0	38.2	36.8	42.8	64.0	42.1	41.9	47.2	67.8
	65	34.7 <sup>(b)</sup>	33.0 <sup>(b)</sup>	39.0	59.3	38.4	37.1	43.0	64.2	42.3	42.1	47.4	67.9
	70	35.6	33.9 <sup>(b)</sup>	39.8	60.0	38.8	37.5	43.3	64.4	42.6	42.4	47.6	68.0
	75	39.3	37.4	43.8	63.8	39.5	38.3	44.1	64.9	42.9	42.8	47.9	68.2
4900 <sup>(a)</sup>	60	36.7	34.9	40.5	58.2	40.4	38.7	44.6	63.4	44.4	43.4	48.9	67.9
	65	37.1	35.3	40.8	58.5	40.8	39.0	44.9	63.6	44.6	43.7	49.1	68.1
	70	39.6	36.4	43.4	59.5	41.1	39.5	45.2	63.9	44.9	44.0	49.4	68.2
	75	42.8	40.6	46.9	64.5	43.0	40.6	47.0	64.8	45.3	44.5	49.7	68.5
5600	60	38.5	36.7	41.9	57.7	42.1	40.4	45.9	62.8	46.1	44.6	50.2	67.7
	65	39.3	37.3	42.7	58.0	42.6	40.8	46.3	63.1	46.4	44.9	50.5	67.9
	70	42.4	40.0	45.8	60.9	43.0	41.4	46.7	63.4	46.8	45.4	50.8	68.2
	75	45.8	43.4	49.5	65.2	45.9	42.7	49.6	64.5	47.2	45.9	51.2	68.5
6300	60	39.9	38.3	43.0	57.2	43.5	41.9	47.0	62.2	47.5	45.8	51.2	67.2
	65	41.0	39.3	44.1	58.0	44.1	42.4	47.4	62.6	47.8	46.2	51.6	67.5
	70	44.7	42.4	47.9	61.4	45.0	43.0	48.4	62.9	48.3	46.7	52.0	67.9
	75	48.2	45.8	51.6	65.7	48.3	45.9	51.7	65.8	49.2	47.3	52.8	68.2
7000	60	41.1	39.6	44.0	56.9	44.7	43.1	47.8	61.8	48.6	46.9	52.1	66.7
	65	42.4	40.9	45.2	57.8	45.3	43.7	48.4	62.2	49.0	47.3	52.4	67.1
	70	46.6	44.4	49.6	61.9	46.5	44.9	49.5	63.0	49.6	47.9	52.9	67.5
	75	50.3	47.9	53.5	66.3	50.4	48.0	53.6	66.4	50.7	49.0	54.0	68.2
7700	60	42.1	40.8	44.8	56.6	45.7	44.2	48.6	61.4	49.6	47.9	52.8	66.3
	65	44.5	42.2	47.1	57.7	46.3	44.9	49.2	61.9	50.0	48.4	53.2	66.7
	70	48.3	46.1	51.1	62.4	48.4	46.2	51.1	62.8	50.6	49.0	53.7	67.1
	75	52.1	49.7	55.1	66.8	52.2	49.8	55.2	66.9	51.9	50.3	54.9	68.0
8400	60	43.0	41.7	45.4	56.4	46.5	45.1	49.2	61.1	50.4	48.7	53.4	65.9
	65	45.9	44.0	48.3	58.3	47.2	45.8	49.8	61.6	50.9	49.3	53.8	66.4
	70	49.7	47.7	52.3	62.8	49.8	47.3	52.4	62.7	51.5	50.0	54.4	66.8
	75	53.7	51.3	56.5	67.3	53.7	51.4	56.6	67.4	53.8	51.4	56.6	67.8

**Note:** MIN, MAX: The leaving evaporator temperature is affected by the modulating valve position. The MIN and MAX numbers represent modulating valve position impact on both the leaving evaporator temperature and the leaving reheat coil temperature. MAX represents wide open, MIN represents closed to minimum position.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat.

<sup>(b)</sup> The unit might be tripped by Froststat at these conditions due to low leaving evaporator air temperature.

**Table 12. Reheat temperature rise — 20 tons**

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
<b>Ambient DB 60°F</b>													
4000 <sup>(a)</sup>	60	30.0 <sup>(a)</sup>	30.0 <sup>(a)</sup>	41.6	56.6	33.5 <sup>(b)</sup>	34.6 <sup>(b)</sup>	45.9	60.3	37.2	39.4	50.6	63.6
	65	30.3 <sup>(b)</sup>	30.4 <sup>(b)</sup>	41.9	56.8	33.7 <sup>(b)</sup>	34.8 <sup>(b)</sup>	46.1	60.4	37.4	39.7	50.7	63.7
	70	30.6 <sup>(b)</sup>	30.7 <sup>(b)</sup>	42.1	57.0	34.0 <sup>(b)</sup>	35.2	46.4	60.6	37.6	39.9	50.9	63.8
	75	32.7 <sup>(b)</sup>	33.8 <sup>(b)</sup>	44.4	59.3	34.3 <sup>(b)</sup>	35.5	46.6	60.8	37.8	40.2	51.0	64.0



## Reheat Temperature Rise

Table 12. Reheat temperature rise — 20 tons (continued)

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
4800 <sup>(a)</sup>	60	32.9 <sup>(b)</sup>	32.6 <sup>(b)</sup>	43.1	56.3	36.6	36.8	47.4	60.9	40.4	41.5	52.0	64.4
	65	33.4 <sup>(b)</sup>	33.1 <sup>(b)</sup>	43.5	56.7	36.8	37.1	47.7	61.0	40.7	41.8	52.2	64.5
	70	34.3 <sup>(b)</sup>	34.0 <sup>(b)</sup>	44.3	57.4	37.2	37.7	48.0	61.3	40.9	42.2	52.4	64.7
	75	37.3	37.6	47.6	60.8	38.0	38.6	48.7	61.8	41.3	42.7	52.8	64.9
5600 <sup>(a)</sup>	60	35.3	34.7 <sup>(b)</sup>	44.3	55.9	39.0	38.6	48.6	60.8	42.8	43.2	53.1	64.7
	65	35.8	35.3	44.7	56.3	39.3	39.0	48.9	61.1	43.2	43.6	53.4	64.9
	70	37.8	36.6	46.6	57.4	39.8	39.6	49.4	61.4	43.5	44.0	53.7	65.2
	75	40.9	40.8	50.2	62.0	40.9	40.8	50.3	62.3	44.0	44.6	54.1	65.4
6400	60	37.2	36.7	45.3	55.6	40.9	40.3	49.5	60.5	44.7	44.6	53.9	64.9
	65	37.8	37.3	45.8	56.1	41.4	40.8	49.9	60.9	45.1	45.0	54.3	65.1
	70	40.7	40.0	48.7	58.8	41.9	41.4	50.4	61.3	45.6	45.6	54.7	65.4
	75	44.0	43.5	52.3	62.9	44.1	42.9	52.4	62.4	46.1	46.2	55.1	65.8
7200	60	38.8	38.2	46.2	55.4	42.4	41.7	50.2	60.2	46.2	45.7	54.5	64.8
	65	39.9	39.3	47.1	56.3	43.0	42.3	50.7	60.6	46.6	46.2	54.9	65.1
	70	43.1	42.4	50.4	59.5	44.0	43.0	51.6	61.1	47.2	46.9	55.5	65.5
	75	46.5	45.9	54.2	63.7	46.6	46.0	54.3	63.8	47.8	47.6	55.9	65.9
8000	60	40.2	39.6	46.8	55.2	43.7	42.9	50.8	59.9	47.4	46.7	55.1	64.5
	65	41.5	40.9	48.0	56.3	44.3	43.6	51.4	60.4	47.9	47.3	55.5	64.9
	70	45.1	44.3	51.8	60.1	45.5	44.9	52.5	61.4	48.6	48.0	56.1	65.4
	75	48.7	47.9	55.7	64.4	48.8	48.0	55.8	64.5	49.7	49.3	57.1	66.2
8800	60	41.3	40.7	47.4	55.1	44.7	44.0	51.3	59.6	48.4	47.7	55.5	64.3
	65	42.8	42.2	48.7	56.3	45.5	44.8	52.0	60.2	48.9	48.2	55.9	64.7
	70	46.9	46.0	53.1	60.7	46.8	46.2	53.2	61.3	49.7	49.1	56.6	65.3
	75	50.5	49.7	57.1	65.0	50.6	49.8	57.2	65.1	51.0	50.5	57.8	66.3
9600	60	42.2	41.7	47.9	55.0	45.6	44.9	51.7	59.4	49.2	48.5	55.8	64.0
	65	44.6	43.4	50.2	56.3	46.4	45.8	52.4	60.1	49.8	49.1	56.3	64.5
	70	48.4	47.5	54.2	61.2	48.0	47.4	53.8	61.3	50.6	50.0	57.1	65.1
	75	52.1	51.3	58.2	65.6	52.2	51.4	58.3	65.7	52.1	51.6	58.4	66.2
<b>Ambient DB 65°F</b>													
4000 <sup>(a)</sup>	60	30.8 <sup>(b)</sup>	30.7 <sup>(b)</sup>	35.7	59.7	34.6	35.4	39.7	63.2	38.7	40.4	44.2	66.5
	65	31.2 <sup>(b)</sup>	31.0 <sup>(b)</sup>	36.0	59.9	34.8	35.7	39.9	63.4	38.8	40.6	44.3	66.7
	70	31.4 <sup>(b)</sup>	31.4 <sup>(b)</sup>	36.2	60.0	35.0	36.0	40.2	63.6	39.0	40.9	44.5	66.8
	75	34.0 <sup>(b)</sup>	34.9 <sup>(b)</sup>	38.9	62.5	35.3	36.3	40.4	63.7	39.2	41.3	44.7	66.9
4800 <sup>(a)</sup>	60	33.8 <sup>(b)</sup>	32.8 <sup>(b)</sup>	38.0	59.3	37.7	37.4	42.2	63.6	41.7	42.2	46.5	67.1
	65	34.3 <sup>(b)</sup>	33.3 <sup>(b)</sup>	38.4	59.6	38.0	37.7	42.4	63.8	42.0	42.5	46.7	67.2
	70	35.2	34.3 <sup>(b)</sup>	39.4	60.3	38.4	38.3	42.8	64.0	42.2	42.9	47.0	67.4
	75	38.7	38.6	43.0	63.8	39.2	39.2	43.6	64.5	42.6	43.4	47.4	67.6
5600 <sup>(a)</sup>	60	36.2	34.9 <sup>(b)</sup>	39.9	58.6	40.1	38.9	44.1	63.5	43.9	43.7	48.2	67.3
	65	36.7	35.5	40.4	59.0	40.5	39.4	44.4	63.8	44.2	44.1	48.5	67.5
	70	39.1	36.8	42.7	60.1	40.9	40.0	44.8	64.1	44.6	44.5	48.9	67.7
	75	42.4	41.4	46.3	64.8	42.1	41.3	45.9	64.9	45.1	45.1	49.3	68.0

Table 12. Reheat temperature rise — 20 tons (continued)

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
6400	60	38.1	36.8	41.5	58.1	41.8	40.5	45.4	63.0	45.6	44.9	49.5	67.3
	65	39.0	37.4	42.3	58.5	42.4	41.0	45.9	63.4	46.0	45.4	49.9	67.5
	70	41.9	40.2	45.3	61.3	42.9	41.6	46.4	63.8	46.5	46.0	50.4	67.9
	75	45.4	43.9	48.9	65.5	45.5	44.1	49.0	65.6	47.1	46.6	50.8	68.2
7200	60	39.7	38.3	42.7	57.7	43.2	41.8	46.5	62.5	47.0	45.9	50.6	67.1
	65	40.8	39.4	43.7	58.5	43.9	42.5	47.1	63.0	47.4	46.5	51.0	67.4
	70	44.4	42.5	47.4	61.8	44.9	43.2	48.1	63.4	48.1	47.2	51.5	67.8
	75	47.9	46.2	51.1	66.1	47.9	46.3	51.2	66.2	49.0	47.9	52.4	68.2
8000	60	40.9	39.6	43.7	57.3	44.4	43.0	47.4	62.0	48.2	46.9	51.4	66.7
	65	42.3	41.0	44.9	58.3	45.1	43.7	48.1	62.5	48.6	47.4	51.9	67.1
	70	46.3	44.5	49.1	62.2	46.4	45.0	49.3	63.5	49.3	48.2	52.5	67.6
	75	49.9	48.2	52.9	66.6	50.0	48.3	53.0	66.7	50.5	49.5	53.6	68.4
8800	60	42.0	40.8	44.5	57.0	45.4	44.1	48.2	61.6	49.1	47.8	52.1	66.3
	65	44.2	42.3	46.7	58.1	46.2	44.9	48.9	62.2	49.7	48.3	52.7	66.8
	70	48.0	46.2	50.6	62.7	47.6	46.3	50.3	63.2	50.4	49.2	53.3	67.3
	75	51.7	49.9	54.4	67.0	51.7	50.0	54.5	67.1	51.8	50.6	54.6	68.3
9600	60	42.9	41.7	45.2	56.7	46.3	44.9	48.8	61.2	49.9	48.6	52.7	65.9
	65	45.6	44.0	47.9	58.6	47.1	45.8	49.6	61.9	50.6	49.2	53.4	66.4
	70	49.4	47.7	51.9	63.0	49.5	47.4	51.9	63.0	51.3	50.1	54.0	67.0
	75	53.2	51.4	55.8	67.5	53.3	51.5	55.9	67.6	52.8	51.7	55.5	68.1
<b>Ambient DB 70°F</b>													
4000 <sup>(a)</sup>	60	31.3 <sup>(b)</sup>	30.1 <sup>(b)</sup>	36.2	60.5	35.1	34.8 <sup>(b)</sup>	40.3	65.0	39.2	39.8	44.8	68.5
	65	31.6 <sup>(b)</sup>	30.5 <sup>(b)</sup>	36.5	60.7	35.3	35.0	40.5	65.1	39.4	40.0	45.0	68.6
	70	32.2 <sup>(b)</sup>	30.8 <sup>(b)</sup>	37.1	60.9	35.6	35.4	40.7	65.3	39.6	40.3	45.1	68.7
	75	34.7 <sup>(b)</sup>	33.7 <sup>(b)</sup>	39.6	63.6	35.8	35.7	41.0	65.4	39.9	40.6	45.4	68.9
4800 <sup>(a)</sup>	60	34.3 <sup>(b)</sup>	32.8 <sup>(b)</sup>	38.5	59.5	38.2	36.7	42.7	64.7	42.1	41.6	47.0	68.9
	65	34.7 <sup>(b)</sup>	33.3 <sup>(b)</sup>	38.9	59.8	38.4	37.0	43.0	64.9	42.4	41.9	47.2	69.1
	70	35.6	34.2 <sup>(b)</sup>	39.8	60.6	38.9	37.5	43.3	65.2	42.7	42.2	47.5	69.2
	75	39.3	37.5	43.7	64.4	39.7	38.4	44.2	65.8	43.1	42.7	47.9	69.5
5600 <sup>(a)</sup>	60	36.6	35.0	40.4	58.7	40.5	38.7	44.5	63.9	44.3	43.0	48.7	68.8
	65	37.1	35.6	40.8	59.1	40.9	39.1	44.9	64.2	44.6	43.4	49.0	69.0
	70	39.6	36.8	43.4	60.2	41.4	39.7	45.3	64.6	45.0	43.8	49.3	69.3
	75	43.1	40.8	47.0	65.1	42.5	40.8	46.4	65.5	45.5	44.4	49.8	69.6
6400	60	38.5	36.9	41.9	58.2	42.2	40.5	45.8	63.2	46.0	44.4	50.0	68.3
	65	39.4	37.5	42.7	58.5	42.7	41.0	46.3	63.6	46.4	44.8	50.3	68.6
	70	42.5	40.3	45.9	61.4	43.2	41.6	46.8	64.0	46.9	45.4	50.8	68.9
	75	46.0	43.6	49.5	65.7	46.1	43.0	49.6	65.2	47.4	46.0	51.3	69.3
7200	60	40.0	38.4	43.1	57.7	43.6	41.9	46.9	62.6	47.4	45.7	51.0	67.6
	65	41.2	39.6	44.1	58.5	44.2	42.5	47.4	63.0	47.8	46.1	51.4	68.0
	70	44.9	42.6	47.9	61.9	45.3	43.2	48.5	63.5	48.4	46.8	51.9	68.5
	75	48.4	46.0	51.6	66.2	48.5	46.1	51.7	66.3	49.4	47.4	52.9	68.9



## Reheat Temperature Rise

**Table 12. Reheat temperature rise — 20 tons (continued)**

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
8000	60	41.3	39.8	44.0	57.3	44.7	43.1	47.7	62.1	48.5	46.8	51.8	67.1
	65	42.6	41.1	45.3	58.3	45.4	43.8	48.4	62.6	49.0	47.3	52.2	67.5
	70	46.8	44.6	49.6	62.3	46.7	45.1	49.6	63.5	49.7	48.0	52.9	68.0
	75	50.4	48.1	53.4	66.7	50.5	48.2	53.5	66.8	50.9	49.1	54.0	68.8
8800	60	42.3	40.9	44.8	57.0	45.7	44.2	48.5	61.7	49.4	47.8	52.5	66.6
	65	44.7	42.4	47.2	58.1	46.5	45.0	49.2	62.2	50.0	48.4	53.0	67.0
	70	48.4	46.3	51.1	62.7	47.9	46.4	50.6	63.3	50.7	49.1	53.7	67.6
	75	52.1	49.9	55.0	67.2	52.2	50.0	55.1	67.3	52.1	50.5	55.0	68.5
9600	60	43.2	41.9	45.5	56.7	46.6	45.1	49.2	61.3	50.2	48.7	53.1	66.2
	65	46.0	44.2	48.4	58.6	47.3	46.0	49.9	61.9	50.9	49.3	53.7	66.6
	70	49.8	47.8	52.3	63.1	49.9	47.6	52.4	63.1	51.6	50.1	54.4	67.2
	75	53.7	51.4	56.3	67.6	53.7	51.5	56.4	67.7	53.8	51.6	56.5	68.3

Note: MIN, MAX: The leaving evaporator temperature is affected by the modulating valve position. The MIN and MAX numbers represent modulating valve position impact on both the leaving evaporator temperature and the leaving reheat coil temperature. MAX represents wide open, MIN represents closed to minimum position.

- (a) Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat.
- (b) The unit might be tripped by Frost at these conditions due to low leaving evaporator air temperature.

**Table 13. Reheat temperature rise — 25 tons**

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
<b>Ambient DB 60°F</b>													
5000 <sup>(a)</sup>	60	33.1 <sup>(b)</sup>	34.2 <sup>(b)</sup>	44.6	61.1	36.5	38.6	48.8	64.4	40.1	43.1	53.2	67.6
	65	33.8 <sup>(b)</sup>	35.0	45.2	61.5	37.0	39.2	49.2	64.7	40.6	43.7	53.7	67.9
	70	35.0	36.5	46.3	62.2	37.6	40.0	49.8	65.0	41.1	44.3	54.1	68.2
	75	37.7	41.0	49.2	65.2	38.3	41.4	50.3	65.7	41.7	45.1	54.6	68.6
6000 <sup>(a)</sup>	60	35.9	35.9	45.8	61.2	39.3	40.3	50.0	64.6	42.9	44.7	54.3	67.8
	65	36.7	36.9	46.6	61.7	39.9	41.0	50.5	64.9	43.5	45.4	54.9	68.2
	70	38.3	38.8	48.0	62.7	40.7	42.0	51.2	65.4	44.1	46.1	55.4	68.5
	75	42.0	44.2	52.1	66.3	42.1	43.8	52.5	66.2	44.9	47.1	56.1	69.0
7000 <sup>(a)</sup>	60	38.1	37.5	46.9	60.8	41.5	41.6	50.9	64.5	44.9	45.9	55.1	67.8
	65	39.0	38.6	47.7	61.4	42.3	42.6	51.6	65.0	45.6	46.7	55.7	68.2
	70	42.0	42.3	50.6	63.8	43.1	43.6	52.4	65.5	46.3	47.7	56.4	68.7
	75	45.4	46.9	54.3	67.2	44.9	47.0	54.0	67.3	47.2	48.7	57.1	69.2
8000	60	39.8	39.0	47.7	60.3	43.1	42.8	51.6	64.3	46.5	46.9	55.7	67.7
	65	41.3	40.6	49.0	61.3	44.0	43.8	52.4	64.9	47.2	47.8	56.4	68.2
	70	44.6	44.4	52.3	64.3	45.0	45.4	53.2	65.7	48.1	48.9	57.2	68.8
	75	48.1	49.1	56.2	67.9	48.2	49.2	56.3	67.9	49.1	50.0	58.0	69.2
9000	60	41.3	40.4	48.4	59.7	44.4	43.8	52.2	64.0	47.8	47.8	56.2	67.5
	65	43.0	42.3	49.9	61.0	45.4	44.9	53.1	64.7	48.6	48.7	56.9	68.1
	70	46.8	46.2	53.8	64.7	47.1	46.8	54.5	65.7	49.6	50.0	57.8	68.7
	75	50.3	50.9	57.7	68.4	50.4	51.0	57.8	68.5	51.1	51.8	59.1	69.5

Table 13. Reheat temperature rise — 25 tons (continued)

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
10000	60	42.5	41.6	49.0	59.3	45.5	44.7	52.6	63.5	48.8	48.6	56.6	67.3
	65	44.5	43.7	50.7	60.7	46.6	46.0	53.6	64.4	49.7	49.6	57.3	67.9
	70	48.5	47.8	55.0	65.0	48.5	48.0	55.2	65.6	50.8	50.9	58.3	68.6
	75	52.2	52.6	59.0	68.8	52.2	51.7	59.1	69.6	52.6	53.0	59.8	69.5
11000	60	43.5	42.7	49.4	58.9	46.4	45.6	53.0	63.1	49.7	49.3	56.9	67.0
	65	46.3	44.9	52.0	60.4	47.6	46.9	54.0	64.0	50.6	50.3	57.7	67.6
	70	50.0	49.3	56.1	65.2	49.7	49.1	55.8	65.4	51.9	51.7	58.7	68.4
	75	53.7	54.0	60.1	69.2	53.8	54.1	60.2	69.3	53.8	54.0	60.4	69.5
12000	60	44.3	43.6	49.8	58.5	47.2	46.4	53.3	62.7	50.4	49.9	57.1	66.7
	65	47.5	46.6	52.8	60.9	48.5	47.8	54.4	63.7	51.5	51.1	58.1	67.4
	70	51.3	50.5	57.0	65.5	51.4	50.7	57.0	66.0	52.7	52.5	59.1	68.2
	75	55.1	55.2	61.1	69.6	55.2	55.3	61.1	69.6	54.9	54.4	60.9	70.3
<b>Ambient DB 65°F</b>													
5000 <sup>(a)</sup>	60	33.5 <sup>(b)</sup>	33.3 <sup>(b)</sup>	45.0	62.7	36.9	37.9	49.2	66.1	40.6	42.5	53.7	69.4
	65	34.1 <sup>(b)</sup>	34.1 <sup>(b)</sup>	45.6	63.1	37.4	38.4	49.7	66.4	41.1	43.1	54.2	69.7
	70	35.3	35.6	46.7	63.9	38.0	39.2	50.2	66.8	41.5	43.6	54.6	70.0
	75	38.2	39.8	49.8	66.6	38.6	40.6	50.8	67.4	42.1	44.4	55.1	70.4
6000 <sup>(a)</sup>	60	36.2	35.4	46.3	61.9	39.7	39.5	50.4	66.1	43.2	44.0	54.8	69.5
	65	37.0	36.3	47.0	62.5	40.3	40.2	51.0	66.5	43.8	44.7	55.3	69.9
	70	38.6	38.1	48.4	63.7	41.1	41.2	51.7	67.0	44.4	45.4	55.8	70.3
	75	42.5	43.0	52.6	67.6	42.5	43.0	52.9	67.9	45.2	46.4	56.5	70.7
7000 <sup>(a)</sup>	60	38.4	37.4	47.3	61.0	41.8	40.9	51.3	65.7	45.2	45.3	55.5	69.4
	65	39.3	38.4	48.0	61.7	42.6	41.8	52.0	66.2	45.9	46.0	56.1	69.8
	70	42.5	41.4	51.1	64.3	43.5	42.8	52.7	66.8	46.6	47.0	56.7	70.3
	75	45.9	45.7	54.9	68.3	45.3	45.0	54.4	68.0	47.6	48.0	57.5	70.8
8000	60	40.2	39.1	48.1	60.3	43.4	42.4	51.9	64.9	46.8	46.4	56.1	69.1
	65	41.7	40.6	49.4	61.4	44.3	43.3	52.7	65.7	47.5	47.2	56.8	69.6
	70	45.1	43.9	52.8	64.5	45.7	44.4	53.9	66.3	48.4	48.2	57.5	70.2
	75	48.5	47.9	56.7	68.8	48.6	48.0	56.8	68.9	49.4	49.4	58.3	70.7
9000	60	41.5	40.4	48.7	59.8	44.6	43.6	52.5	64.3	48.0	47.3	56.5	68.7
	65	43.3	42.3	50.3	61.0	45.7	44.7	53.4	65.1	48.9	48.2	57.3	69.3
	70	47.1	45.9	54.2	64.8	47.4	46.4	54.8	66.2	49.9	49.4	58.1	70.0
	75	50.7	49.8	58.2	69.2	50.8	49.9	58.3	69.3	51.4	51.0	59.4	70.9
10000	60	42.7	41.6	49.2	59.3	45.7	44.7	52.9	63.7	49.1	48.2	56.9	68.2
	65	44.7	43.8	51.0	60.6	46.9	45.9	53.9	64.6	50.0	49.1	57.7	68.9
	70	48.9	47.7	55.4	65.1	48.8	47.8	55.5	65.9	51.1	50.3	58.6	69.7
	75	52.5	51.5	59.5	69.5	52.6	51.6	59.5	69.6	52.9	52.3	60.1	70.8
11000	60	43.7	42.8	49.7	58.8	46.6	45.7	53.2	63.2	49.9	49.0	57.2	67.6
	65	46.6	45.0	52.3	60.4	47.9	46.9	54.3	64.1	50.9	50.0	58.0	68.4
	70	50.3	49.2	56.4	65.3	50.0	49.0	56.1	65.5	52.1	51.3	59.0	69.3
	75	54.1	53.1	60.6	69.8	54.2	53.1	60.6	69.9	54.1	53.4	60.7	70.6



# Reheat Temperature Rise

**Table 13. Reheat temperature rise — 25 tons (continued)**

Airflow (cfm)	Ent DB (°F)	Entering Wet Bulb (°F)											
		51				55				59			
		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)		Lvg Evap DB (°F)		Lvg Reheat DB (°F)	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
12000	60	44.5	43.7	50.1	58.5	47.5	46.5	53.6	62.8	50.7	49.7	57.4	67.2
	65	47.8	46.7	53.2	60.9	48.7	47.9	54.7	63.7	51.8	50.8	58.4	68.0
	70	51.6	50.5	57.3	65.5	51.7	50.1	57.4	65.3	53.0	52.1	59.4	68.9
	75	55.5	54.4	61.5	70.1	55.5	54.5	61.6	70.1	55.1	54.4	61.2	70.3
<b>Ambient DB 70°F</b>													
5000 <sup>(a)</sup>	60	33.8 <sup>(b)</sup>	32.9 <sup>(b)</sup>	45.5	63.3	37.3	37.1	49.7	67.8	41.0	41.8	54.2	71.3
	65	34.5 <sup>(b)</sup>	33.6 <sup>(b)</sup>	46.1	63.8	37.8	37.7	50.2	68.1	41.5	42.4	54.7	71.5
	70	35.7	34.9 <sup>(b)</sup>	47.2	64.7	38.4	38.5	50.7	68.5	41.9	43.0	55.1	71.8
	75	38.7	38.5	50.5	67.9	39.1	39.2	51.3	68.9	42.6	43.7	55.6	72.2
6000 <sup>(a)</sup>	60	36.6	35.4	46.7	62.0	40.0	38.9	50.8	67.0	43.6	43.4	55.2	71.2
	65	37.4	36.3	47.3	62.6	40.7	39.6	51.4	67.4	44.2	44.0	55.7	71.5
	70	39.0	37.9	48.8	63.9	41.5	40.5	52.1	68.0	44.8	44.7	56.3	71.9
	75	43.0	41.9	53.3	68.4	43.0	42.1	53.4	69.1	45.6	45.7	56.9	72.4
7000 <sup>(a)</sup>	60	38.8	37.5	47.6	61.0	42.1	40.8	51.7	65.9	45.6	44.6	55.9	70.7
	65	39.7	38.5	48.4	61.7	42.8	41.5	52.3	66.5	46.2	45.4	56.5	71.2
	70	42.9	41.4	51.6	64.3	43.8	42.6	53.1	67.2	47.0	46.2	57.2	71.7
	75	46.3	44.9	55.4	68.7	46.4	44.5	55.5	68.6	47.9	47.3	57.9	72.3
8000	60	40.4	39.2	48.4	60.3	43.6	42.4	52.3	65.1	47.1	45.9	56.5	69.9
	65	42.0	40.7	49.7	61.4	44.5	43.3	53.1	65.8	47.8	46.7	57.1	70.5
	70	45.4	43.9	53.3	64.6	46.0	44.4	54.3	66.5	48.7	47.7	57.9	71.2
	75	48.9	47.4	57.2	69.0	49.0	47.5	57.3	69.1	49.7	48.8	58.7	71.8
9000	60	41.8	40.6	49.0	59.7	44.9	43.7	52.8	64.3	48.3	47.1	56.9	69.1
	65	43.6	42.5	50.5	61.0	46.0	44.8	53.7	65.1	49.1	47.9	57.6	69.8
	70	47.5	46.0	54.7	64.8	47.6	46.3	55.1	66.3	50.2	49.0	58.5	70.6
	75	51.1	49.6	58.7	69.3	51.2	49.7	58.8	69.4	51.7	50.6	59.8	71.6
10000	60	42.9	41.7	49.5	59.3	46.0	44.9	53.2	63.8	49.4	48.2	57.2	68.5
	65	45.0	43.9	51.2	60.6	47.1	46.0	54.2	64.6	50.2	49.1	58.0	69.2
	70	49.2	47.8	55.8	65.1	49.0	47.9	55.8	65.9	51.4	50.2	59.0	70.0
	75	52.9	51.4	59.9	69.6	53.0	51.5	60.0	69.7	53.2	52.0	60.5	71.2
11000	60	43.9	42.9	49.9	58.8	46.9	45.8	53.5	63.2	50.2	49.1	57.5	67.9
	65	46.9	45.2	52.7	60.3	48.1	47.1	54.6	64.1	51.2	50.0	58.3	68.7
	70	50.7	49.3	56.8	65.4	50.7	49.2	56.9	65.5	52.4	51.3	59.3	69.5
	75	54.5	53.0	61.0	69.9	54.5	53.1	61.1	70.0	54.4	53.2	61.0	70.8
12000	60	44.7	43.8	50.3	58.5	47.7	46.6	53.9	62.8	50.9	49.8	57.7	67.3
	65	48.1	46.9	53.5	61.0	48.9	48.0	54.9	63.7	52.0	50.9	58.7	68.1
	70	52.0	50.6	57.7	65.6	52.0	50.3	57.8	65.3	53.2	52.2	59.7	69.1
	75	55.8	54.4	62.0	70.2	55.9	54.5	62.0	70.3	56.0	54.3	62.1	70.5

**Note:** MIN, MAX: The leaving evaporator temperature is affected by the modulating valve position. The MIN and MAX numbers represent modulating valve position impact on both the leaving evaporator temperature and the leaving reheat coil temperature. MAX represents wide open, MIN represents closed to minimum position.

- <sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat.
- <sup>(b)</sup> The unit might be tripped by Froststat at these conditions due to low leaving evaporator air temperature.





# Evaporator Fan Performance

Fan Curve Limits:

- TZJ150 to 300 Std Motor, Max 6 hp or 1850 rpm
- TZJ300 High static, Max 9.1 hp or 1940 rpm
- Maximum CFM — 480 cfm/ton
- Maximum ESP = 2.0 in-H<sub>2</sub>O @ 400 cfm/ton

Available static pressure is reduced with options based on the accessory table component pressure drop. To determine available static at RPM/CFM with other options/accessories, select intersection point of RPM vs CFM and then reduce Available External Static Pressure shown in this graph by additional option static pressure drop shown in the fan performance section.

## 12.5 to 25 Ton Units — Downflow

Figure 1. Fan curves — 12.5 to 25 tons, downflow

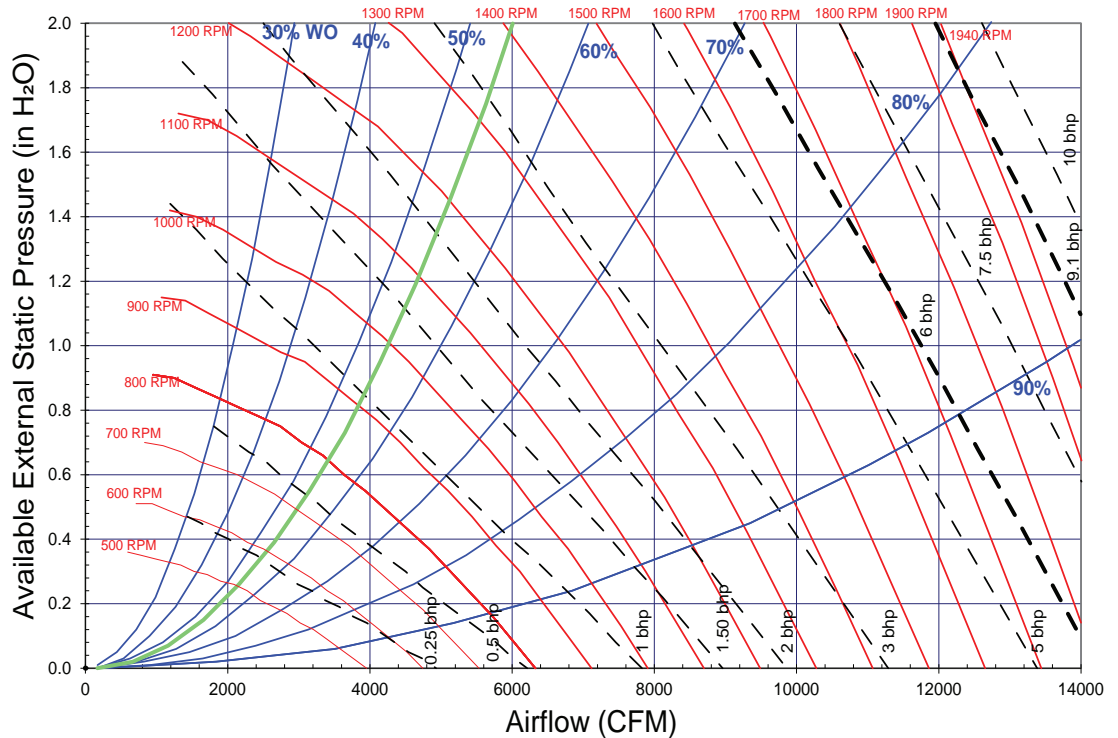


Table 14. Evaporator fan performance - 12.5 ton, downflow

CFM	Available External Static Pressure (Inches of Water Gauge)																			
	0.10"		0.20"		0.30"		0.40"		0.50"		0.60"		0.70"		0.80"		0.90"		1.00"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>3-hp Standard Motor</b>																				
2500 <sup>(a)</sup>	415	0.09	493	0.16	559	0.23	618	0.30	671	0.38	720	0.46	767	0.55	812	0.65	855	0.74	895	0.84
3000 <sup>(a)</sup>	466	0.13	536	0.20	598	0.28	654	0.36	704	0.45	752	0.54	797	0.64	838	0.74	878	0.84	918	0.95
3500 <sup>(a)</sup>	518	0.17	583	0.25	641	0.34	694	0.44	743	0.53	787	0.63	830	0.73	871	0.84	910	0.95	947	1.07
3750	545	0.19	608	0.28	663	0.38	715	0.48	763	0.58	807	0.68	848	0.79	888	0.90	926	1.01	963	1.13
4000	573	0.22	634	0.32	687	0.42	736	0.52	783	0.63	827	0.74	867	0.85	906	0.96	943	1.08	979	1.20
4500	629	0.29	685	0.39	736	0.51	782	0.62	826	0.74	868	0.86	907	0.98	945	1.10	981	1.22	1015	1.35
5000	687	0.37	738	0.48	786	0.61	830	0.73	871	0.86	911	0.99	949	1.12	986	1.25	1021	1.39	1054	1.52
5500	746	0.47	792	0.59	838	0.72	880	0.86	919	0.99	956	1.13	993	1.28	1028	1.42	1062	1.57	1095	1.71
6000	805	0.58	849	0.72	890	0.85	931	1.00	969	1.15	1004	1.30	1039	1.45	1072	1.60	1105	1.76	1136	1.92



## Evaporator Fan Performance

**Table 14. Evaporator fan performance - 12.5 ton, downflow (continued)**

Available External Static Pressure (Inches of Water Gauge)											
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
2500 <sup>(a)</sup>	933 0.95	969 1.05	1004 1.16	1038 1.27	1070 1.39	1102 1.50	1132 1.62	1162 1.74	1190 1.87	1218 1.99	
3000 <sup>(a)</sup>	956 1.06	992 1.17	1027 1.29	1060 1.41	1093 1.53	1124 1.65	1155 1.78	1184 1.91	1213 2.04	1241 2.18	
3500 <sup>(a)</sup>	982 1.18	1016 1.30	1050 1.42	1083 1.55	1116 1.68	1147 1.81	1177 1.95	1207 2.09	1236 2.23	1263 2.37	
3750	998 1.25	1032 1.37	1064 1.5	1095 1.63	1127 1.76	1159 1.9	1189 2.04	1218 2.18	1247 2.32	1275 2.47	
4000	1014 1.33	1048 1.45	1080 1.58	1111 1.71	1141 1.85	1170 1.99	1201 2.13	1230 2.27	1259 2.42	1286 2.57	
4500	1048 1.48	1081 1.62	1113 1.76	1144 1.90	1173 2.04	1202 2.19	1230 2.33	1257 2.48	1284 2.63	1310 2.79	
5000	1086 1.66	1117 1.81	1147 1.95	1177 2.10	1206 2.25	1235 2.40	1263 2.56	1290 2.72	1316 2.88	1342 3.04	
5500	1126 1.86	1157 2.01	1186 2.17	1214 2.32	1242 2.48	1269 2.64	1296 2.80	1323 2.97	1349 3.14	1375 3.31	
6000	1167 2.08	1197 2.24	1226 2.40	1254 2.57	1281 2.73	1308 2.90	1333 3.07	1358 3.25	1383 3.42	1408 3.60	

**Notes:**

1. Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
2. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
3. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
4. Direct drive fan motor heat is negligible.
5. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.

- Electric heaters restricted on applications below 300 cfm/ton.

- VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.

**Table 15. Evaporator fan performance - 15 ton, downflow**

Available External Static Pressure (Inches of Water Gauge)											
CFM	0.10"	0.20"	0.30"	0.40"	0.50"	0.60"	0.70"	0.80"	0.90"	1.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
3000 <sup>(a)</sup>	466 0.13	536 0.20	598 0.28	654 0.36	704 0.45	752 0.54	797 0.64	838 0.74	878 0.84	918 0.95	
3600 <sup>(a)</sup>	528 0.18	593 0.27	650 0.36	702 0.45	751 0.55	795 0.65	836 0.76	878 0.86	916 0.98	953 1.09	
4200 <sup>(a)</sup>	595 0.25	654 0.35	706 0.45	754 0.56	800 0.67	843 0.78	883 0.90	921 1.01	957 1.13	993 1.26	
4500	629 0.29	685 0.39	736 0.51	782 0.62	826 0.74	868 0.86	907 0.98	945 1.10	981 1.22	1015 1.35	
4800	664 0.34	716 0.45	766 0.56	810 0.68	852 0.81	893 0.93	932 1.06	969 1.19	1005 1.32	1038 1.45	
5400	734 0.45	781 0.57	828 0.70	870 0.83	909 0.96	947 1.10	984 1.24	1019 1.39	1053 1.53	1086 1.67	
6000	805 0.58	849 0.72	890 0.85	931 1.00	969 1.15	1004 1.30	1039 1.45	1072 1.60	1105 1.76	1136 1.92	
6600	877 0.74	917 0.89	955 1.04	994 1.20	1030 1.36	1064 1.52	1096 1.68	1128 1.85	1158 2.02	1189 2.19	
7200	950 0.94	987 1.10	1023 1.26	1057 1.42	1092 1.60	1125 1.77	1156 1.95	1186 2.13	1216 2.31	1244 2.49	
<b>Available External Static Pressure (Inches of Water Gauge)</b>											
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
3000 <sup>(a)</sup>	956 1.06	992 1.17	1027 1.29	1060 1.41	1093 1.53	1124 1.65	1155 1.78	1184 1.91	1213 2.04	1241 2.18	
3600 <sup>(a)</sup>	988 1.21	1022 1.33	1055 1.45	1088 1.58	1120 1.71	1152 1.85	1182 1.98	1211 2.12	1240 2.26	1268 2.41	
4200 <sup>(a)</sup>	1028 1.39	1061 1.52	1093 1.65	1124 1.79	1154 1.92	1183 2.06	1211 2.21	1239 2.35	1268 2.5	1296 2.66	
4500	1048 1.48	1081 1.62	1113 1.76	1144 1.90	1173 2.04	1202 2.19	1230 2.33	1257 2.48	1284 2.63	1310 2.79	
4800	1071 1.59	1101 1.73	1133 1.87	1163 2.02	1193 2.16	1222 2.31	1250 2.47	1277 2.62	1303 2.78	1329 2.94	
5400	1118 1.82	1149 1.97	1178 2.12	1207 2.28	1234 2.43	1262 2.59	1289 2.75	1316 2.92	1343 3.08	1368 3.25	
6000	1167 2.08	1197 2.24	1226 2.40	1254 2.57	1281 2.73	1308 2.90	1333 3.07	1358 3.25	1383 3.42	1408 3.60	
6600	1218 2.36	1247 2.54	1275 2.71	1303 2.89	1329 3.07	1355 3.25	1381 3.43	1406 3.61	1430 3.80	1453 3.98	

**Table 15. Evaporator fan performance - 15 ton, downflow (continued)**

Available External Static Pressure (Inches of Water Gauge)											
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
7200	1272 2.68	1299 2.86	1327 3.05	1353 3.24	1379 3.43	1404 3.62	1429 3.82	1454 4.01	1478 4.21	1501 4.40	

**Notes:**

1. Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
2. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
3. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
4. Direct drive fan motor heat is negligible.
5. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.

- Electric heaters restricted on applications below 300 cfm/ton.

- VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.

**Table 16. Evaporator fan performance - 17.5 ton, downflow**

Available External Static Pressure (Inches of Water Gauge)											
CFM	0.10"	0.20"	0.30"	0.40"	0.50"	0.60"	0.70"	0.80"	0.90"	1.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
3500 <sup>(a)</sup>	518 0.17	583 0.25	641 0.34	694 0.44	743 0.53	787 0.63	830 0.73	871 0.84	910 0.95	947 1.07	
4200 <sup>(a)</sup>	595 0.25	654 0.35	706 0.45	754 0.56	800 0.67	843 0.78	883 0.90	921 1.01	957 1.13	993 1.26	
4900 <sup>(a)</sup>	675 0.35	727 0.47	776 0.58	820 0.71	862 0.83	902 0.96	940 1.09	977 1.22	1013 1.35	1046 1.49	
5250	716 0.42	765 0.54	812 0.66	855 0.79	895 0.92	933 1.06	971 1.19	1006 1.33	1041 1.47	1074 1.62	
5600	758 0.49	804 0.61	848 0.75	890 0.88	929 1.02	966 1.16	1001 1.31	1037 1.46	1070 1.60	1103 1.75	
6300	841 0.66	883 0.80	922 0.94	962 1.10	999 1.25	1034 1.40	1067 1.56	1099 1.72	1131 1.89	1162 2.05	
7000	926 0.87	963 1.02	1000 1.18	1036 1.34	1071 1.51	1105 1.68	1136 1.86	1167 2.03	1196 2.21	1225 2.39	
7700	1011 1.12	1046 1.29	1079 1.46	1112 1.64	1144 1.82	1177 2.00	1208 2.19	1237 2.38	1264 2.57	1292 2.76	
8400	1097 1.42	1129 1.60	1160 1.79	1190 1.98	1220 2.17	1250 2.37	1280 2.57	1308 2.78	1335 2.98	1361 3.19	
Available External Static Pressure (Inches of Water Gauge)											
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
3500 <sup>(a)</sup>	982 1.18	1016 1.30	1050 1.42	1083 1.55	1116 1.68	1147 1.81	1177 1.95	1207 2.09	1236 2.23	1263 2.37	
4200 <sup>(a)</sup>	1028 1.39	1061 1.52	1093 1.65	1124 1.79	1154 1.92	1183 2.06	1211 2.21	1239 2.35	1268 2.50	1296 2.66	
4900 <sup>(a)</sup>	1078 1.63	1109 1.77	1140 1.91	1170 2.06	1200 2.21	1228 2.36	1256 2.51	1283 2.67	1310 2.83	1336 2.99	
5250	1106 1.76	1137 1.91	1166 2.06	1195 2.21	1223 2.36	1252 2.52	1279 2.68	1306 2.84	1333 3.01	1358 3.17	
5600	1134 1.90	1165 2.06	1194 2.21	1222 2.37	1250 2.53	1276 2.69	1303 2.85	1330 3.02	1356 3.19	1381 3.37	
6300	1192 2.22	1222 2.39	1250 2.55	1278 2.72	1305 2.90	1331 3.07	1357 3.25	1382 3.42	1406 3.6	1430 3.78	
7000	1254 2.57	1282 2.75	1309 2.94	1336 3.12	1362 3.31	1388 3.49	1413 3.68	1438 3.87	1462 4.07	1485 4.26	
7700	1319 2.96	1345 3.16	1371 3.36	1397 3.56	1422 3.76	1447 3.96	1471 4.17	1495 4.37	1518 4.58	1541 4.78	
8400	1387 3.40	1412 3.61	1437 3.82	1461 4.04	1484 4.26	1508 4.47	1532 4.69	1555 4.91	1577 5.13	1599 5.36	

**Notes:**

1. Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
2. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
3. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
4. Direct drive fan motor heat is negligible.
5. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

(a) Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.

- Electric heaters restricted on applications below 300 cfm/ton.

- VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.



# Evaporator Fan Performance

**Table 17. Evaporator fan performance - 20 ton, downflow**

Available External Static Pressure (Inches of Water Gauge)										
CFM	0.10"	0.20"	0.30"	0.40"	0.50"	0.60"	0.70"	0.80"	0.90"	1.00"
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>										
4000 <sup>(a)</sup>	573 0.22	634 0.32	687 0.42	736 0.52	783 0.63	827 0.74	867 0.85	906 0.96	943 1.08	979 1.20
4800 <sup>(a)</sup>	664 0.34	716 0.45	766 0.56	810 0.68	852 0.81	893 0.93	932 1.06	969 1.19	1005 1.32	1038 1.45
5600 <sup>(a)</sup>	758 0.49	804 0.61	848 0.75	890 0.88	929 1.02	966 1.16	1001 1.31	1037 1.46	1070 1.60	1103 1.75
6000	805 0.58	849 0.72	890 0.85	931 1.00	969 1.15	1004 1.30	1039 1.45	1072 1.60	1105 1.76	1136 1.92
6400	853 0.69	894 0.83	933 0.97	973 1.13	1010 1.28	1044 1.44	1077 1.60	1109 1.77	1140 1.93	1171 2.10
7200	950 0.94	987 1.10	1023 1.26	1057 1.42	1092 1.60	1125 1.77	1156 1.95	1186 2.13	1216 2.31	1244 2.49
8000	1048 1.24	1081 1.42	1114 1.60	1145 1.78	1176 1.96	1208 2.16	1239 2.35	1267 2.55	1295 2.74	1321 2.94
8800	1146 1.61	1177 1.81	1207 2.00	1236 2.20	1264 2.40	1292 2.60	1322 2.81	1350 3.03	1376 3.24	1402 3.46
9600	1244 2.05	1273 2.27	1301 2.48	1328 2.69	1355 2.91	1381 3.12	1406 3.34	1433 3.57	1459 3.81	1485 4.04
<b>Available External Static Pressure (Inches of Water Gauge)</b>										
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>										
4000 <sup>(a)</sup>	1014 1.33	1048 1.45	1080 1.58	1111 1.71	1141 1.85	1170 1.99	1201 2.13	1230 2.27	1259 2.42	1286 2.57
4800 <sup>(a)</sup>	1071 1.59	1101 1.73	1133 1.87	1163 2.02	1193 2.16	1222 2.31	1250 2.47	1277 2.62	1303 2.78	1329 2.94
5600 <sup>(a)</sup>	1134 1.90	1165 2.06	1194 2.21	1222 2.37	1250 2.53	1276 2.69	1303 2.85	1330 3.02	1356 3.19	1381 3.37
6000	1167 2.08	1197 2.24	1226 2.40	1254 2.57	1281 2.73	1308 2.90	1333 3.07	1358 3.25	1383 3.42	1408 3.60
6400	1201 2.27	1230 2.44	1258 2.61	1286 2.78	1313 2.95	1339 3.13	1365 3.31	1390 3.49	1414 3.67	1438 3.85
7200	1272 2.68	1299 2.86	1327 3.05	1353 3.24	1379 3.43	1404 3.62	1429 3.82	1454 4.01	1478 4.21	1501 4.40
8000	1348 3.14	1374 3.35	1399 3.55	1423 3.76	1448 3.97	1473 4.17	1497 4.39	1520 4.60	1543 4.81	1566 5.02
8800	1427 3.67	1451 3.89	1475 4.11	1499 4.34	1522 4.56	1544 4.79	1567 5.02	1590 5.24	1612 5.47	1634 5.7
9600	1508 4.28	1532 4.51	1555 4.75	1577 4.99	1599 5.23	1621 5.47	1642 5.71	1663 5.96	-	-

**Notes:**

1. Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
2. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
3. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
4. Direct drive fan motor heat is negligible.
5. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.

- Electric heaters restricted on applications below 300 cfm/ton.

- VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.

**Table 18. Evaporator fan performance - 25 ton, downflow**

Available External Static Pressure (Inches of Water Gauge)										
CFM	0.10"	0.20"	0.30"	0.40"	0.50"	0.60"	0.70"	0.80"	0.90"	1.00"
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>										
5000 <sup>(a)</sup>	687 0.37	738 0.48	786 0.61	830 0.73	871 0.86	911 0.99	949 1.12	986 1.25	1021 1.39	1054 1.52
6000 <sup>(a)</sup>	805 0.58	849 0.72	890 0.85	931 1.00	969 1.15	1004 1.30	1039 1.45	1072 1.60	1105 1.76	1136 1.92
7000 <sup>(a)</sup>	926 0.87	963 1.02	1000 1.18	1036 1.34	1071 1.51	1105 1.68	1136 1.86	1167 2.03	1196 2.21	1225 2.39
7500	987 1.04	1022 1.21	1056 1.38	1090 1.55	1123 1.73	1156 1.91	1187 2.09	1216 2.28	1245 2.46	1273 2.65
8000	1048 1.24	1081 1.42	1114 1.60	1145 1.78	1176 1.96	1208 2.16	1239 2.35	1267 2.55	1295 2.74	1321 2.94
9000	1170 1.72	1201 1.92	1230 2.12	1259 2.32	1287 2.52	1314 2.72	1343 2.94	1370 3.16	1397 3.38	1423 3.60
10000	1294 2.30	1321 2.52	1348 2.74	1374 2.97	1400 3.19	1425 3.42	1450 3.64	1475 3.88	1501 4.12	1526 4.36
11000	1418 3.01	1443 3.26	1468 3.50	1492 3.74	1515 3.99	1539 4.24	1562 4.48	1585 4.73	1607 4.98	1630 5.24
12000	1542 3.86	1565 4.13	1588 4.39	1611 4.66	1633 4.92	1654 5.19	1676 5.46	1697 5.73	1718 6.00	-
<b>Available External Static Pressure (Inches of Water Gauge)</b>										
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>										
5000 <sup>(a)</sup>	1086 1.66	1117 1.81	1147 1.95	1177 2.10	1206 2.25	1235 2.40	1263 2.56	1290 2.72	1316 2.88	1342 3.04
6000 <sup>(a)</sup>	1167 2.08	1197 2.24	1226 2.40	1254 2.57	1281 2.73	1308 2.90	1333 3.07	1358 3.25	1383 3.42	1408 3.60

**Table 18. Evaporator fan performance - 25 ton, downflow (continued)**

Available External Static Pressure (Inches of Water Gauge)																				
CFM	1.10"		1.20"		1.30"		1.40"		1.50"		1.60"		1.70"		1.80"		1.90"		2.00"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>3-hp Standard Motor</b>																				
7000 <sup>(a)</sup>	1254	2.57	1282	2.75	1309	2.94	1336	3.12	1362	3.31	1388	3.49	1413	3.68	1438	3.87	1462	4.07	1485	4.26
7500	1300	2.84	1326	3.04	1353	3.23	1379	3.43	1405	3.63	1429	3.83	1454	4.03	1478	4.22	1502	4.43	1525	4.63
8000	1348	3.14	1374	3.35	1399	3.55	1423	3.76	1448	3.97	1473	4.17	1497	4.39	1520	4.60	1543	4.81	1566	5.02
9000	1447	3.82	1471	4.04	1495	4.26	1518	4.49	1541	4.72	1563	4.95	1585	5.18	1608	5.42	1630	5.65	1652	5.88
10000	1550	4.61	1573	4.85	1595	5.09	1617	5.34	1638	5.59	1660	5.84	-	-	-	-	-	-	-	-
11000	1653	5.51	1676	5.78	1698	6.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Notes:**

1. Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
2. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
3. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
4. Direct drive fan motor heat is negligible.
5. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.

- Electric heaters restricted on applications below 300 cfm/ton.
- VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.

**Table 19. Evaporator fan performance - 25 ton, downflow, high static drive**

CFM	0.10"		0.20"		0.30"		0.40"		0.50"		0.60"		0.70"		0.80"		0.90"		1.00"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>5-hp Oversized Motor</b>																				
5000 <sup>(a)</sup>	698	0.38	748	0.49	795	0.61	840	0.74	882	0.86	921	0.99	958	1.12	994	1.26	1027	1.40	1061	1.53
6000 <sup>(a)</sup>	819	0.59	862	0.73	903	0.87	942	1.01	980	1.16	1017	1.31	1051	1.46	1085	1.62	1117	1.77	1147	1.93
7000 <sup>(a)</sup>	943	0.88	979	1.04	1015	1.20	1050	1.36	1084	1.53	1118	1.70	1150	1.87	1181	2.05	1211	2.23	1240	2.41
7500	1005	1.06	1039	1.23	1073	1.40	1106	1.57	1138	1.75	1170	1.92	1201	2.11	1231	2.29	1260	2.48	1288	2.67
8000	1068	1.27	1099	1.44	1131	1.62	1163	1.80	1193	1.99	1224	2.18	1253	2.37	1282	2.56	1310	2.76	1338	2.96
9000	1193	1.75	1222	1.95	1250	2.14	1278	2.35	1306	2.56	1334	2.77	1361	2.98	1387	3.19	1413	3.40	1439	3.62
10000	1320	2.36	1346	2.57	1371	2.79	1396	3.01	1422	3.24	1447	3.47	1472	3.70	1496	3.93	1521	4.17	1544	4.40
11000	1447	3.09	1471	3.32	1494	3.56	1517	3.80	1540	4.04	1563	4.29	1586	4.55	1608	4.80	1631	5.06	1653	5.31
12000	1574	3.96	1596	4.21	1618	4.47	1639	4.73	1659	4.99	1681	5.26	1702	5.54	1723	5.81	1744	6.09	1764	6.37
CFM	1.10"		1.20"		1.30"		1.40"		1.50"		1.60"		1.70"		1.80"		1.90"		2.00"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>5-hp Oversized Motor</b>																				
5000 <sup>(a)</sup>	1093	1.67	1124	1.81	1153	1.96	1182	2.11	1210	2.25	1237	2.40	1265	2.56	1291	2.71	1317	2.87	1343	3.03
6000 <sup>(a)</sup>	1177	2.09	1206	2.25	1234	2.42	1262	2.58	1289	2.75	1315	2.92	1341	3.09	1366	3.26	1391	3.43	1415	3.61
7000 <sup>(a)</sup>	1269	2.59	1296	2.77	1323	2.95	1349	3.14	1374	3.32	1399	3.51	1423	3.71	1447	3.90	1471	4.09	1494	4.28
7500	1316	2.87	1343	3.06	1369	3.25	1394	3.45	1419	3.64	1443	3.84	1467	4.04	1490	4.25	1513	4.45	1535	4.66
8000	1364	3.17	1390	3.37	1416	3.58	1441	3.78	1465	3.99	1489	4.20	1512	4.41	1535	4.62	1557	4.83	1579	5.05
9000	1464	3.85	1489	4.07	1513	4.30	1537	4.53	1560	4.76	1583	4.99	1605	5.22	1627	5.45	1649	5.68	1670	5.92
10000	1567	4.64	1591	4.89	1614	5.13	1636	5.38	1658	5.63	1680	5.88	1702	6.14	1723	6.39	1743	6.65	1763	6.91
11000	1675	5.57	1696	5.83	1717	6.10	1739	6.36	1760	6.63	1781	6.91	1801	7.18	1821	7.46	1841	7.73	1861	8.01
12000	1785	6.65	1805	6.93	1825	7.21	1845	7.49	1864	7.78	1884	8.07	1904	8.36	1923	8.66	-	-	-	-

**Notes:**

1. Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
2. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
3. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
4. Direct drive fan motor heat is negligible.
5. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.

- Electric heaters restricted on applications below 300 cfm/ton.
- VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.



Evaporator Fan Performance

# 12.5 to 25 Ton Units — Horizontal

Figure 2. Fan curves — 12.5 to 25 tons, horizontal

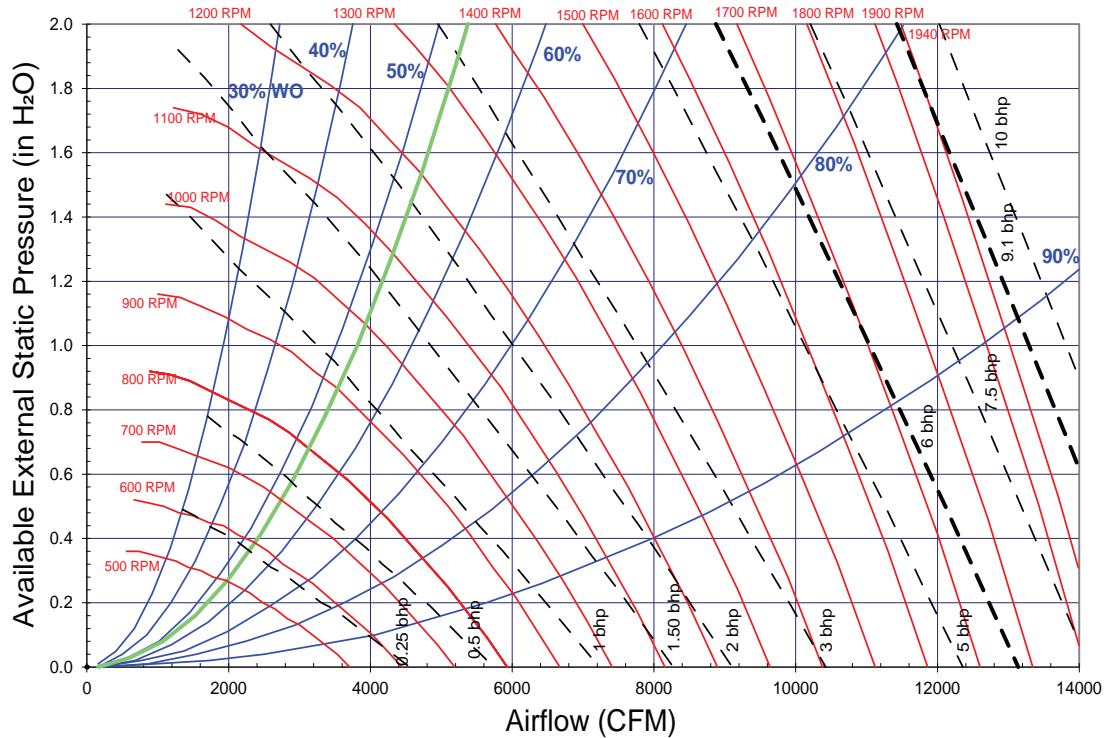


Table 20. Evaporator fan performance - 12.5 ton, horizontal

Available External Static Pressure (Inches of Water Gauge)																				
CFM	0.10"		0.20"		0.30"		0.40"		0.50"		0.60"		0.70"		0.80"		0.90"		1.00"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>3-hp Standard Motor</b>																				
2500 <sup>(a)</sup>	426	0.10	499	0.16	564	0.23	620	0.30	672	0.38	720	0.46	765	0.55	807	0.64	849	0.73	889	0.83
3000 <sup>(a)</sup>	481	0.14	547	0.21	606	0.29	660	0.37	709	0.45	754	0.54	798	0.63	839	0.73	878	0.83	915	0.94
3500 <sup>(a)</sup>	539	0.19	599	0.27	653	0.36	703	0.45	750	0.54	794	0.64	835	0.74	874	0.84	911	0.95	948	1.06
3750	569	0.22	626	0.31	678	0.40	726	0.49	772	0.59	815	0.70	855	0.80	894	0.91	930	1.02	965	1.13
4000	599	0.26	654	0.35	704	0.44	750	0.54	794	0.65	836	0.75	876	0.86	914	0.97	950	1.09	984	1.20
4500	660	0.34	710	0.44	757	0.55	800	0.66	842	0.77	880	0.88	919	1.00	955	1.12	990	1.25	1024	1.37
5000	722	0.44	769	0.55	812	0.67	852	0.78	892	0.91	929	1.03	964	1.16	999	1.29	1033	1.42	1065	1.56
5500	785	0.56	828	0.68	869	0.81	907	0.93	944	1.06	979	1.20	1013	1.34	1046	1.48	1077	1.62	1109	1.76
6000	849	0.70	889	0.83	927	0.97	963	1.11	998	1.25	1031	1.39	1064	1.54	1095	1.69	1125	1.84	1155	1.99
<b>Available External Static Pressure (Inches of Water Gauge)</b>																				
CFM	1.10"		1.20"		1.30"		1.40"		1.50"		1.60"		1.70"		1.80"		1.90"		2.00"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>3-hp Standard Motor</b>																				
2500 <sup>(a)</sup>	928	0.93	964	1.04	999	1.14	1033	1.25	1066	1.37	1097	1.48	1128	1.6	1158	1.72	1186	1.84	1215	1.96
3000 <sup>(a)</sup>	950	1.04	986	1.15	1021	1.27	1054	1.39	1087	1.51	1118	1.63	1149	1.75	1178	1.88	1207	2.01	1235	2.14
3500 <sup>(a)</sup>	983	1.18	1016	1.29	1048	1.41	1079	1.53	1109	1.66	1140	1.79	1170	1.92	1200	2.06	1228	2.19	1256	2.33
3750	999	1.25	1033	1.37	1064	1.49	1095	1.62	1125	1.75	1154	1.88	1182	2.01	1210	2.15	1239	2.29	1267	2.43
4000	1016	1.32	1049	1.45	1081	1.58	1112	1.71	1142	1.84	1170	1.97	1198	2.11	1225	2.25	1252	2.39	1278	2.54
4500	1056	1.5	1087	1.63	1117	1.76	1146	1.89	1175	2.03	1204	2.18	1231	2.32	1258	2.47	1285	2.62	1310	2.77
5000	1097	1.69	1127	1.83	1157	1.97	1185	2.12	1213	2.26	1240	2.41	1266	2.56	1292	2.71	1318	2.87	1344	3.03
5500	1139	1.91	1168	2.06	1197	2.21	1226	2.36	1253	2.51	1279	2.67	1305	2.83	1330	2.98	1355	3.15	1379	3.31

**Table 20. Evaporator fan performance - 12.5 ton, horizontal (continued)**

Available External Static Pressure (Inches of Water Gauge)											
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
6000	1184 2.15	1212 2.30	1240 2.46	1267 2.63	1294 2.79	1320 2.95	1346 3.12	1370 3.29	1395 3.46	1418 3.63	

**Notes:**

- Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
- Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
- To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
- Direct drive fan motor heat is negligible.
- Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.

- Electric heaters restricted on applications below 300 cfm/ton.

- VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.

**Table 21. Evaporator fan performance - 15 ton, horizontal**

Available External Static Pressure (Inches of Water Gauge)											
CFM	0.10"	0.20"	0.30"	0.40"	0.50"	0.60"	0.70"	0.80"	0.90"	1.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
3000 <sup>(a)</sup>	481 0.14	547 0.21	606 0.29	660 0.37	709 0.45	754 0.54	798 0.63	839 0.73	878 0.83	915 0.94	
3600 <sup>(a)</sup>	551 0.20	610 0.29	663 0.37	712 0.47	758 0.56	802 0.66	843 0.76	882 0.87	918 0.97	954 1.09	
4200 <sup>(a)</sup>	623 0.29	676 0.38	725 0.48	770 0.59	812 0.69	853 0.80	892 0.92	930 1.03	966 1.15	1000 1.27	
4500	660 0.34	710 0.44	757 0.55	800 0.66	842 0.77	880 0.88	919 1.00	955 1.12	990 1.25	1024 1.37	
4800	697 0.40	745 0.51	790 0.62	831 0.73	871 0.85	909 0.97	946 1.09	981 1.22	1015 1.35	1048 1.48	
5400	772 0.53	816 0.65	857 0.78	896 0.90	933 1.03	969 1.16	1003 1.30	1036 1.44	1068 1.58	1100 1.72	
6000	849 0.70	889 0.83	927 0.97	963 1.11	998 1.25	1031 1.39	1064 1.54	1095 1.69	1125 1.84	1155 1.99	
6600	926 0.90	962 1.05	998 1.20	1032 1.35	1064 1.50	1096 1.65	1126 1.81	1156 1.97	1185 2.13	1213 2.30	
7200	1004 1.14	1037 1.30	1071 1.46	1103 1.62	1133 1.79	1162 1.95	1191 2.12	1219 2.29	1247 2.46	1274 2.64	

**Available External Static Pressure (Inches of Water Gauge)**

CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
3000 <sup>(a)</sup>	950 1.04	986 1.15	1021 1.27	1054 1.39	1087 1.51	1118 1.63	1149 1.75	1178 1.88	1207 2.01	1235 2.14	
3600 <sup>(a)</sup>	989 1.20	1023 1.32	1055 1.44	1085 1.57	1115 1.69	1144 1.82	1174 1.96	1204 2.09	1233 2.23	1261 2.37	
4200 <sup>(a)</sup>	1032 1.39	1063 1.52	1095 1.65	1125 1.78	1155 1.92	1184 2.05	1211 2.19	1239 2.34	1265 2.48	1291 2.63	
4500	1056 1.50	1087 1.63	1117 1.76	1146 1.89	1175 2.03	1204 2.18	1231 2.32	1258 2.47	1285 2.62	1310 2.77	
4800	1080 1.61	1111 1.75	1141 1.89	1169 2.02	1197 2.17	1224 2.31	1252 2.46	1278 2.61	1305 2.77	1330 2.92	
5400	1130 1.86	1160 2.01	1189 2.16	1217 2.31	1245 2.46	1271 2.61	1297 2.77	1323 2.93	1347 3.09	1371 3.25	
6000	1184 2.15	1212 2.30	1240 2.46	1267 2.63	1294 2.79	1320 2.95	1346 3.12	1370 3.29	1395 3.46	1418 3.63	
6600	1241 2.46	1268 2.63	1294 2.80	1320 2.98	1346 3.15	1371 3.33	1395 3.51	1419 3.69	1443 3.87	1467 4.05	
7200	1300 2.82	1326 3.00	1352 3.18	1376 3.37	1400 3.55	1424 3.74	1448 3.93	1472 4.12	1494 4.31	1517 4.51	

**Notes:**

- Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
- Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
- To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
- Direct drive fan motor heat is negligible.
- Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.

- Electric heaters restricted on applications below 300 cfm/ton.

- VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.



# Evaporator Fan Performance

**Table 22. Evaporator fan performance - 17.5 ton, horizontal**

Available External Static Pressure (Inches of Water Gauge)										
CFM	0.10"	0.20"	0.30"	0.40"	0.50"	0.60"	0.70"	0.80"	0.90"	1.00"
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>										
3500 <sup>(a)</sup>	539 0.19	599 0.27	653 0.36	703 0.45	750 0.54	794 0.64	835 0.74	874 0.84	911 0.95	948 1.06
4200 <sup>(a)</sup>	623 0.29	676 0.38	725 0.48	770 0.59	812 0.69	853 0.80	892 0.92	930 1.03	966 1.15	1000 1.27
4900 <sup>(a)</sup>	709 0.42	757 0.53	801 0.64	842 0.76	881 0.88	919 1.00	955 1.13	990 1.25	1024 1.39	1056 1.52
5250	753 0.50	798 0.61	840 0.73	880 0.86	917 0.98	954 1.11	988 1.25	1022 1.38	1055 1.52	1087 1.66
5600	798 0.59	840 0.71	880 0.84	918 0.97	954 1.10	989 1.24	1023 1.37	1056 1.52	1087 1.66	1118 1.81
6300	887 0.80	925 0.94	962 1.08	997 1.22	1031 1.37	1063 1.52	1095 1.67	1125 1.82	1155 1.98	1184 2.14
7000	978 1.06	1012 1.21	1046 1.37	1079 1.53	1110 1.69	1140 1.85	1169 2.01	1198 2.18	1226 2.35	1254 2.52
7700	1069 1.38	1100 1.54	1131 1.71	1162 1.88	1191 2.06	1219 2.24	1247 2.41	1274 2.59	1300 2.77	1326 2.96
8400	1160 1.75	1189 1.93	1218 2.12	1247 2.30	1274 2.49	1301 2.68	1327 2.88	1352 3.07	1377 3.26	1401 3.46
Available External Static Pressure (Inches of Water Gauge)										
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>										
3500 <sup>(a)</sup>	983 1.18	1016 1.29	1048 1.41	1079 1.53	1109 1.66	1140 1.79	1170 1.92	1200 2.06	1228 2.19	1256 2.33
4200 <sup>(a)</sup>	1032 1.39	1063 1.52	1095 1.65	1125 1.78	1155 1.92	1184 2.05	1211 2.19	1239 2.34	1265 2.48	1291 2.63
4900 <sup>(a)</sup>	1088 1.65	1119 1.79	1149 1.93	1177 2.07	1205 2.21	1232 2.36	1258 2.51	1285 2.66	1311 2.82	1337 2.97
5250	1117 1.80	1148 1.94	1177 2.09	1205 2.24	1233 2.38	1259 2.53	1285 2.69	1311 2.84	1335 3.00	1360 3.16
5600	1148 1.95	1177 2.11	1206 2.26	1234 2.41	1261 2.57	1287 2.72	1313 2.88	1338 3.04	1363 3.21	1387 3.37
6300	1212 2.3	1239 2.46	1267 2.63	1293 2.8	1319 2.97	1345 3.14	1370 3.31	1395 3.48	1419 3.66	1443 3.83
7000	1280 2.70	1307 2.87	1332 3.05	1357 3.23	1382 3.41	1406 3.60	1430 3.78	1454 3.97	1477 4.16	1500 4.35
7700	1352 3.15	1377 3.34	1401 3.53	1425 3.72	1448 3.92	1471 4.11	1494 4.31	1516 4.51	1539 4.71	1561 4.92
8400	1425 3.66	1449 3.86	1473 4.07	1495 4.27	1518 4.48	1540 4.69	1562 4.9	1583 5.12	1604 5.33	1625 5.55

**Notes:**

1. Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
2. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
3. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
4. Direct drive fan motor heat is negligible.
5. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.

- Electric heaters restricted on applications below 300 cfm/ton.

- VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.

**Table 23. Evaporator fan performance - 20 ton, horizontal**

Available External Static Pressure (Inches of Water Gauge)										
CFM	0.10"	0.20"	0.30"	0.40"	0.50"	0.60"	0.70"	0.80"	0.90"	1.00"
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>										
4000 <sup>(a)</sup>	599 0.26	654 0.35	704 0.44	750 0.54	794 0.65	836 0.75	876 0.86	914 0.97	950 1.09	984 1.20
4800 <sup>(a)</sup>	697 0.40	745 0.51	790 0.62	831 0.73	871 0.85	909 0.97	946 1.09	981 1.22	1015 1.35	1048 1.48
5600 <sup>(a)</sup>	798 0.59	840 0.71	880 0.84	918 0.97	954 1.10	989 1.24	1023 1.37	1056 1.52	1087 1.66	1118 1.81
6000	849 0.70	889 0.83	927 0.97	963 1.11	998 1.25	1031 1.39	1064 1.54	1095 1.69	1125 1.84	1155 1.99
6400	900 0.83	938 0.97	974 1.12	1009 1.26	1042 1.41	1074 1.56	1105 1.71	1136 1.87	1165 2.03	1194 2.19
7200	1004 1.14	1037 1.30	1071 1.46	1103 1.62	1133 1.79	1162 1.95	1191 2.12	1219 2.29	1247 2.46	1274 2.64
8000	1108 1.53	1138 1.70	1168 1.88	1198 2.06	1227 2.24	1254 2.42	1281 2.60	1307 2.79	1333 2.98	1358 3.16
8800	1213 2.00	1241 2.19	1267 2.38	1295 2.57	1322 2.77	1348 2.97	1373 3.17	1398 3.37	1422 3.57	1445 3.78
9600	1319 2.55	1344 2.76	1369 2.97	1394 3.18	1419 3.39	1444 3.61	1467 3.82	1491 4.04	1513 4.26	1535 4.48
Available External Static Pressure (Inches of Water Gauge)										
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>										
4000 <sup>(a)</sup>	1016 1.32	1049 1.45	1081 1.58	1112 1.71	1142 1.84	1170 1.97	1198 2.11	1225 2.25	1252 2.39	1278 2.54
4800 <sup>(a)</sup>	1080 1.61	1111 1.75	1141 1.89	1169 2.02	1197 2.17	1224 2.31	1252 2.46	1278 2.61	1305 2.77	1330 2.92



**Table 23. Evaporator fan performance - 20 ton, horizontal (continued)**

Available External Static Pressure (Inches of Water Gauge)											
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
5600 <sup>(a)</sup>	1148 1.95	1177 2.11	1206 2.26	1234 2.41	1261 2.57	1287 2.72	1313 2.88	1338 3.04	1363 3.21	1387 3.37	
6000	1184 2.15	1212 2.30	1240 2.46	1267 2.63	1294 2.79	1320 2.95	1346 3.12	1370 3.29	1395 3.46	1418 3.63	
6400	1222 2.35	1248 2.52	1276 2.69	1302 2.86	1328 3.03	1353 3.20	1378 3.37	1403 3.55	1427 3.73	1451 3.90	
7200	1300 2.82	1326 3.00	1352 3.18	1376 3.37	1400 3.55	1424 3.74	1448 3.93	1472 4.12	1494 4.31	1517 4.51	
8000	1383 3.36	1408 3.55	1431 3.75	1455 3.95	1478 4.15	1501 4.35	1523 4.56	1545 4.76	1566 4.97	1588 5.18	
8800	1469 3.98	1491 4.19	1514 4.40	1537 4.62	1559 4.83	1580 5.05	1601 5.27	1623 5.49	1643 5.71	1664 5.94	
9600	1557 4.70	1579 4.93	1600 5.15	1621 5.38	1642 5.61	1663 5.84	- -	- -	- -	- -	

**Notes:**

1. Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
2. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
3. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
4. Direct drive fan motor heat is negligible.
5. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

<sup>(a)</sup> Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.

- Electric heaters restricted on applications below 300 cfm/ton.

- VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.

**Table 24. Evaporator fan performance - 25 ton, horizontal**

Available External Static Pressure (Inches of Water Gauge)											
CFM	0.10"	0.20"	0.30"	0.40"	0.50"	0.60"	0.70"	0.80"	0.90"	1.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
5000 <sup>(a)</sup>	722 0.44	769 0.55	812 0.67	852 0.78	892 0.91	929 1.03	964 1.16	999 1.29	1033 1.42	1065 1.56	
6000 <sup>(a)</sup>	849 0.70	889 0.83	927 0.97	963 1.11	998 1.25	1031 1.39	1064 1.54	1095 1.69	1125 1.84	1155 1.99	
7000 <sup>(a)</sup>	978 1.06	1012 1.21	1046 1.37	1079 1.53	1110 1.69	1140 1.85	1169 2.01	1198 2.18	1226 2.35	1254 2.52	
7500	1043 1.28	1075 1.44	1107 1.61	1138 1.78	1168 1.95	1196 2.12	1225 2.29	1252 2.47	1279 2.65	1305 2.83	
8000	1108 1.53	1138 1.70	1168 1.88	1198 2.06	1227 2.24	1254 2.42	1281 2.60	1307 2.79	1333 2.98	1358 3.16	
9000	1239 2.13	1266 2.32	1293 2.52	1320 2.72	1346 2.92	1372 3.12	1397 3.32	1421 3.53	1444 3.74	1468 3.94	
10000	1372 2.87	1396 3.08	1420 3.30	1443 3.52	1468 3.74	1492 3.96	1515 4.19	1538 4.41	1560 4.64	1581 4.87	
11000	1505 3.76	1526 4.00	1548 4.24	1570 4.48	1591 4.72	1614 4.96	1635 5.21	1657 5.46	1677 5.70	1698 5.95	
12000	1638 4.84	1657 5.10	1677 5.36	1697 5.62	1717 5.88	- -	- -	- -	- -	- -	
Available External Static Pressure (Inches of Water Gauge)											
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"	
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>3-hp Standard Motor</b>											
5000 <sup>(a)</sup>	1097 1.69	1127 1.83	1157 1.97	1185 2.12	1213 2.26	1240 2.41	1266 2.56	1292 2.71	1318 2.87	1344 3.03	
6000 <sup>(a)</sup>	1184 2.15	1212 2.30	1240 2.46	1267 2.63	1294 2.79	1320 2.95	1346 3.12	1370 3.29	1395 3.46	1418 3.63	
7000 <sup>(a)</sup>	1280 2.70	1307 2.87	1332 3.05	1357 3.23	1382 3.41	1406 3.60	1430 3.78	1454 3.97	1477 4.16	1500 4.35	
7500	1331 3.01	1356 3.20	1381 3.39	1405 3.58	1429 3.77	1452 3.96	1475 4.15	1498 4.35	1521 4.55	1543 4.75	
8000	1383 3.36	1408 3.55	1431 3.75	1455 3.95	1478 4.15	1501 4.35	1523 4.56	1545 4.76	1566 4.97	1588 5.18	
9000	1491 4.15	1513 4.37	1535 4.58	1558 4.80	1579 5.02	1601 5.24	1622 5.46	1642 5.69	1663 5.91	- -	
10000	1602 5.10	1623 5.33	1644 5.56	1665 5.80	1685 6.03	- -	- -	- -	- -	- -	
11000	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
12000	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	

**Notes:**

1. Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
2. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
3. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
4. Direct drive fan motor heat is negligible.
5. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.



## Evaporator Fan Performance

**Table 24. Evaporator fan performance - 25 ton, horizontal (continued)**

- (a) Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.
- Electric heaters restricted on applications below 300 cfm/ton.
  - VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.

**Table 25. Evaporator fan performance - 25 ton, horizontal, high static drive**

Available External Static Pressure (Inches of Water Gauge)												
CFM	0.10"	0.20"	0.30"	0.40"	0.50"	0.60"	0.70"	0.80"	0.90"	1.00"		
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>5-hp Oversized Motor</b>												
5000 <sup>(a)</sup>	737 0.45	782 0.56	824 0.68	865 0.80	902 0.91	939 1.04	974 1.17	1006 1.29	1038 1.42	1071 1.56		
6000 <sup>(a)</sup>	868 0.73	906 0.86	943 0.99	978 1.13	1013 1.27	1045 1.41	1076 1.55	1107 1.70	1137 1.85	1166 2.01		
7000 <sup>(a)</sup>	1000 1.10	1034 1.25	1066 1.41	1097 1.56	1127 1.72	1158 1.88	1187 2.05	1215 2.21	1241 2.37	1268 2.54		
7500	1066 1.33	1098 1.49	1129 1.66	1159 1.82	1187 1.99	1215 2.16	1244 2.34	1271 2.51	1297 2.69	1322 2.86		
8000	1133 1.59	1163 1.76	1193 1.94	1221 2.11	1248 2.29	1274 2.47	1301 2.66	1327 2.84	1353 3.03	1377 3.22		
9000	1268 2.21	1295 2.41	1321 2.60	1347 2.80	1372 3.00	1396 3.20	1420 3.40	1443 3.61	1467 3.81	1490 4.02		
10000	1403 2.98	1427 3.20	1451 3.42	1475 3.63	1498 3.85	1521 4.07	1543 4.30	1564 4.52	1585 4.75	1606 4.97		
11000	1538 3.92	1561 4.16	1583 4.40	1604 4.64	1626 4.88	1647 5.12	1667 5.36	1688 5.60	1707 5.85	1727 6.09		
12000	1674 5.04	1695 5.30	1715 5.57	1735 5.82	1755 6.08	1775 6.34	1794 6.60	1813 6.87	1831 7.13	1850 7.40		
<b>Available External Static Pressure (Inches of Water Gauge)</b>												
CFM	1.10"	1.20"	1.30"	1.40"	1.50"	1.60"	1.70"	1.80"	1.90"	2.00"		
	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
<b>5-hp Oversized Motor</b>												
5000 <sup>(a)</sup>	1102 1.70	1133 1.84	1163 1.99	1192 2.13	1220 2.28	1248 2.43	1274 2.58	1300 2.74	1325 2.89	1350 3.05		
6000 <sup>(a)</sup>	1194 2.15	1220 2.31	1246 2.46	1274 2.62	1301 2.79	1327 2.96	1353 3.14	1378 3.31	1402 3.48	1427 3.66		
7000 <sup>(a)</sup>	1295 2.72	1321 2.90	1346 3.08	1370 3.25	1393 3.43	1416 3.60	1439 3.78	1461 3.96	1485 4.16	1508 4.35		
7500	1346 3.04	1372 3.23	1396 3.41	1420 3.61	1444 3.80	1466 3.99	1488 4.17	1510 4.36	1531 4.55	1551 4.74		
8000	1401 3.40	1424 3.59	1448 3.78	1471 3.98	1494 4.19	1517 4.39	1538 4.60	1560 4.80	1580 5.00	1601 5.20		
9000	1513 4.23	1535 4.44	1557 4.65	1578 4.86	1599 5.07	1619 5.29	1640 5.51	1661 5.74	1681 5.96	1701 6.19		
10000	1628 5.20	1649 5.43	1670 5.67	1690 5.90	1710 6.14	1729 6.37	1748 6.60	1767 6.84	1785 7.07	1804 7.31		
11000	1746 6.34	1765 6.59	1784 6.85	1804 7.10	1823 7.36	1842 7.61	1860 7.87	1878 8.13	1896 8.38	1913 8.64		
12000	1868 7.67	1886 7.94	1903 8.21	1920 8.48	1938 8.76	-	-	-	-	-		

**Notes:**

1. Available External Static Pressure is the static pressure difference between the return duct and the supply duct plus the static pressure drop caused by accessories and options.
  2. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
  3. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
  4. Direct drive fan motor heat is negligible.
  5. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.
- (a) Unit applications below 300 cfm/ton are only applicable to TZJ models without electric heat. See below for restrictions.
- Electric heaters restricted on applications below 300 cfm/ton.
  - VAV applications are capable of running below 300 cfm/ton during low speed airflow operation, but "full" airflow must be set to 300 cfm/ton or higher.



# Fan Performance

**Table 26. Outdoor sound power level**

Tons	Unit Model Number	Octave Center Frequency								Overall dBA
		63	125	250	500	1000	2000	4000	8000	
12.5	TZJ150A*	96	88	88	87	86	81	78	73	90
15	TZJ180A*	96	89	88	87	87	82	78	72	91
17.5	TZJ210A*	91	93	92	90	88	84	80	75	93
20	TZJ240A*	93	93	92	91	89	84	80	76	93
25	TZJ300A*	92	94	93	90	89	84	80	74	93

**Notes:**

1. Outdoor sound rating shown is tested in accordance with AHRI 370-2015.
2. Indoor sound in accordance with AHRI 260 is available through Trane's selection software.

**Table 27. Static pressure drop through accessories (inches water column) - ultra high efficiency**

Tons	Unit Model Number	CFM <sup>(a)</sup>	Standard Filters <sup>(b)</sup>	2" MERV 8 Filter <sup>(c)</sup>	2" MERV 13 Filter <sup>(c)</sup>	Reheat Coil	Economizer with OA/RA Dampers <sup>(d)</sup>								Electric Heater			
							Downflow		Horizontal		Low Leak Downflow		Low Leak Horizontal		Accessory (kW)			
							100% OA	100% RA	100% OA	100% RA	100% OA	100% RA	100% OA	100% RA	18	36	54	72
12.5	TZJ150A	3750	0.02	0.04	0.07	0.02	0.10	0.02	0.10	0.02	0.11	0.09	0.05	0.09	0.00	0.01	0.01	N/A
		5000	0.03	0.06	0.10	0.02	0.15	0.03	0.15	0.03	0.17	0.13	0.09	0.14	0.01	0.03	0.03	N/A
		6000	0.04	0.08	0.13	0.03	0.20	0.04	0.20	0.04	0.23	0.17	0.12	0.18	0.01	0.04	0.04	N/A
15	TZJ180A	4500	0.03	0.05	0.09	0.02	0.13	0.02	0.13	0.02	0.14	0.11	0.07	0.12	0.01	0.02	0.02	N/A
		6000	0.04	0.08	0.13	0.03	0.20	0.04	0.20	0.04	0.23	0.17	0.12	0.18	0.01	0.04	0.04	N/A
		7200	0.06	0.10	0.17	0.04	0.27	0.05	0.27	0.05	0.32	0.23	0.16	0.25	0.02	0.06	0.06	N/A
17.5	TZJ210A	5250	0.04	0.06	0.11	0.03	0.16	0.03	0.16	0.03	0.19	0.14	0.09	0.15	N/A	0.03	0.03	0.03
		7000	0.05	0.10	0.17	0.04	0.26	0.05	0.26	0.05	0.30	0.22	0.15	0.24	N/A	0.06	0.06	0.06
		8400	0.07	0.13	0.22	0.05	0.35	0.06	0.35	0.06	0.42	0.29	0.21	0.33	N/A	0.09	0.09	0.09
20	TZJ240A	6000	0.04	0.08	0.13	0.03	0.20	0.04	0.20	0.04	0.23	0.17	0.12	0.18	N/A	0.04	0.04	0.04
		8000	0.07	0.12	0.21	0.05	0.32	0.06	0.32	0.06	0.39	0.27	0.19	0.3	N/A	0.08	0.08	0.08
		9600	0.09	0.16	0.27	0.06	0.44	0.07	0.44	0.07	0.54	0.37	0.27	0.41	N/A	0.12	0.12	0.12
25	TZJ300A	7500	0.06	0.11	0.19	0.04	0.29	0.05	0.29	0.05	0.34	0.24	0.17	0.27	N/A	0.07	0.07	0.07
		10000	0.09	0.17	0.29	0.06	0.48	0.08	0.48	0.08	0.58	0.40	0.29	0.45	N/A	0.13	0.13	0.13
		12000	0.12	0.23	0.39	0.08	0.66	0.11	0.66	0.11	0.82	0.55	0.39	0.62	N/A	0.20	0.20	0.20

- <sup>(a)</sup> See below for restrictions: Multi-speed, single zone VAV or multi-zone VAV applications are capable of running below 300 cfm/ton during low speed airflow operation.
- <sup>(b)</sup> Tested with: 2-in filters 12.5 to 25 Tons.
- <sup>(c)</sup> Difference in pressure drop should be considered when utilizing optional 2-in pleated filters.
- <sup>(d)</sup> OA = Outside Air and RA = Return Air.



# Heating Performance

**Table 28. Auxiliary electric heat capacity**

Tons	Unit Model Number	Total <sup>(a)</sup>		No. of Stages	Stage 1		Stage 2	
		kw Input <sup>(b)</sup>	MBh Output		kw Input	MBh Output	kw Input	MBh Output
12.5 to 15	TZ*150*3,4,W	18.00	61.47	1	18.00	61.47	-	-
	TZ*180*3,4,W	36.00	122.94	2	18.00	61.47	18.00	61.47
		54.00	184.41	2	36.00	122.94	18.00	61.47
17.5 to 25	TZ*210*3,4,W	36.00	122.94	2	18.00	61.47	18.00	61.47
	TZ*240*3,4,W	54.00	184.41	2	36.00	122.94	18.00	61.47
	TZ*300*3,4,W	72.00	245.88	2	36.00	122.94	36.00	122.94

<sup>(a)</sup> Heaters are rated at 240V, 480V, and 600V. For other than rated voltage, CAP = (voltage/rated voltage)<sup>2</sup> x rated cap.

<sup>(b)</sup> For all input/output categories, does not include fan power or heat.

**Table 29. Air temperature rise**

kW	Stages	12.5 Tons 3750 cfm	15 Tons 4500 cfm	17.5 Tons 5250 cfm	20 Tons 6000 cfm	25 Tons 7500 cfm
		Three Phase TZ*150*3,4,W	Three Phase TZ*180*3,4,W	Three Phase TZ*210*3,4,W	Three Phase TZ*240*3,4,W	Three Phase TZ*300*3,4,W
18.00	1	15.17	12.64	-	-	-
36.00	2	30.35	25.28	21.67	18.96	15.17
54.00	2	45.52	37.93	32.51	28.45	22.76
72.00	2	-	-	43.35	37.93	30.34

**Note:** For minimum design airflow, see airflow performance table for each unit. To calculate temp. rise at different airflow, use the following formula:  
Temp. rise across Electric Heater = (kW x 3414)/(1.08 x cfm).



## Controls

### Enhanced BAS Integration and Connectivity

- Symbio™ 700 integrates seamlessly with Trane® Tracer® Synchrony and Tracer Ensemble® to deliver optimized building automation and building management features and functions.
- Easily integrate with open standard protocols to connect seamlessly to a BAS (whether that is Trane or non-Trane).
- Digit 21 must equal 1, 2, or 3 for communication support.

#### BACnet® Communications

Symbio™ 700 includes native BACnet communications which allows the unit to communicate directly with a Tracer or non-Trane Building Automation System via open protocol BACnet MS/TP or IP.

#### Modbus Communications

Symbio 700 includes native Modbus communications which allows the unit to communicate directly with a Tracer or non-Trane Building Automation System via open protocol Modbus RTU or TCP/IP.

#### LonTalk® Communications

The optional LonTalk® communications module allows the unit to communicate directly with a Tracer or non-Trane Building Automation System via open protocol LonTalk.

#### Air-Fi® Wireless Communications

The optional Air-Fi communications module allows the unit to communicate directly with a Tracer or non-Trane Building Automation System via open protocol BACnet over Zigbee wireless.

### Secure Remote Connectivity with Trane Connect

The Symbio controller enables secure remote connectivity via Trane Connect to Trane Intelligent Services and remote monitoring. Trane Connect provides anywhere/anytime access to monitor and manage with secure remote access and connectivity options through a multitude of platforms. Peace of mind that the system will be operational and provide comfort to customers.

## Serviceability

### Symbio™ Service and Installation Mobile App

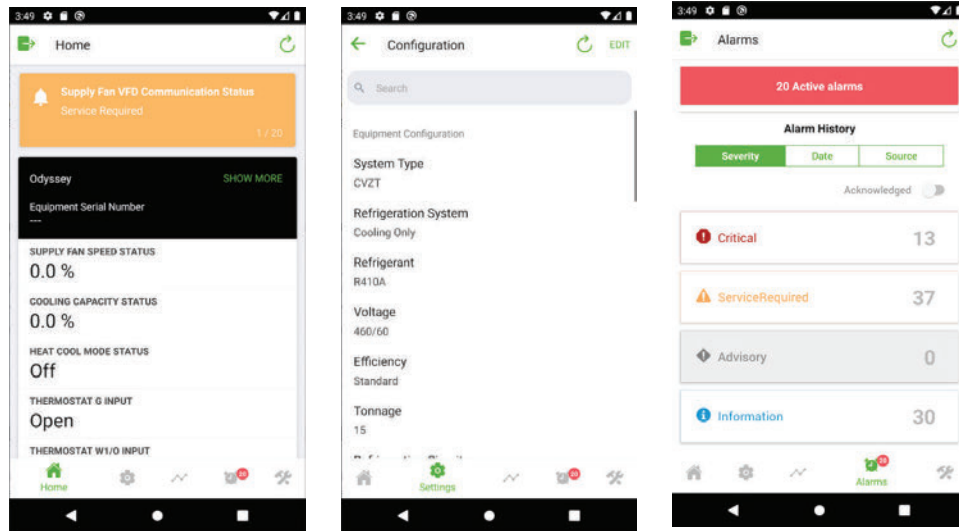
The Symbio™ Service and Installation mobile app is accessible through mobile devices (phones and tablets) via Bluetooth connectivity or via Trane Connect. The intuitive mobile app feels natural to technicians and operators. They will quickly be able to view equipment status and alarms, perform startup tasks, change configurations, test the equipment's performance in specific modes—and much more. Free for download from App Store (Apple iOS) and Google Play (Android devices).

To download the Symbio™ Service and Installation Mobile App use the links below or scan the code with your mobile phone camera.

Apple download link (<https://apps.apple.com/us/app/symbio-service-installation/id1309310176>)

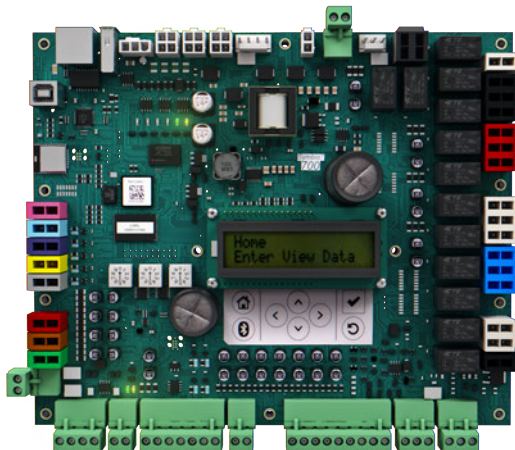
Google Play (Android) download link (<https://play.google.com/store/apps/details?id=com.trane.mobileservicetool>)

**Figure 3. Scan code**

**Figure 4. Symbio™ service and installation mobile app**


## Onboard User Interface

An integrated onboard user interface that makes setup and continued operation easy. It provides real time operational performance, status, data, and alarms. It also allows the user to interact with, service, troubleshoot, and control their equipment without additional service software tools or when a mobile interface is not available.

**Figure 5. Onboard user interface**


## Service Test Mode

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

## Symbio™ 700 controls with upgradeable software

Trane's equipment and systems feature engineered, tested, and proven applications that meet industry energy standards and provide the flexibility to customize and update over the life of the equipment. Professional operational algorithms are embedded within the Symbio™ 700 controller at the Trane factory. Symbio™ 700 standardizes each equipment unit to maintain standards for comfort, efficiency, and air quality, without additional field programming. Symbio™ 700 provides the flexibility over the life of the equipment to meet changing customer needs and/or industry standards.

## Flexibility

### Expansion Modules (requires Tracer® TU)

- XM30 – Provides 4 universal inputs or analog outputs
- XM32 – Provides 4 binary outputs

### Field Programming via TGP2 (requires Tracer TU)

- Control ancillary equipment
- Custom sequences

### TGP2 and XM Limitations:

- Programs will only have access to available BACnet® points. (Ensures system reliability.)
- TGP2 programs will not have direct I/O control access for factory components. (Compressors will not be able to be directly controlled On/Off without going through factory provided protection sequences.)
- Onboard I/O will not be available to custom applied TGP2 programs. If additional I/O is required for a new control loop, a separate expansion module will be required.
- Customer applied I/O will be limited to a maximum combination of 2 XM modules. Only XM30 or XM32 modules will be supported by the Symbio 700 UC.
- Tracer TU will be required to configure XMs and to create, view, or modify TGP2 programs.

## Economizer Controls

There are four options for economizer control, Dry Bulb Temperature, Comparative Enthalpy, Reference Enthalpy and Differential Dry Bulb Temperature.

### Dry Bulb Temperature Control

The dry bulb system measures outdoor temperature comparing it to the economizer enable setpoint. If the outdoor temperature is below the economizer enable setpoint, the economizer will operate freely. This system is best suited for arid regions where the humidity levels of outside air would not be detrimental to building comfort and indoor air quality.

### Comparative Enthalpy Control

The comparative enthalpy system measures the temperature and humidity of both return air and outside air to determine which source has lower enthalpy. This system allows true comparison of outdoor air and return air enthalpy by measurement of outdoor air and return air temperature and humidity.

### Reference Enthalpy Control

The reference enthalpy system compares outdoor air temperature and humidity to the economizer enthalpy enable setpoint. If outdoor air temperature and humidity are below the economizer enthalpy

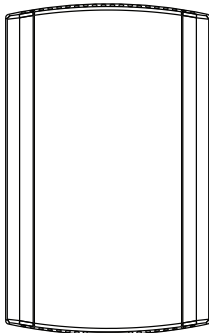
enable setpoint, the economizer will operate freely. This system provides more sophisticated control where outdoor air humidity levels may not be acceptable for building comfort and indoor air quality.

## Differential Dry Bulb Temperature Control

The differential dry bulb system measures the temperature of both return air and outside air to determine when to economize. If outdoor air temperature is below the return air temperature minus a differential, the economizer will operate freely. This system is best suited for arid regions where the humidity levels of outside air would not be detrimental to building comfort and indoor air quality.

## Zone Sensors

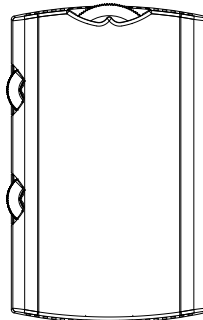
**Zone Temperature Only**



**BAYSENS077**

Provides temperature input only. Can be used as a secondary remote temperature input for thermostats.

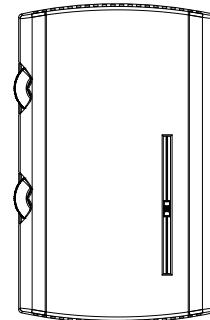
**Manual Changeover**



**BAYSENS106**

Heat, Cool or Off System Switch. Fan Auto or Off Switch. Single temperature setpoint thumbwheel.

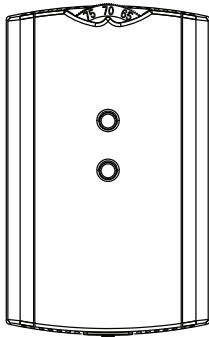
**Manual/Automatic Changeover**



**BAYSENS108**

Auto, Heat, Cool or Off System Switch. Fan Auto or Off Switch. Dual temperature setpoint sliders

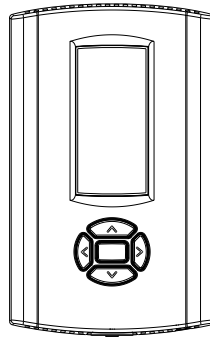
**Integrated Comfort™ System**



**BAYSENS073 / BAYSENS074 / BAYSENS075**

Sensor(s) available with optional temperature adjustment and override buttons to provide central control through a Trane Integrated Comfort system.

**Wired Display Sensor**



**BAYSENS135**

LCD display that provides heat, cool, auto, or off. Includes two temperature setpoints and a lockable setting with °F or °C indicators.

**Touchscreen Digital Display Communicating Sensor**



**BAYSENS800**

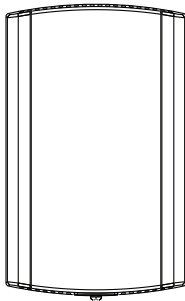
Uses BACnet® MS/TP link to communicate zone temperature and setpoints. Auto, Heat, Cool or Off System Switch. Fan Auto or On Switch. 7-day programmable thermostat with night setback.

**Note:** Not compatible with VAV units. Requires BACnet communications.



# Air-Fi Wireless Communicating Zone Sensors

Wireless Zone Temperature Only

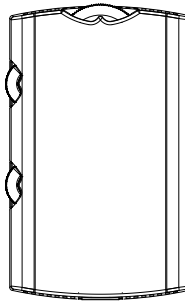


**BAYSENS077**

Measures temperature and optional humidity (with WCS-SH) for use in public spaces where no local user interface is preferred.

**Note:** Requires BACnet communications.

Wireless Display Sensor

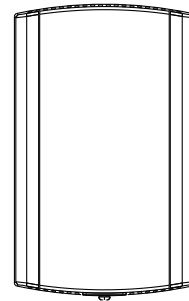


**BAYSENS106**

Easy-to-use interface for clear and simple monitoring and control. Can be configured for any Trane system or to meet the customer's preference.

**Note:** Requires BACnet communications.

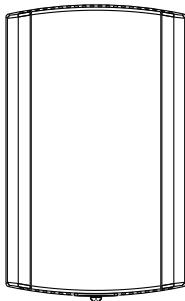
Wired CO<sub>2</sub> Sensor



**X13790422010**

The maintenance-free carbon dioxide (CO<sub>2</sub>) sensor is primarily used for demand control ventilation applications.

Wired Zone Temperature and Humidity Sensor

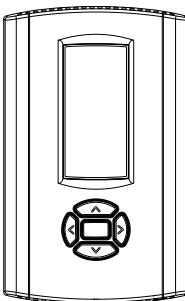


**BAYSENS036**

Measures temperature and relative humidity. Relative humidity input is used to control activation of dehumidification.

## Thermostats

Digital Display Programmable Thermostat (3H/2C)

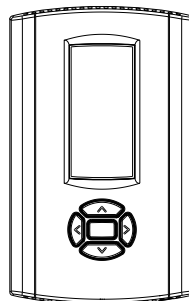


**BAYSTAT150**

Three Heat/Two Cool Auto changeover digital display thermostat. 7-day programmable thermostat with night setback.

**Note:** Not compatible with VAV units.

Digital Display Programmable Thermostat (1H/1C)

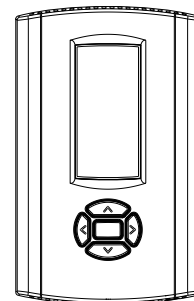


**BAYSTAT151**

One Heat/One Cool Auto changeover digital display thermostat.

**Note:** Not compatible with VAV units.

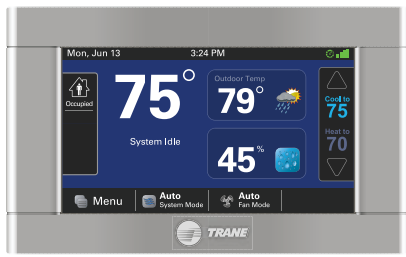
Digital Display Thermostat (3H/2C)



**BAYSTAT155**

Three Heat/Two Cool Auto changeover display thermostat.

**Note:** Not compatible with VAV units.

**Pivot® Web Enabled Smart Thermostat (3H/2C)**

**BAYSTAT814**

Our Pivot Smart Thermostat system is great for commercial buildings. With its intuitive touchscreen and customizable display, it is easy for occupants to use. The Trane Pivot mobile app enables users to control multiple buildings remotely, making changes in seconds to all systems.

**Note:** Not compatible with VAV units.

**Touchscreen Programmable Thermostat with Relative Humidity Sensor (3H/2C)**

**BAYSTAT152**

Three Heat, Two Cool digital display thermostat with built-in humidity control. This thermostat combines both humidity and temperature into one.

**Note:** Not compatible with VAV units.

## Humidity Control (HGRH)

### Sequence of Operations

Humidity Control system capable of operating in normal cooling, dual mode to satisfy cooling and humidity requirements, and hot gas reheat mode when only humidity demand is required. Function between requirements and unit transition seamlessly providing an all-around comfort solution.

**Note:** Supports Humidistat control. When the Humidistat input becomes active, compressors will stage to full capacity and modulate the 3 way valve.

#### Initiation of Humidity Control

- Conforms to ASHRAE standard (62)
- Dehumidification is initiated when too much moisture is in the space (>60°F Dew point)
  - Two measurement options for this dehumidification status:
  - Humidity control is started when:
    - Dew point is too high (60°F is default),
    - Relative Humidity is too high (60% is default), DH is started
    - Choice between these values above is user-configurable, and the actual values are adjustable by customer if desired
- Reheat circuit is initiated when space temperature drops below setpoint during humidity control.

#### Humidity Control Routine

There are two independent control loops: One to control latent load, the other to control sensible load.

Latent load is controlled by compressor staging:

- Compressors initially move up one stage from the last cooling mode stage.
- Compressors are staged up as needed by the controller to achieve a target leaving ID air dew point based on space conditions.

Sensible load is controlled with the Modulating 3 way valve:

- Modulating valve opens when space temperature is below setpoint.
- The reheat valve adjusts the amount of flow to RH coil to achieve the targeted leaving ID air temperature, based on space conditions.

---

### **Purge Cycle**

During dehumidification, every 120 minutes (default) a 3 minute cooling “purge cycle” will be executed. This purge cycle is executed for system reliability, specifically it helps manage oil return to compressors.

- Modulating valve moves to a fixed position based on OD air and compressor stage.
- Compressors move to full load.

### **Leaving Humidity Control and Returning to Cooling Only**

- When space humidity drops to below the threshold humidity value (60°F dew point or 60% relative humidity), system reverts back to cooling mode. Dead band of ~5°F yields approximately 55°F dew point for switch to cooling.
- Unit can stay in humidity control mode indefinitely, with purge cycles happening regularly.
  - Relative humidity setpoint is 65% for unoccupied mode.
  - Dew point for unoccupied mode is the same as occupied (default 60°F DP).



# Electrical Data

**Table 30. Unit wiring**

Tons	Unit Model Number	Voltage Range	Standard Indoor Fan Motor		Oversized/High Static Indoor Fan Motor		Optional Power Exhaust Standard Indoor Fan Motor		Optional Power Exhaust Oversized/High Static Indoor Fan Motor	
			MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker
12.5	TZJ150A3	187-253	72	100	-	-	78	110	-	-
	TZJ150A4	414-506	41	60	-	-	45	60	-	-
	TZJ150AW	517-633	29	40	-	-	31	45	-	-
15	TZJ180A3	187-253	84	125	-	-	90	125	-	-
	TZJ180A4	414-506	48	70	-	-	52	70	-	-
	TZJ180AW	517-633	35	50	-	-	37	50	-	-
17.5	TZJ210A3	187-253	94	125	-	-	100	125	-	-
	TZJ210A4	414-506	48	60	-	-	52	60	-	-
	TZJ210AW	517-633	40	50	-	-	42	50	-	-
20	TZJ240A3	187-253	109	150	-	-	114	150	-	-
	TZJ240A4	414-506	58	80	-	-	62	80	-	-
	TZJ240AW	517-633	47	60	-	-	49	60	-	-
25	TZJ300A3	187-253	110	150	114	150	116	150	120	150
	TZJ300A4	414-506	56	70	57	80	59	80	61	80
	TZJ300AW	517-633	44	60	46	60	46	60	48	60

**Table 31. Unit wiring with electric heat**

Tons	Unit Model Number	Heater Model Number	Heater kW Rating	Control Stages	Standard Indoor Fan Motor		Oversized/High Static Indoor Fan Motor		Optional Power Exhaust Standard Indoor Fan Motor		Optional Power Exhaust Oversized/High Static Indoor Fan Motor	
					MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker
<b>208/230 Volts Three Phase</b>												
12.5	TZJ150A3	FIAEHTD318AA	13.5/18.0	1	72/78	100/100	-	-	78/85	110/110	-	-
		FIAEHTD336AA	27.0/36.0	2	118/132	125/150	-	-	125/139	125/175	-	-
		FIAEHTD354AA	40.6/54.0	2	165/154	175/175	-	-	172/161	175/175	-	-
15	TZJ180A3	FIAEHTD318AA	13.5/18.0	1	84/84	125/125	-	-	90/90	125/125	-	-
		FIAEHTD336AA	27.0/36.0	2	118/132	125/150	-	-	125/139	150/175	-	-
		FIAEHTD354AA	40.6/54.0	2	165/154	175/175	-	-	172/161	175/175	-	-
17.5	TZJ210A3	FIAEHTD336AA	27.0/36.0	2	118/132	125/150	-	-	125/139	150/150	-	-
		FIAEHTD354AA	40.6/54.0	2	164/154	175/175	-	-	172/161	175/175	-	-
		FIAEHTD372AA	54.0/72.0	2	174/197	200/225	-	-	181/204	200/225	-	-

**Table 31. Unit wiring with electric heat (continued)**

Tons	Unit Model Number	Heater Model Number	Heater kW Rating	Control Stages	Standard Indoor Fan Motor		Oversized/High Static Indoor Fan Motor		Optional Power Exhaust Standard Indoor Fan Motor		Optional Power Exhaust Oversized/High Static Indoor Fan Motor	
					MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker
20	TZJ240A3	FIAEHTD336AA	27.0/36.0	2	118/132	125/150	-	-	125/139	150/150	-	-
		FIAEHTD354AA	40.6/54.0	2	164/154	175/175	-	-	172/161	175/175	-	-
		FIAEHTD372AA	54.0/72.0	2	174/197	200/225	-	-	181/204	200/225	-	-
25	TZJ300A3	FIAEHTD336AA	27.0/36.0	2	118/132	150/150	123/138	150/150	125/139	150/150	130/145	150/150
		FIAEHTD354AA	40.6/54.0	2	164/154	175/175	170/159	175/175	172/161	175/175	177/166	200/175
		FIAEHTD372AA	54.0/72.0	2	174/197	200/225	179/202	200/225	181/204	200/225	186/210	200/225
<b>460 Volts Three Phase</b>												
12.5	TZJ150A4	FIAEHTD418AA	18	1	41	60	-	-	45	60	-	-
		FIAEHTD436AA	36	2	67	70	-	-	72	90	-	-
		FIAEHTD454AA	54	2	78	90	-	-	82	90	-	-
15	TZJ180A4	FIAEHTD418AA	18	1	48	70	-	-	52	70	-	-
		FIAEHTD436AA	36	2	67	70	-	-	72	90	-	-
		FIAEHTD454AA	54	2	78	90	-	-	82	90	-	-
17.5	TZJ210A4	FIAEHTD436AA	36	2	67	70	-	-	72	80	-	-
		FIAEHTD454AA	54	2	78	90	-	-	82	90	-	-
		FIAEHTD472AA	72	2	100	110	-	-	104	110	-	-
20	TZJ240A4	FIAEHTD436AA	36	2	67	80	-	-	72	80	-	-
		FIAEHTD454AA	54	2	78	90	-	-	82	90	-	-
		FIAEHTD472AA	72	2	100	110	-	-	104	110	-	-
25	TZJ300A4	FIAEHTD436AA	36	2	67	70	70	80	72	80	74	80
		FIAEHTD454AA	54	2	78	90	80	90	82	90	85	90
		FIAEHTD472AA	72	2	100	110	102	110	104	110	106	110
<b>575 Volts Three Phase</b>												
12.5	TZJ150AW	FIAEHTDW18AA	18	1	31	40	-	-	34	45	-	-
		FIAEHTDW36AA	36	2	53	60	-	-	56	70	-	-
		FIAEHTDW54AA	54	2	62	70	-	-	65	70	-	-
15	TZJ180AW	FIAEHTDW18AA	18	1	35	50	-	-	37	50	-	-
		FIAEHTDW36AA	36	2	53	60	-	-	56	70	-	-
		FIAEHTDW54AA	54	2	62	70	-	-	65	70	-	-
17.5	TZJ210AW	FIAEHTDW36AA	36	2	53	60	-	-	56	60	-	-
		FIAEHTDW54AA	54	2	62	70	-	-	65	70	-	-
		FIAEHTDW72AA	72	2	79	90	-	-	82	90	-	-



## Electrical Data

**Table 31. Unit wiring with electric heat (continued)**

Tons	Unit Model Number	Heater Model Number	Heater kW Rating	Control Stages	Standard Indoor Fan Motor		Oversized/High Static Indoor Fan Motor		Optional Power Exhaust Standard Indoor Fan Motor		Optional Power Exhaust Oversized/High Static Indoor Fan Motor	
					MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker
20	TZJ240AW	FIAHTDW36AA	36	2	53	60	-	-	56	60	-	-
		FIAHTDW54AA	54	2	62	70	-	-	65	70	-	-
		FIAHTDW72AA	72	2	79	90	-	-	82	90	-	-
25	TZJ300AW	FIAHTDW36AA	36	2	53	60	55	60	56	60	58	60
		FIAHTDW54AA	54	2	62	70	63	70	65	70	66	70
		FIAHTDW72AA	72	2	79	90	81	90	82	90	84	90

**Table 32. Electrical characteristics - compressor motor and condenser motor**

Tons	Unit Model Number	No.	Compressor Motors						No.	Condenser Fan Motor				
			Volts	Phase	hp <sup>(a)</sup> , <sup>(b)</sup>	rpm <sup>(b)</sup>	Amps <sup>(c)</sup>			Volts	Phase	hp	Amps	
							RLA	LRA <sup>(b)</sup>					FLA	LRA <sup>(b)</sup>
12.5	YZJ150A3	1	208/230	3	-	-	35.6	-	2	208/230	1	0.5	4.7	-
	YZJ150A4	1	460	3	-	-	21.3	-	2	460	1	0.5	2.5	-
	YZJ150AW	1	575	3	-	-	15.8	-	2	575	1	0.5	1.1	3
15	YZJ180A3	1	208/230	3	-	-	45.3	-	2	208/230	1	0.5	4.7	-
	YZJ180A4	1	460	3	-	-	26.9	-	2	460	1	0.5	2.5	-
	YZJ180AW	1	575	3	-	-	20.5	-	2	575	1	0.5	1.1	3
17.5	YZJ210A3	2	208/230	3	- / 8.7	- / 3500	30/32.6	- / 255	2	208/230	3	1.5	2.6	-
	YZJ210A4	2	460	3	- / 8.7	- / 3500	18/13.4	- / 123	2	460	3	1.5	1.3	-
	YZJ210AW	2	575	3	- / 8.7	- / 3500	14/11.4	- / 93.7	2	575	3	1.5	1.1	3
20	YZJ240A3	2	208/230	3	- / 8.7	- / 3500	42.1/32.6	- / 255	2	208/230	3	1.5	2.6	-
	YZJ240A4	2	460	3	- / 8.7	- / 3500	26/13.4	- / 123	2	460	3	1.5	1.3	-
	YZJ240AW	2	575	3	- / 8.7	- / 3500	20/11.4	- / 93.7	2	575	3	1.5	1.1	3
25	YZJ300A3	2	208/230	3	- / 8.7	- / 3500	43.3/32.6	- / 255	2	208/230	3	1.5	2.6	-
	YZJ300A4	2	460	3	- / 8.7	- / 3500	23.9/13.4	- / 123	2	460	3	1.5	1.3	-
	YZJ300AW	2	575	3	- / 8.7	- / 3500	17.7/11.4	- / 93.7	2	575	3	1.5	1.1	3

(a) Hp for each compressor.

(b) Data not available for variable speed driven motor.

(c) Amp draw for each motor (compressor and condenser fan motor); multiply value by number of motors to determine total amps.

**Table 33. Electrical characteristics - indoor fan motor**

Tons	Unit Model Number	No.	Volts	Phase	hp	Amps <sup>(a)</sup>	
						FLA	LRA <sup>(b)</sup>
12.5	TZJ150A3	2	208/230	3	3	8.8	-
	TZJ150A4	2	460	3	3	4.6	-
	TZJ150AW	2	575	3	3	3.2	-
15	TZJ180A3	2	208/230	3	3	8.8	-
	TZJ180A4	2	460	3	3	4.6	-
	TZJ180AW	2	575	3	3	3.2	-
17.5	TZJ210A3	2	208/230	3	3	8.8	-
	TZJ210A4	2	460	3	3	4.6	-
	TZJ210AW	2	575	3	3	3.2	-
20	TZJ240A3	2	208/230	3	3	8.8	-
	TZJ240A4	2	460	3	3	4.6	-
	TZJ240AW	2	575	3	3	3.2	-
25	TZJ300A3	2	208/230	3	3	8.8	-
	TZJ300A4	2	460	3	3	4.6	-
	TZJ300AW	2	575	3	3	3.2	-

<sup>(a)</sup> Amp draw for each motor (compressor and condenser fan motor); multiply value by number of motors to determine total amps.

<sup>(b)</sup> Data not available for variable speed driven motor.

**Table 34. Electrical characteristics - oversized indoor fan motor**

Tons	Unit Model Number	No.	Volts	Phase	hp	Amps <sup>(a)</sup>	
						FLA	LRA <sup>(b)</sup>
25	TZJ300A3	2	208/230	3	5	11.0	-
	TZJ300A4	2	460	3	5	5.5	-
	TZJ300AW	2	575	3	5	3.9	-

<sup>(a)</sup> Amp draw for each motor (compressor and condenser fan motor); multiply value by number of motors to determine total amps.

<sup>(b)</sup> Data not available for variable speed driven motor.

**Table 35. Electrical characteristics - power exhaust**

Tons	Volts	Phase	hp	rpm	FLA	LRA
12 to 25	208-230	1	0.87	1075	5.7	13.6
12 to 25	460	1	0.87	1075	3.3	7.2
12 to 25	575	1	0.80	1075	2.3	5.8

# Dimensional Data

Figure 6. 12.5 to 25 tons ultra high efficiency

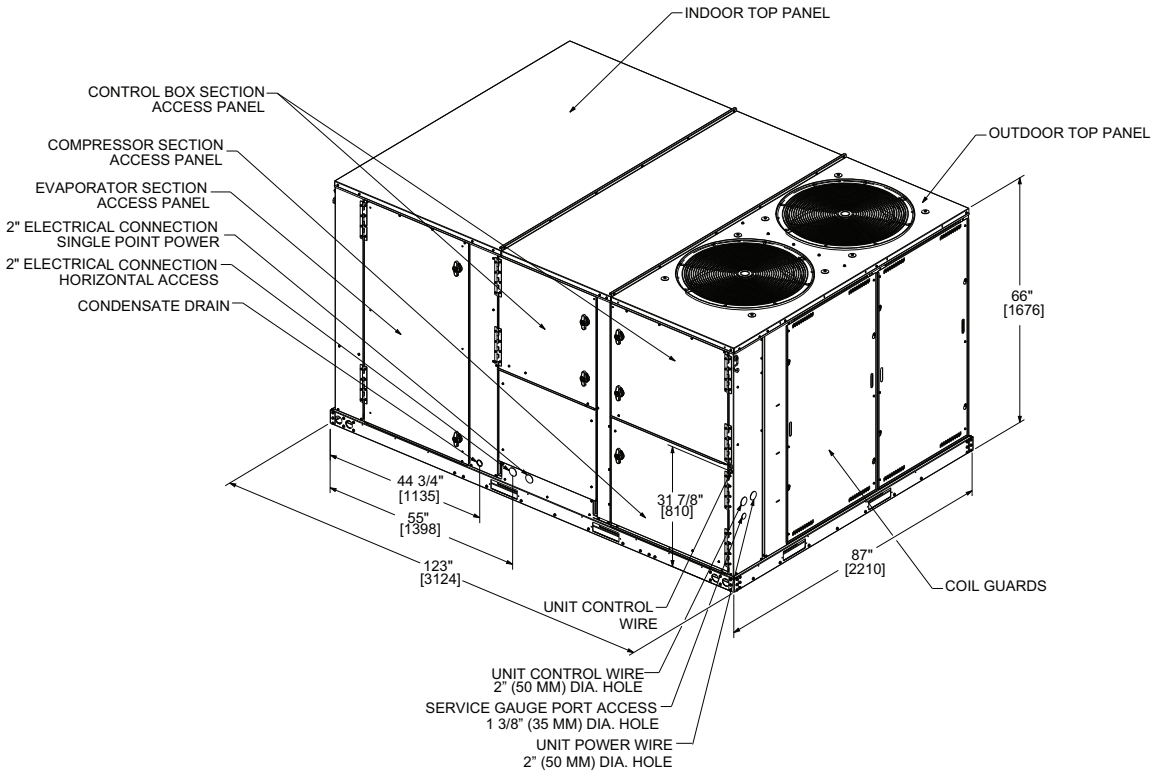


Figure 7. 12.5 to 25 tons ultra high efficiency – downflow airflow supply/return, through-the-base utilities

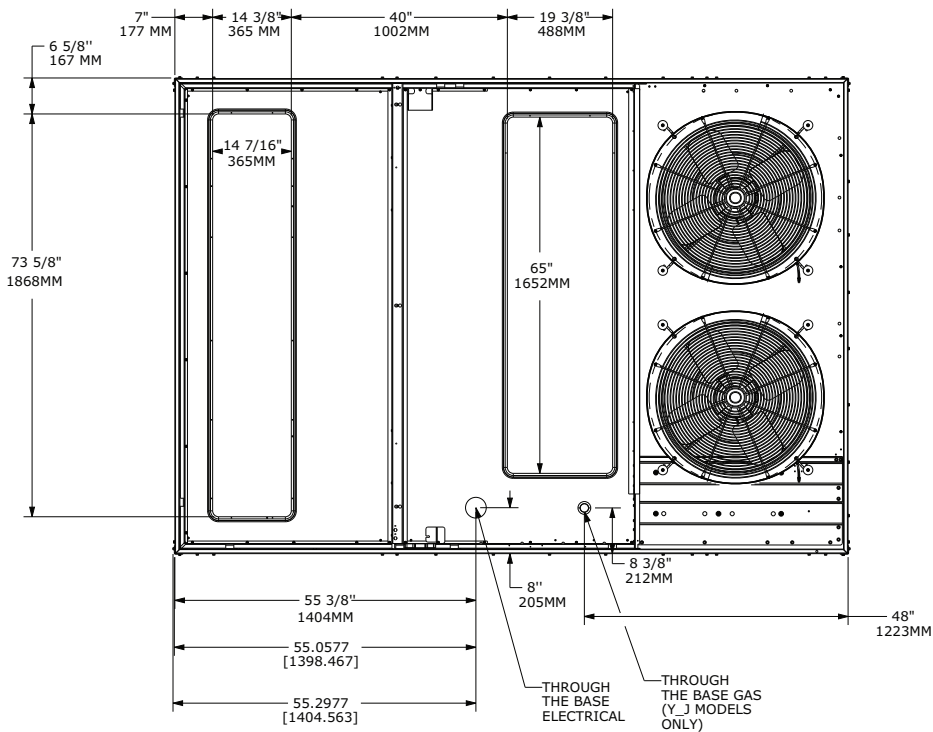




Figure 8. 12.5 to 25 tons ultra high efficiency – horizontal airflow supply/return

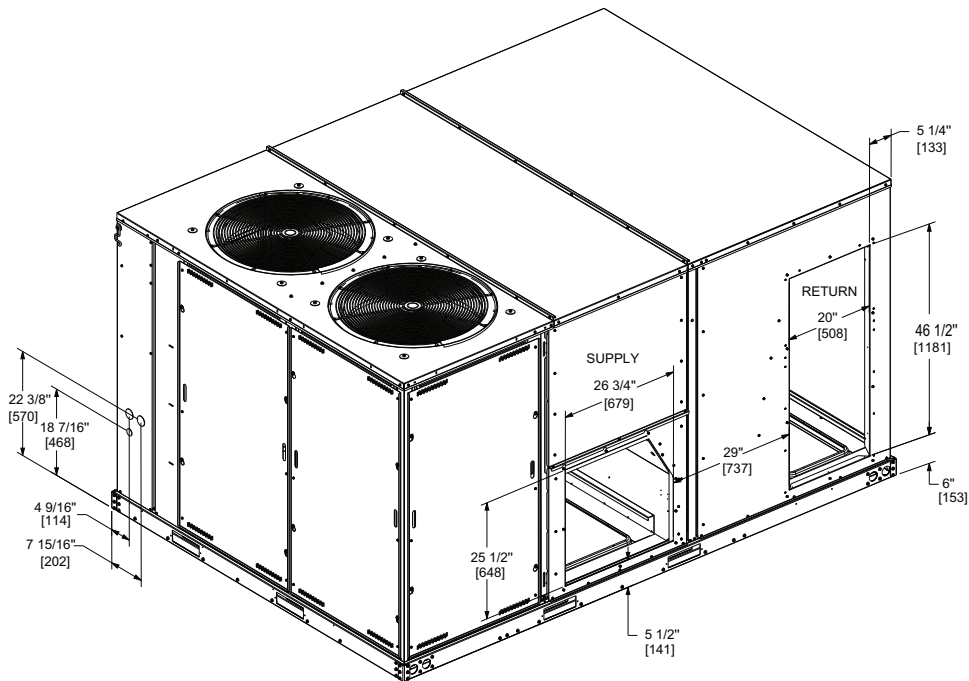
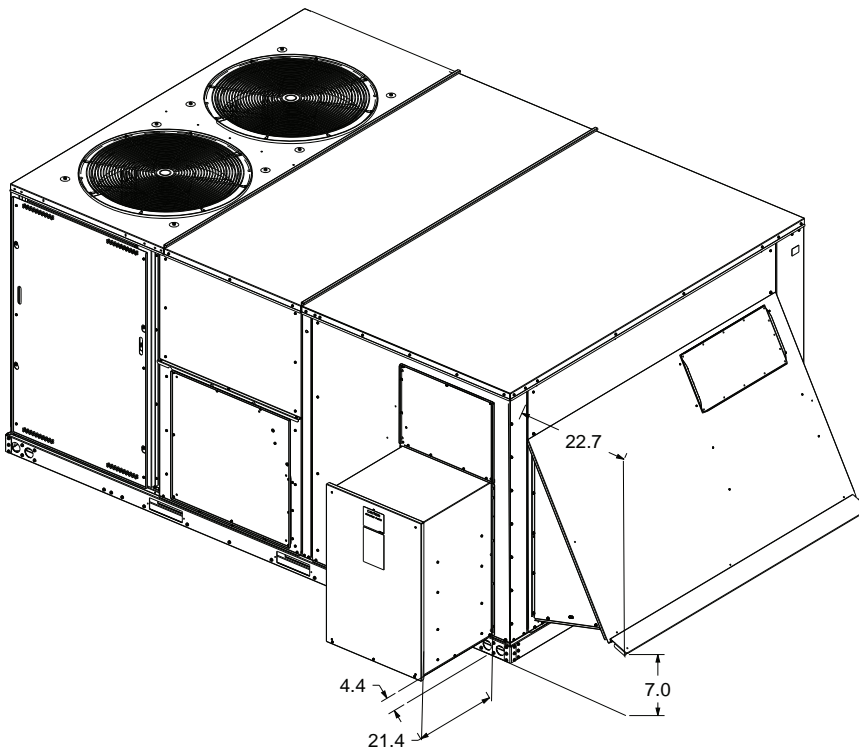
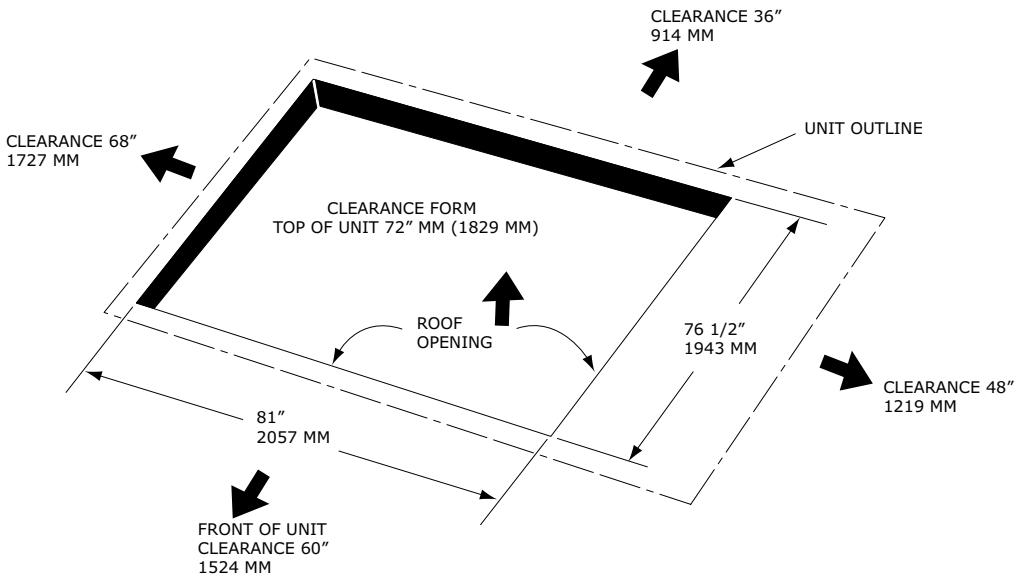


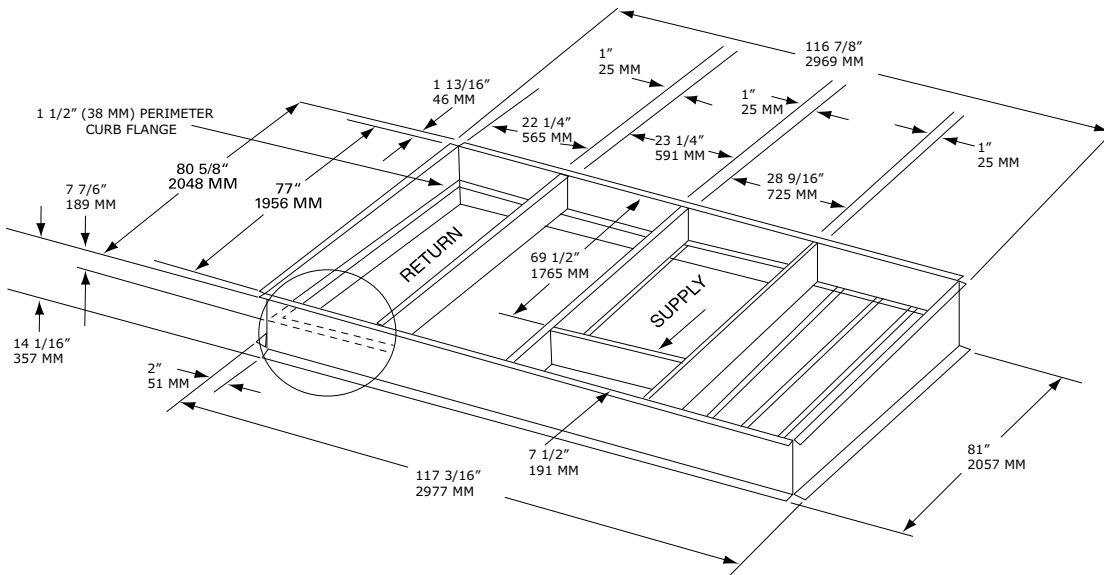
Figure 9. 12.5 to 25 tons ultra high efficiency – power exhaust



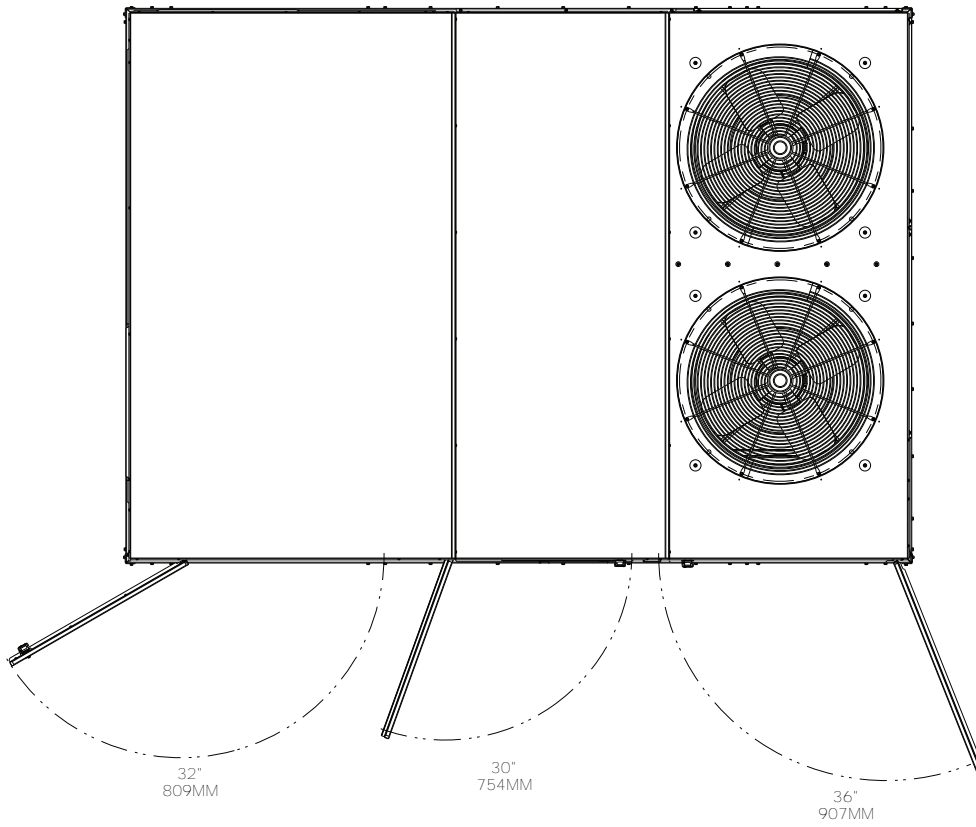
**Figure 10. 12.5 to 25 tons ultra high efficiency – unit clearance and roof opening**



**Figure 11. 12.5 to 25 tons ultra high efficiency – roof curb**



**Figure 12. 12.5 to 25 ton ultra high efficiency – swing diameter for hinged door(s) option**



# Weights

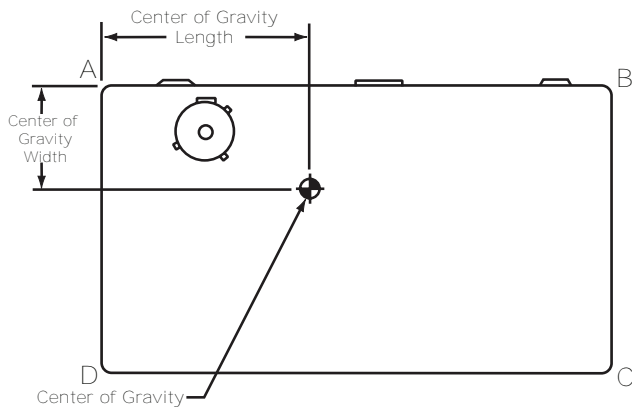
**Table 36. Model weights, corner weights (lbs) and center of gravity dimensions (in.)**

Tons	Unit Model No.	Model Weights <sup>(a)</sup>		Corner Weights <sup>(b)</sup>				Center of Gravity (in.)	
		Shipping	Net	A	B	C	D	Length	Width
12.5	TZJ150	2161	1941	595	498	386	462	56	38
15	TZJ180	2166	1946	597	499	387	463	56	38
17.5	TZJ210	2266	2046	660	516	382	488	54	37
20	TZJ240	2271	2051	661	517	383	489	54	37
25	TZJ300	2274	2054	662	518	384	490	54	37

<sup>(a)</sup> Weights are approximate. Weights do not include additional factory or field installed options/accessories. For option/accessory additional weights to be added to unit weight, reference the following table.

<sup>(b)</sup> Corner weights are given for information only.

**Figure 13. Corner weights**



**Table 37. Factory installed options (FIOPS)/accessory net weights (lb)**

Accessory	TZJ150-300
	12.5, 15, 17.5, 20, 25 Tons
Barometric Relief	40
Economizer	91
Electric Heaters	75
Low Leak Economizer - Downflow	150
Low Leak Economizer - Horizontal	180
Oversized Motor <sup>(a)</sup>	30
Powered Convenience Outlet	50
Powered Exhaust	110
Reheat Coil	33
Roof Curb	235
Smoke Detector, Supply	5
Smoke Detector, Return	5
Through-the-Base Electrical	10
Unit Mounted Circuit Breaker	10

**Table 37. Factory installed options (FIOPS)/accessory net weights (lb) (continued)**

Accessory	TZJ150-300
	12.5, 15, 17.5, 20, 25 Tons
Unit Mounted Disconnect	10

**Notes:**

1. Weights for options not listed are less than 5 pounds.
2. Net weight should be added to unit weight when ordering factory-installed accessories.
3. Weights are approximate.

<sup>(a)</sup> Oversized motor only allowed on the 25 ton.



# Mechanical Specifications

## General

- Packaged rooftop units cooling, heating capacities, and efficiencies are AHRI Certified within scope of AHRI Standard 210-240 for 6 to 25 tons.
- Convertible airflow.
- Symbio controls operating range between 0°F and 125°F in cooling mode standard from the factory.
- Factory assembled, internally wired, fully charged with R-410A, and 100 percent run tested to check cooling operation, fan and blower rotation, and control sequence before leaving the factory.
- Colored and numbered wiring internal to the unit for simplified identification.
- Units cULus listed and labeled, classified in accordance for Central Cooling Air Conditioners.

## Casing

- Zinc coated, heavy gauge, galvanized steel.
- Weather resistant pre-painted metal with galvanized substrate.
- Meets ASTM B117, 672 hour salt spray test.
- Single side maintenance through hinged access panels.
- Exposed vertical panels and top covers in the indoor air section insulated with a cleanable foil-faced, fire-retardant permanent, odorless glass fiber material.
- Base pan shall have no penetrations within the perimeter of the curb other than the raised 1 inch high downflow supply/return openings to provide an added water integrity precaution, if the condensate drain backs up.
- Base of the unit insulated with 1/8 inch, foil-faced, closed-cell insulation.
- Unit base provisions for forklift and/or crane lifting on three sides of unit.

## Coils

### Microchannel Coils

- Optimal heat transfer performance due to flat, streamlined tubes with small ports, and metallurgical tube-to-fin bond.
- Reduce system refrigerant charge by up to 50% leading to better compressor reliability.
- Compact all-aluminum microchannel coils reduce the unit weight.
- Recyclable all-aluminum coils. All-aluminium construction minimizes galvanic corrosion.
- Strong aluminum brazed structure provides better fin protection.
- Flat streamlined tubes more dust resistant and easy to clean.
- Coils leak tested at the factory to ensure the pressure integrity.

### Coil Guards

Provides condenser coil protection.

## Compressors

- All units have variable speed compressor matched with variable frequency drive that modulates the speed of the compressor motor and provides several compressor protection functions.
- Permanent magnet motor with voltage utilization range of plus or minus 10 percent of unit nameplate voltage.
- Crankcase heaters sized to minimize the amount liquid refrigerant present in the oil sump during off cycles are standard on all compressors.
- Single variable speed compressors in 12.5 and 15 ton units. Manifoldded variable and fixed speed compressors in 17.5 to 25 ton units.
- Variable speed modulation to 15 Hz equating to 27% or less of full capacity
- Control of the eFlex system is integrated with the Symbio™ 700 unit controller to ensure optimal equipment reliability and performance.

## Filters

- Standard throwaway filters
- Optional 2 inch MERV 8 and MERV 13 filters

## Frostat™

- Utilized as a safety device.
- Opens to prevent freezing temperatures on evaporator coil.
- Temperature will need to rise to 50°F before closing.
- Utilized in low airflow or high outside air applications (cooling only).

## Indoor Fan

- Direct drive plenum fan design.
- Plenum fan design — backward-curved fan wheel along with an external rotor direct drive variable speed indoor motor.
- Supply fan speed adjustments can be made using the Symbio™ 700 or Mobile App.
- Motors are electronically protected.
- Variable speed direct drive motors are high efficiency.

## Powered or Unpowered Convenience Outlet

- Powered GFCI, 120V/15A, 2 plug, convenience outlet or unpowered GFCI, 120V/20A, 2 plug, convenience outlet.
- When convenience outlet is powered, a service receptacle disconnect will be available.
- Convenience outlet is powered from the line side of the disconnect or circuit breaker, and therefore will not be affected by the position of the disconnect or circuit breaker.
- Available to order when through-the-base electrical with disconnect switch or circuit breaker option is ordered.

## Stainless Steel Drain Pan

- Corrosion and oxidation resistance.
- Constructed of 304 stainless steel.

## Through-the-Base Electrical with Circuit Breaker

- Thermal magnetic, molded case, HACR circuit breaker with provisions for through-the-base electrical connections.
- Circuit breaker installed within unit in water tight enclosure.
- Wiring provided from the switch to the unit high voltage terminal block.
- Circuit breaker will provide overcurrent protection, sized per NEC and cULus guidelines, and agency recognized by cULus.

## Through-the-Base Electrical with Disconnect Switch

- 3-pole, molded case, disconnect switch with provisions for through-the-base electrical connections.
- Disconnect switch installed within unit in a water tight enclosure.
- Wiring provided from the switch to the unit high voltage terminal block.
- Switch cULus agency recognized.

**Note:** Disconnect switch sized per NEC and cULus guidelines but will not be used in place of unit overcurrent protection

## Economizer (Standard)

- Available with or without barometric relief.



## Mechanical Specifications

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- Fully modulating 0-100 percent motor and dampers, minimum position setting, preset linkage, wiring harness with plug, spring return actuator and fixed dry bulb control.
- Barometric relief shall provide a pressure operated damper that shall be gravity closing.
- Barometric relief shall prohibit entrance of outside air during the equipment “off” cycle.
- Optional solid state or differential enthalpy control.
- Arrives in shipping position and shall be moved to the operating position by the installing contractor.

## Electric Heaters

- Constructed of heavy-duty nickel chromium elements internally delta connected for 240V, wye connected for 480V and 600V.
- Staging achieved through Symbio.
- Multiple automatic reset and single operation high temperature limit controls operating to break line power to the heater element.
- Heaters individually fused from the factory.
- Shall meet all NEC and CEC requirements when properly installed.
- Power assemblies shall provide single-point connection.
- Modules shall be cULus listed.

## Powered Exhaust

- Available for 6 to 25 ton units.
- Shall provide exhaust of return air, when using an economizer.
- Maintain better building pressurization.

## Roof Curb

- Designed to mate with the unit’s downflow supply and return.
- Provide support and a water tight installation when installed properly.
- Shall allow field-fabricated rectangular supply/return ductwork to be connected directly to the curb.
- Curb shall be shipped knocked down for field assembly.
- Shall include wood nailer strips.

## Ventilation Override Operation

- Unit can be set to transition up to 3 different pre-programmed sequences for smoke purge, pressurization, and exhaust.
- Transition occurs when binary input on the Symbio is closed (shorted) (typically hard wired relay output from a smoke detector/ fire control panel).

**Note:** Requires Symbio™ Customer Connection Module, FIASCCM001\*.







**Notes**

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The AHRI Certified mark indicates Trane U.S. Inc. participation in the AHRI Certification program. For verification of individual certified products, go to [ahridirectory.org](http://ahridirectory.org).

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