

Product Catalog

Packaged Rooftop Air Conditioners Precedent[™] Cooling and Gas/Electric

Standard Efficiency
6 to 25 Tons — 60 Hz



Introduction

Packaged Rooftop Air Conditioners

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

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

Through the years, American Standard has designed and developed the most complete line of Packaged Rooftop products available in the market today. American Standard 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 American Standard light commercial products.

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Revision History

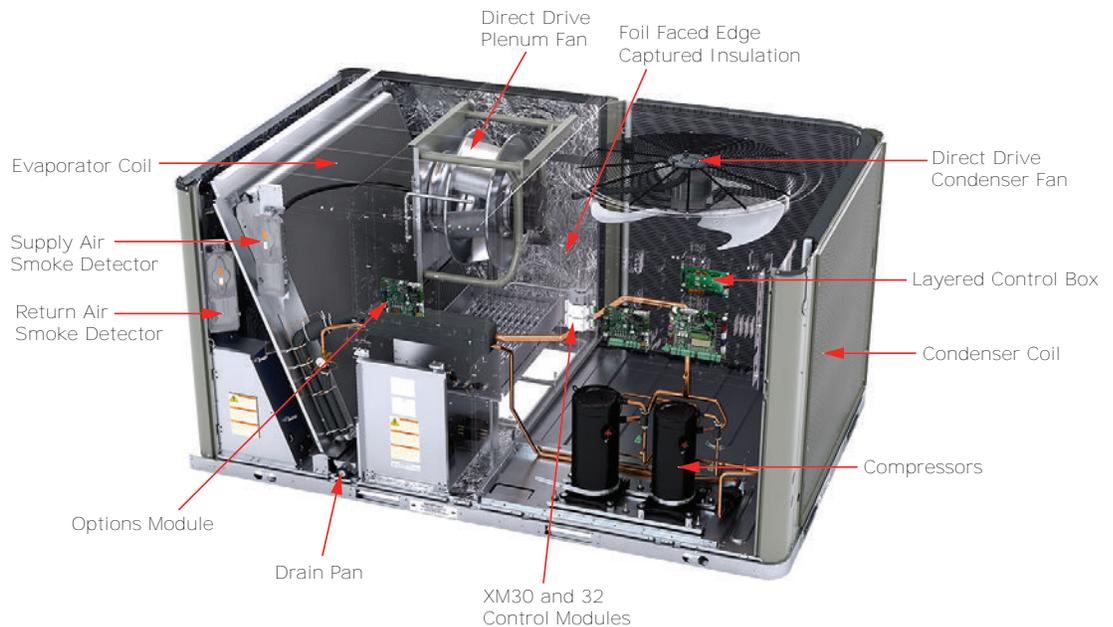
- Updated Features and Benefits to add ventilation override information.
- Updated Fan Performance chapter, static pressure drop through accessories table.
- Updated Evaporator Fan Performance table heading and added tablenote for available external static temperature.
- Corrected Gas fired heating capacities table error.
- Updated electrical characteristics- inducer motor table to add data for 15 to 25 ton models.
- Corrected roof curb weights.

Features and Benefits

FIA KIT #S	DESCRIPTION	Used With Cabinets	Used With Models
FIAOVFL001*(b)	Condensate Overflow Switch	ALL	YSJ072A-300A
FIAPWRX302*	Power Exhaust 230V	B/C	YSJ072A3-150A3
FIAPWRX402*	Power Exhaust 460V	B/C	YSJ072A4-150A4
FIAPWRXW02*	Power Exhaust 575V	B/C	YSJ072AW-150AW
FIAHALT002*	High Altitude Gas Adjustment Kit	B/C	YSJ072-150
FIAHALT003*	High Altitude Gas Adjustment Kit	D	YSJ180-300
FIALPKT002*	LP Gas Conversion Kit	B/C	YSJ072-150
FIALPKT003*	LP Gas Conversion Kit	D	YSJ180-300
FIAPWRX303*	Power Exhaust 230V	D	YSJ180A3-300A3
FIAPWRX403*	Power Exhaust 460V	D	YSJ180A4-300A4
FIAPWRXW03*	Power Exhaust 575V	D	YSJ180AW-300AW
FIAQACB026*	Adapter Curb, Existing BAYCURB026 to New C Cabinet (FIACURB403A)	C	YSJ150A
FIAQACB027*	Adapter Curb, Existing BAYCURB027 to New C Cabinet (BAYCURB403A)	C	YSJ150A
FIAQACB044*	Adapter Curb, Existing BAYCURB044 to New B Cabinet (BAYCURB402A)	B	YSJ072A-120A
FIASCCM001*(c), (d)	Symbio Customer Connection Module	ALL	YSJ072A-300A
FIAXMOD030*, (e)	Symbio 700 XM30 Expansion Module	ALL	YSJ072A-300A
FIAXMOD032*,	Symbio 700 XM32 Expansion Module	ALL	YSJ072A-300A

- (a) Requires Symbio Fresh Air Options Module.
- (b) Requires Symbio Indoor Options Module.
- (c) Provides Ventilation Override, External Auto/Stop, Alarm Indicator, Remote Min Position.
- (d) Requires Symbio Advanced Controller (digit 21=1 or 3).
- (e) Requires Tracer TU and Utilizes TGP2 Software (programming knowledge required).

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.



CO₂ 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 CO₂ sensor measures the concentration (parts per million, ppm) of CO₂ (carbon dioxide) in the air. As the CO₂ concentration changes, the outside air damper modulates to meet the current ventilation needs of the zone. The CO₂ 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)

Features and Benefits

- 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.



Convertible Units

Units ship in a downflow configuration and can be easily converted to horizontal by simply removing two panels. Optional field accessory kits required for 15 to 25 ton units.



Humidity Control (HGRH)

All 6 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.

Direct Drive Plenum Fans

All 6 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). On units with B or C (6 to 12.5T) size cabinets, the drain pan is reversible, allowing installation of the draining trap on either side of the unit.



Features and Benefits

Fault Detection and Diagnostics (FDD)

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

Flexibility

Precedent™ offers ultimate flexibility. Units are built to order in our standard “shortest in the industry” ship cycle time.

High Altitude Kit

While recommended for units applied above 2,000 feet, domestic contractors should consult with local authority on best practice. High altitude kits contain gas orifices that derate the gas input rate (Btuh/r) by 10%.

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 10 and 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, fan and compressor/control sections. They reduce the potential roof damage from screws or sharp access door corners.



Humidity Control (HGRH)

All 6 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™ microprocessor units have cooling capabilities down to 40°F. Factory installed option or field installed accessory extends operation 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/ft²@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.

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.

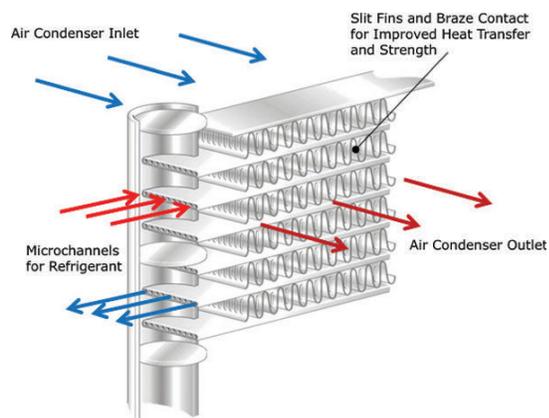
LP Conversion Kit

Provided for field conversion of gas/electric units from natural gas to propane.

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



Features and Benefits

Multiple-Zone VAV Control

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

For decades, American Standard has been an industry leader in rooftop VAV systems. Now, multiple-zone VAV control is available in the light commercial rooftop platform (6 to 25 tons).

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

Quick Adapt Curbs

Enables easy upgrade of existing Voyager™ 6 to 25 tons units to Precedent™ units on replacement jobs.

Rigorous Testing

All of the Precedent™ designs were rigorously rain tested at the factory to ensure water integrity.

Actual shipping tests were performed to determine packaging requirements. Units were test shipped around the country to determine the best packaging design. Factory shake and drop tests were used as part of the package design process to help assure that the unit arrives at the job site in top condition.

Rigging tests include lifting a unit into the air and letting it drop one foot, assuring that the lifting lugs and rails hold up under stress.

We perform a 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 -American Standard.

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. Supply and/or return smoke detectors may not be used with the plenum smoke detector.

Figure 1. Supply/Return air smoke detector



Through-the-Base Condensate

6 to 12.5 tons unit includes provisions for through-the-base condensate drain connections. This allows the drain to be connected through the roof curb instead of a roof penetration.

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.

Through-the-Base Gas Piping

Factory provided through-the-base openings simplify wiring and piping. Because these utility openings frequently minimize the number of roof penetrations, the integrity of roofing materials is enhanced.

This option shall have all piping necessary including, black steel, manual gas shut-off valve, elbows, and union. This assembly will require minor field labor to install.

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, reference *Symbio™ 700 Controller with Precedent™ Packaged Rooftop Air-Conditioners Application Guide* (ACC-APG002*-EN).

Model Number Description

Digit 1 — Unit Function

Y = DX Cooling, Gas Heat

Digit 2 — Cooling Efficiency

S = Standard Efficiency

Digit 3 — Refrigerant

J = R-410A

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

072 = 6 Ton

090 = 7.5 Ton

102 = 8.5 Ton

120 = 10 Ton

150 = 12.5 Ton

180 = 15 Ton

210 = 17.5 Ton

240 = 20 Ton

300 = 25 Ton

Digit 7 — Major 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

A = Stainless Steel Gas Heat

Digit 11 — Heating Capacity¹

L = Low Gas Heat

M = Medium Gas Heat

H = High Gas Heat

Digit 12, 13 — Service Sequence

** = Factory Assigned

Digit 14 — Fresh Air Selection

0 = No Fresh Air

A = Manual Outside Air Damper 0–50%

B = Motorized Outside Air Damper 0–50%

C = Economizer, Dry Bulb 0–100% without Barometric Relief²

D = Economizer, Dry Bulb 0–100% with Barometric Relief²

E = Economizer, Reference Enthalpy 0–100% without Barometric Relief²

F = Economizer, Reference Enthalpy 0–100% with Barometric Relief²

G = Economizer, Comparative Enthalpy 0–100% without Barometric Relief²

H = Economizer, Comparative Enthalpy 0–100% with Barometric Relief²

K = Downflow Low Leak Economizer, Dry Bulb with Barometric Relief²

M = Downflow Low Leak Economizer, Reference Enthalpy with Barometric Relief²

P = Downflow Low Leak Economizer, Comparative Enthalpy with Barometric Relief²

R = Downflow Low Leak Economizer, Differential Dry Bulb with Barometric Relief²

Digit 15 — Supply Fan/Drive Type/Motor

0 = Standard Motor

1 = Optional Oversized/High Static 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 Service Access/Filters

0 = Standard Panels/Standard Filters

A = Hinged Access Panels/Standard Filters

B = Standard Panels/2 inch MERV 8 Filters

C = Hinged Access Panels/2 inch MERV 8 Filters

D = Standard Panels/2 inch MERV 13 Filters

E = Hinged Access Panels/2 inch MERV 13 Filters

Digit 17 — Condenser 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

B = Through-the-Base Gas Piping⁵

C = Through-the-Base Electric and Gas Piping⁵

Digit 19 — Disconnect/Circuit Breaker (three-phase only)

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^{1, 3}

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 Detector²

B = Supply Air Smoke Detector¹

C = Supply and Return Air Smoke Detectors^{1, 2}

Digit 25— System Monitoring Controls

- 0 = No Monitoring Control
- 1 = Clogged Filter Switch²
- 2 = Condensate Overflow Switch¹
- 3 = Discharge Air Sensing Tube
- 4 = Clogged Filter Switch and Condensate Overflow Switch^{1, 2}
- 5 = Clogged Filter Switch and Discharge Air Sensing Tube²
- 6 = Condensate Overflow Switch and Discharge Air Sensing Tube¹
- 7 = Clogged Filter Switch, Condensate Overflow Switch and Discharge Air Sensing Tube^{1, 2}

Digit 26— Not Used

Digit 27— Unit 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 Ambient⁴

- 0 = None
- A = Low Ambient Cooling to 0°F

Model Number Notes

Notes:

1. Includes Symbio™ Indoor Module.
2. Includes Symbio™ Fresh Air Module.
3. Includes Symbio™ Customer Connection Module.
4. Standard Low Ambient Cooling Limit is 40°F.
5. Includes gas piping and shutoff valve (field assembly required).

General Data

Table 3. General data— 6 to 12.5 tons— standard efficiency

	6 Tons	7.5 Tons	8.5 Tons	10 Tons	12.5 Tons
	YSJ072	YSJ090	YSJ102	YSJ120	YSJ150
Cooling Performance					
Gross Cooling Capacity	73000	91000	104000	123000	154000
EER	11.0	11.0	11.0	11.0	10.8
Nominal cfm/AHRI Rated cfm	1860	2475	2975	3700	4875
AHRI Net Cooling Capacity	72000	90000	102000	120000	148000
IEER (2-Speed)	14.6	14.6	14.6	14.6	14.0
IEER (SZVAV/MZVAV)	15.1/15.1	15.1/15.1	15.1/15.1	15.1/15.1	14.5/14.5
System Power (kW)	6.55	8.18	9.27	10.91	13.70
Compressor					
Number/Type	2/Manifold Scroll				
Percent Capacity (Stage 1 - Stage 3)	32/68/100	33/67/100	32/68/100	28/72/100	32/68/100
Sound					
Outdoor Sound Rating (dBA)	86	86	86	86	89
Outdoor Coil					
Type	Microchannel	Microchannel	Microchannel	Microchannel	Microchannel
Configuration	Full Face				
Tube Size (in.)	0.7	0.7	1.0	1.0	1.0
Face Area (sq. ft.)	21.64	21.64	21.64	21.64	28.32
Rows/FPI (Fins per inch)	1/23	1/23	1/23	1/23	1/23
Indoor Coil					
Type	Microchannel	Microchannel	Microchannel	Microchannel	Microchannel
Configuration	Full Face				
Tube Size (in.)	1.0	1.0	1.0	1.0	1.0
Face Area (sq. ft.)	11.84	11.84	11.84	11.84	14.27
Rows/FPI (Fins per inch)	2/18	2/18	2/18	2/18	2/18
Refrigerant Control	TXV	TXV	TXV	TXV	TXV
Drain Connection No./Size (in.) NPT	1/0.75	1/0.75	1/0.75	1/0.75	1/0.75
Reheat Coil					
Type	Microchannel	Microchannel	Microchannel	Microchannel	Microchannel
Configuration	Full Face				
Tube Size (in.)	0.6	0.6	0.6	0.6	0.6
Face Area (sq. ft.)	9.04	9.04	9.04	9.04	11.82
Rows/FPI (Fins per inch)	1/23	1/23	1/23	1/23	1/23
Outdoor Fan					
Type	Propeller	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter (in.)	1/26	1/26	1/26	1/26	1/30
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1	Direct/1
CFM	5900	5900	5900	6700	8200
Motor HP	0.70	0.70	0.70	0.75	1.00
Motor RPM	1100	1100	1100	1100	1100
Indoor Fan					
Type	BC Plenum				

Table 3. General data— 6 to 12.5 tons— standard efficiency (continued)

	6 Tons	7.5 Tons	8.5 Tons	10 Tons	12.5 Tons
	YSJ072	YSJ090	YSJ102	YSJ120	YSJ150
No. Used/Diameter (in.)/Width (in.)	1/23x6	1/23x6	1/23x6	1/23x6	1/23x6
Drive Type/No. Speeds/RPM	Direct/Variable	Direct/Variable	Direct/Variable	Direct/Variable	Direct/Variable
Motor HP (Standard/Oversized)	3.1 / –	3.1 / –	3.1 / –	3.1 / 4.6	4.6 / –
Max Motor RPM	1850	1850	1850	1850 / 1940	1940
Filters^(a)					
Type Furnished	Throwaway	Throwaway	Throwaway	Throwaway	Throwaway
Number Size Recommended	(2) 18 x 24 x 2 (3) 24 x 16 x 2	(2) 18 x 24 x 2 (3) 24 x 16 x 2	(2) 18 x 24 x 2 (3) 24 x 16 x 2	(2) 18 x 24 x 2 (3) 24 x 16 x 2	(3) 18 x 18 x 2 (3) 24 x 18 x 2
Refrigerant Charge					
lbs of R-410A	9.0	9.0	9.5	10.1	11.4
lbs of R-410A, Hot Gas Reheat	10.3	9.6	10.1	10.7	11.6
Heating Performance (Gas/Electric Only)					
Heating Input					
Low Heat Input (Btu) (High/Low Stage)	80,000/56,000	120,000/84,000	120,000/84,000	150,000/105,000	150,000/105,000
Mid Heat Input (Btu) (High/Low Stage)	120,000/84,000	150,000/105,000	150,000/105,000	200,000/140,000	200,000/140,000
High Heat Input (Btu) (High/Low Stage)	150,000/105,000	200,000/140,000	200,000/140,000	240,000/168,000	250,000/175,000
Heating Output					
Low Heat Output (Btu) (High/Low Stage)	64,800/45,300	97,200/68,000	97,200/68,000	121,500/85,000	121,500/85,000
Mid Heat Output (Btu) (High/Low Stage)	97,200/68,000	121,500/85,000	121,500/85,000	162,000/113,400	162,000/113,400
High Heat Output (Btu) (High/Low Stage)	121,500/85,000	162,000/113,400	162,000/113,400	194,400/136,000	202,500/141,750
Steady State Efficiency %					
Low Heat Input (Btu)	81	81	81	81	81
Mid Heat Input (Btu)	81	81	81	81	81
High Heat Input (Btu)	81	81	81	81	81
No. Burners					
Low Heat Output (Btu)	3	3	3	4	4
Mid Heat Output (Btu)	3	4	4	6	4
High Heat Output (Btu)	4	6	6	6	6
No. Stages					
Low Heat Input (Btu)	2	2	2	2	2
Mid Heat Input (Btu)	2	2	2	2	2
High Heat Input (Btu)	2	2	2	2	2
Gas Supply Line Pressure (InWC)					
Natural (minimum/maximum)	4.5/14.0	4.5/14.0	4.5/14.0	4.5/14.0	4.5/14.0
LP (minimum/maximum)	11.5/14.0	11.5/14.0	11.5/14.0	11.5/14.0	11.5/14.0
Gas Connection Pipe Size (in.)					
Low Heat	1/2	3/4	3/4	3/4	3/4
Mid Heat	3/4	3/4	3/4	3/4	3/4
High Heat	3/4	3/4	3/4	3/4	3/4
Cabinet					
Cabinet Size	B0	B0	B0	B0	C0

^(a) 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 5. Gross cooling capacities — 6 tons

CFM	Ent DB (°F)	Entering Wet Bulb Temp (°F)						Entering Wet Bulb Temp (°F)						Entering Wet Bulb Temp (°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
		Ambient Temperature 85°F						Ambient Temperature 95°F						Ambient Temperature 105°F					
1860	75	67.9	54.2	77.6	43.2	85.6	29.1	63.8	51.9	73.0	40.9	80.2	28.6	59.4	49.6	68.1	38.5	74.1	26.5
	80	67.7	63.3	77.5	53.0	85.9	40.7	63.7	60.9	73.0	50.7	80.6	38.3	59.3	58.5	68.1	48.3	74.8	35.8
	85	69.3	69.3	77.3	62.5	86.1	50.9	66.1	66.1	72.9	60.5	81.0	48.4	62.5	62.5	68.0	57.9	75.2	45.9
	90	77.1	71.7	77.1	71.7	86.2	60.6	70.3	70.3	72.7	69.4	81.0	58.3	66.7	66.7	67.9	66.9	75.3	55.8
2160	75	70.3	59.0	80.0	46.2	87.3	30.8	65.9	56.4	75.2	43.7	81.5	28.7	61.3	52.4	70.0	41.2	75.1	27.2
	80	69.9	69.0	79.9	57.4	87.7	42.9	65.7	65.7	75.2	55.0	82.1	40.6	61.6	61.6	70.0	52.6	76.0	38.1
	85	73.4	73.4	79.7	68.0	88.0	54.5	69.9	69.9	75.0	63.6	82.5	52.1	66.1	66.1	69.8	63.1	76.3	49.5
	90	77.9	77.9	79.3	78.4	88.1	66.0	74.3	74.3	74.6	74.6	82.6	63.6	70.3	70.3	70.4	70.4	76.5	61.0
2400	75	71.7	61.4	81.6	48.2	88.3	31.6	67.2	57.2	76.6	45.8	82.6	29.3	62.3	57.0	71.3	43.3	76.1	27.9
	80	71.3	71.3	81.5	60.7	88.8	44.8	67.7	67.7	76.5	59.3	83.1	42.4	63.9	63.9	71.2	55.9	76.9	39.9
	85	76.1	76.1	81.0	72.3	89.1	57.4	72.4	72.4	76.1	69.8	83.4	55.0	68.4	68.4	70.7	67.1	76.9	52.3
	90	80.8	80.8	80.9	80.9	89.2	70.1	76.9	76.9	77.0	77.0	83.5	67.7	72.5	72.5	72.6	72.6	77.2	63.1
2640	75	72.7	65.3	82.9	50.3	89.5	32.3	68.0	62.8	77.8	47.9	83.4	30.5	63.1	60.1	72.3	45.3	77.0	26.1
	80	73.5	73.5	82.7	64.0	89.9	46.5	69.8	69.8	77.6	61.6	84.1	44.0	65.8	65.8	72.1	59.0	77.6	41.3
	85	78.5	78.5	82.0	76.2	89.9	60.3	74.6	74.6	76.9	73.7	84.0	57.8	70.4	70.4	71.4	71.4	77.5	55.1
	90	83.2	83.2	83.3	83.3	90.1	73.3	79.0	79.0	79.1	79.1	84.2	67.9	74.2	74.2	74.3	74.3	77.3	67.9
2880	75	73.5	68.4	84.0	52.3	90.5	32.9	68.8	65.8	78.7	49.9	84.3	30.8	63.7	63.1	73.0	47.3	77.7	28.9
	80	75.5	75.5	83.7	67.2	90.7	48.1	71.7	71.7	78.5	64.2	84.6	45.5	67.5	67.5	72.8	59.5	78.3	43.0
	85	80.6	80.6	82.7	80.1	90.6	63.1	76.5	76.5	77.5	77.5	84.5	60.6	72.0	72.0	72.1	72.1	78.2	58.0
	90	85.1	85.1	85.2	85.2	90.6	77.1	80.7	80.7	80.7	80.7	84.3	74.4	75.4	75.4	75.5	75.5	77.6	71.5
		Ambient Temperature 115°F						Ambient Temperature 125°F											
1860	75	54.7	46.9	62.7	36.0	67.7	23.3	49.6	42.5	56.9	33.2	60.9	18.6						
	80	54.7	54.7	62.8	45.8	68.3	33.1	50.6	50.6	57.0	43.0	61.3	30.3						
	85	58.7	58.7	62.8	53.6	68.7	43.1	54.4	54.4	56.9	52.3	61.5	40.1						
	90	62.6	62.6	62.7	62.7	68.9	53.1	57.9	57.9	58.0	58.0	61.6	50.1						
2160	75	56.2	51.0	64.4	38.6	68.9	24.1	50.8	48.1	58.3	35.8	61.8	21.0						
	80	57.7	57.7	64.4	50.0	69.4	35.3	53.3	53.3	58.3	47.1	62.4	32.4						
	85	61.9	61.9	64.2	60.3	69.5	46.6	57.1	57.1	58.0	57.3	62.4	43.8						
	90	65.7	65.7	65.8	65.8	69.6	57.3	60.1	60.1	60.2	60.2	62.4	54.6						
2400	75	57.1	54.2	65.5	40.6	69.8	24.4	51.6	51.3	59.1	37.7	62.2	22.4						
	80	59.7	59.7	65.4	53.2	70.2	36.9	55.0	55.0	59.1	48.8	63.0	34.0						
	85	63.9	63.9	64.9	64.3	70.2	49.6	58.7	58.7	58.8	58.8	63.0	47.2						
	90	67.4	67.4	67.4	67.4	70.1	61.3	61.0	61.0	61.0	61.0	62.7	58.2						
2640	75	57.8	57.3	66.3	42.6	70.4	26.1	52.3	52.3	59.7	39.7	65.2	24.0						
	80	61.4	61.4	66.2	54.3	70.9	38.6	56.5	56.5	59.4	52.6	63.5	35.6						
	85	65.6	65.6	65.6	65.6	70.9	52.4	59.9	59.9	60.0	60.0	63.4	48.8						
	90	68.5	68.5	68.5	68.5	70.5	65.0	62.1	62.1	62.1	62.1	62.9	61.8						
2880	75	58.4	58.4	66.9	44.5	71.1	24.9	53.5	53.5	60.2	41.5	66.4	23.5						
	80	62.9	62.9	66.5	58.5	71.5	40.2	57.7	57.7	59.7	55.3	63.9	37.2						
	85	66.8	66.8	66.9	66.9	71.4	55.3	60.7	60.7	60.8	60.8	63.8	50.4						
	90	69.3	69.3	69.4	69.4	70.7	68.6	63.0	63.0	63.0	63.0	63.1	63.1						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat. For indoor fan heat formula, refer to appropriate airflow table notes.
2. MBh = Total gross capacity
3. SHC = Sensible heat capacity

Reheat Temperature Rise

Table 14. Reheat temperature rise — 6 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
Ambient DB 60°F													
1200	60	28.5 ^(a)	32.0 ^(a)	45.9	54.1	32.2 ^(a)	36.9	50.7	56.7	36.3	41.8	55.2	59.0
	65	28.5 ^(a)	32.0 ^(a)	45.9	54.2	32.2 ^(a)	36.9	50.7	56.7	36.4	41.8	55.2	59.0
	70	28.5 ^(a)	32.2 ^(a)	45.8	54.2	32.2 ^(a)	36.9	50.6	56.7	36.3	41.8	55.1	59.0
	75	30.1 ^(a)	36.4	47.7	56.3	32.2 ^(a)	37.1	50.6	56.7	36.3	41.8	55.1	59.1
1440	60	31.5 ^(a)	33.9 ^(a)	46.6	54.8	35.2	38.9	51.3	57.4	39.2	44.0	56.0	60.0
	65	31.6 ^(a)	34.0 ^(a)	46.7	54.9	35.3	39.0	51.3	57.4	39.3	43.9	56.0	59.9
	70	31.9 ^(a)	35.8	47.0	55.7	35.4	39.0	51.4	57.5	39.3	43.9	56.1	60.0
	75	34.6 ^(a)	40.1	50.1	57.9	35.4	40.2	51.4	58.0	39.4	44.0	56.1	60.0
1680	60	33.9 ^(a)	35.5	47.2	55.2	37.7	40.5	51.9	57.9	41.5	45.6	56.6	60.7
	65	34.0 ^(a)	35.7	47.3	55.3	37.8	40.6	52.0	58.0	41.6	45.5	56.6	60.6
	70	35.4	38.7	48.7	56.9	37.9	40.6	52.1	58.0	41.7	45.6	56.7	60.7
	75	38.3	43.2	52.2	59.3	38.4	43.3	52.4	59.3	41.8	45.7	56.8	60.7
1920	60	35.8	36.8	47.8	55.7	39.6	41.7	52.5	58.4	43.6	46.8	57.1	61.1
	65	36.0	37.0	48.0	55.7	39.8	41.9	52.6	58.5	43.5	46.7	57.0	61.1
	70	38.3	41.1	50.4	57.9	39.9	42.1	52.7	58.5	43.6	46.9	57.1	61.2
	75	41.3	45.8	53.9	60.4	41.4	45.9	54.0	60.5	43.8	47.1	57.3	61.3
2160	60	37.4	37.0	48.3	56.1	41.2	42.8	52.9	58.7	45.1	47.8	57.4	61.5
	65	38.0	38.6	48.7	56.2	41.4	43.0	53.0	58.8	45.0	47.8	57.4	61.5
	70	40.8	43.2	51.9	58.7	41.7	43.7	53.2	59.1	45.2	48.0	57.5	61.6
	75	43.8	48.0	55.4	61.4	43.9	48.2	55.5	61.5	45.4	48.7	57.7	61.8
2400	60	38.8	38.9	48.7	56.0	42.5	43.6	53.2	58.9	46.3	48.6	57.7	61.7
	65	39.5	40.0	49.3	56.6	42.7	43.9	53.4	59.0	46.3	48.6	57.7	61.7
	70	42.9	45.0	53.2	59.4	43.4	44.8	53.9	59.4	46.5	48.9	57.8	61.8
	75	45.9	50.0	56.6	62.2	46.0	50.1	56.7	62.3	46.9	49.8	58.1	62.2
2640	60	39.9	39.8	49.1	55.9	43.5	44.4	53.5	59.0	47.4	49.3	57.9	61.9
	65	41.3	41.5	50.4	57.0	43.8	44.7	53.7	59.2	47.4	49.4	57.9	61.9
	70	44.7	46.6	54.2	60.1	44.6	46.7	54.3	60.1	47.7	49.7	58.1	62.0
	75	47.8	51.7	57.7	62.9	47.8	51.8	57.8	63.0	48.4	51.9	58.6	63.1
2880	60	40.8	40.6	49.3	55.7	44.4	45.1	53.7	59.1	48.3	49.8	58.1	61.9
	65	42.8	42.9	51.2	57.4	44.8	45.5	53.9	59.3	48.4	50.1	58.1	62.0
	70	46.2	48.1	55.2	60.6	45.7	48.2	54.7	60.6	48.7	50.4	58.3	62.2
	75	49.4	53.2	58.7	63.6	49.5	53.3	58.8	63.6	49.5	53.5	59.0	63.7
Ambient DB 65°F													
1200	60	29.0 ^(a)	31.4 ^(a)	46.4	56.4	32.6 ^(a)	36.4	51.1	59.0	36.5	41.4	56.1	61.5
	65	29.0 ^(a)	31.5 ^(a)	46.4	56.4	32.6 ^(a)	36.4	51.0	59.0	36.6	41.4	56.2	61.5
	70	29.0 ^(a)	31.7 ^(a)	46.3	56.4	32.6 ^(a)	36.5	51.0	59.0	36.5	41.4	56.0	61.5
	75	30.8 ^(a)	35.6	48.5	58.5	32.6 ^(a)	36.4	51.0	59.0	36.5	41.4	56.0	61.5

Reheat Temperature Rise

Table 14. Reheat temperature rise — 6 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
1440	60	32.0 ^(a)	33.2 ^(a)	47.0	56.9	35.7	38.3	51.8	59.7	39.5	43.5	56.6	62.4
	65	32.1 ^(a)	33.3 ^(a)	47.1	56.9	35.8	38.4	51.8	59.7	39.6	43.4	56.6	62.4
	70	32.4 ^(a)	34.8 ^(a)	47.4	57.6	35.9	38.5	51.8	59.8	39.6	43.4	56.6	62.4
	75	35.3	39.1	50.9	60.0	35.9	38.9	51.9	59.9	39.7	43.5	56.7	62.4
1680	60	34.3 ^(a)	34.7 ^(a)	47.7	57.4	38.2	39.8	52.4	60.3	42.0	45.0	57.2	63.1
	65	34.5 ^(a)	34.9 ^(a)	47.7	57.4	38.3	39.9	52.5	60.3	42.0	44.9	57.2	63.0
	70	36.1	37.5	49.4	58.8	38.4	40.1	52.6	60.4	42.1	45.0	57.3	63.1
	75	39.0	42.1	53.0	61.3	38.9	42.2	53.0	61.4	42.2	45.1	57.3	63.1
1920	60	36.3	36.1	48.3	57.2	40.1	41.0	52.9	60.7	44.1	46.2	57.8	63.5
	65	36.5	36.3	48.4	57.3	40.2	41.2	53.0	60.7	44.0	46.1	57.7	63.5
	70	39.0	39.8	51.1	59.8	40.4	41.4	53.1	60.8	44.2	46.3	57.8	63.5
	75	42.0	44.5	54.8	62.4	42.1	44.7	54.9	62.5	44.4	46.5	57.9	63.6
2160	60	37.8	37.5	48.7	56.8	41.6	42.0	53.3	60.9	45.6	47.1	58.1	63.8
	65	38.4	38.1	49.1	57.2	41.7	42.2	53.4	61.0	45.5	47.1	58.0	63.8
	70	41.4	41.8	52.5	60.5	42.2	42.8	53.7	61.2	45.7	47.3	58.2	63.9
	75	44.5	46.7	56.2	63.3	44.6	46.8	56.3	63.4	46.0	47.9	58.3	64.1
2400	60	39.1	38.7	49.0	56.5	42.8	42.9	53.5	60.9	46.8	47.9	58.3	64.0
	65	39.9	39.5	49.7	57.0	43.0	43.2	53.7	61.0	46.8	48.0	58.3	64.0
	70	43.4	43.6	53.7	61.1	43.7	44.0	54.2	61.4	47.0	48.2	58.4	64.1
	75	46.7	48.6	57.5	64.1	46.8	48.7	57.6	64.1	47.3	49.0	58.6	64.4
2640	60	40.2	39.8	49.3	56.1	43.8	43.7	53.7	60.7	47.8	48.6	58.4	64.0
	65	41.8	41.2	50.8	57.3	44.1	44.0	54.0	60.9	47.9	48.7	58.5	64.1
	70	45.2	45.2	54.7	61.5	45.0	45.0	54.7	61.5	48.1	49.0	58.7	64.2
	75	48.5	50.2	58.6	64.7	48.6	50.4	58.7	64.7	48.9	50.0	59.2	64.6
2880	60	41.1	40.7	49.6	55.8	44.7	44.5	53.9	60.5	48.7	49.2	58.6	64.1
	65	43.3	42.7	51.7	57.7	45.1	44.9	54.2	60.7	48.8	49.4	58.6	64.1
	70	46.7	46.6	55.6	62.0	46.8	46.7	55.7	62.0	49.1	49.7	58.8	64.3
	75	50.1	51.7	59.6	65.2	50.2	51.8	59.6	65.3	50.0	52.0	59.6	65.4
Ambient DB 70°F													
1200	60	29.5 ^(a)	30.9 ^(a)	46.9	58.4	33.2 ^(a)	36.0	51.7	61.3	37.0	41.0	56.6	63.9
	65	29.5 ^(a)	30.9 ^(a)	46.8	58.4	33.1 ^(a)	35.9	51.6	61.3	37.1	41.0	56.7	63.9
	70	29.5 ^(a)	31.1 ^(a)	46.8	58.5	33.1 ^(a)	36.0	51.5	61.3	37.0	41.0	56.6	63.9
	75	31.5 ^(a)	34.8 ^(a)	49.2	60.6	33.1 ^(a)	36.0	51.5	61.3	37.0	41.0	56.5	63.9
1440	60	32.5 ^(a)	32.6 ^(a)	47.5	58.7	36.3	37.7	52.3	62.0	40.2	43.0	57.4	64.9
	65	32.5 ^(a)	32.7 ^(a)	47.5	58.7	36.3	37.8	52.3	62.1	40.2	42.8	57.4	64.8
	70	33.0 ^(a)	33.1 ^(a)	48.0	59.0	36.4	37.9	52.4	62.1	40.3	42.9	57.4	64.8
	75	36.0	38.1	51.6	62.1	36.4	38.3	52.4	62.3	40.3	43.0	57.4	64.9
1680	60	34.8 ^(a)	34.5 ^(a)	48.1	58.1	38.6	39.1	52.9	62.5	42.5	44.4	57.8	65.5
	65	34.9 ^(a)	34.6 ^(a)	48.2	58.2	38.7	39.2	53.0	62.6	42.6	44.3	57.8	65.4
	70	36.8	36.5	50.1	60.0	38.9	39.4	53.0	62.6	42.6	44.4	57.9	65.5
	75	39.7	40.9	53.8	63.4	39.6	41.0	53.7	63.5	42.8	44.5	58.0	65.5

Reheat Temperature Rise

Table 14. Reheat temperature rise — 6 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
1920	60	36.7	36.2	48.7	57.4	40.4	40.3	53.3	62.4	44.5	45.5	58.2	65.8
	65	36.9	36.5	48.8	57.7	40.6	40.5	53.4	62.5	44.4	45.4	58.2	65.8
	70	39.6	39.1	51.7	60.5	40.8	40.7	53.5	62.6	44.5	45.6	58.3	65.9
	75	42.6	43.2	55.4	64.3	42.7	43.4	55.5	64.4	44.7	45.8	58.4	65.9
2160	60	38.2	37.7	49.0	56.8	41.9	41.6	53.6	61.9	45.9	46.5	58.5	66.0
	65	38.8	38.3	49.5	57.2	42.1	41.8	53.7	62.1	45.9	46.4	58.4	66.0
	70	41.9	41.4	53.1	61.0	42.5	42.0	54.1	62.2	46.1	46.6	58.6	66.1
	75	45.1	45.3	56.9	65.0	45.2	45.5	57.0	65.1	46.3	47.1	58.7	66.3
2400	60	39.4	38.9	49.4	56.4	43.1	42.7	53.8	61.5	47.1	47.3	58.6	66.0
	65	40.4	39.7	50.2	56.9	43.4	42.9	54.0	61.6	47.1	47.3	58.6	66.0
	70	43.9	43.3	54.2	61.4	44.1	43.7	54.6	62.1	47.4	47.6	58.8	66.1
	75	47.2	47.2	58.1	65.5	47.3	47.3	58.2	65.6	48.0	48.3	59.2	66.5
2640	60	40.5	40.0	49.6	56.2	44.1	43.7	54.0	61.0	48.1	48.0	58.7	65.8
	65	42.3	41.6	51.3	57.5	44.4	44.0	54.2	61.2	48.2	48.0	58.8	65.8
	70	45.7	45.0	55.2	61.8	45.5	44.8	55.1	61.8	48.5	48.4	59.0	66.0
	75	49.0	48.9	59.2	66.0	49.1	49.0	59.2	66.1	49.2	49.3	59.6	66.5
2880	60	41.4	41.0	49.8	55.9	45.0	44.6	54.2	60.6	49.0	48.7	58.8	65.4
	65	43.7	43.1	52.1	57.9	45.3	44.9	54.4	60.8	49.1	48.8	58.9	65.5
	70	47.2	46.5	56.1	62.2	47.2	46.6	56.2	62.3	49.4	49.2	59.1	65.7
	75	50.6	50.4	60.1	66.4	50.7	50.5	60.2	66.5	50.6	50.2	60.2	66.4

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

Table 15. Reheat temperature rise — 7.5 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
Ambient DB 60°F													
1500	60	29.5 ^(a)	32.9 ^(a)	46.1	55.0	33.1 ^(a)	38.0	50.7	57.8	36.7	43.2	55.0	60.6
	65	29.7 ^(a)	33.0 ^(a)	46.2	55.1	33.0 ^(a)	38.1	50.6	57.8	36.9	43.1	55.2	60.5
	70	29.7 ^(a)	34.1 ^(a)	46.2	55.5	33.2 ^(a)	38.3	50.7	57.9	36.8	43.2	55.1	60.6
	75	31.9 ^(a)	38.7	48.7	58.0	33.3 ^(a)	38.7	50.7	58.1	36.9	43.4	55.1	60.6
1800	60	32.5 ^(a)	34.8 ^(a)	47.0	55.7	36.1	39.8	51.6	58.5	39.8	45.1	56.0	61.3
	65	32.7 ^(a)	35.0	47.1	55.8	36.3	40.1	51.7	58.6	39.9	45.0	56.0	61.2
	70	33.3 ^(a)	37.6	47.7	57.1	36.5	40.3	51.8	58.7	40.0	45.2	56.1	61.3
	75	36.4	42.3	51.2	59.7	37.0	42.5	52.2	59.7	40.2	45.4	56.2	61.4
2100	60	34.8 ^(a)	36.3	47.7	56.2	38.5	41.3	52.3	58.9	42.2	46.5	56.7	61.7
	65	35.1	36.8	47.9	56.4	38.7	41.6	52.4	59.1	42.3	46.5	56.8	61.7
	70	37.0	40.4	49.8	58.2	39.0	42.0	52.6	59.2	42.5	46.8	56.9	61.9
	75	40.0	45.4	53.3	60.9	39.8	45.5	53.3	61.0	42.8	47.1	57.1	62.0

Evaporator Fan Performance

Tables

Table 23. Evaporator fan performance - 6 ton (model YSJ), downflow, high heat

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																		
1800	560	0.11	621	0.16	676	0.21	727	0.26	775	0.32	820	0.37	861	0.43	900	0.49	937	0.56	973	0.62
1920	590	0.13	647	0.18	701	0.23	750	0.29	796	0.34	840	0.40	881	0.47	920	0.53	957	0.59	992	0.66
2040	619	0.15	674	0.20	726	0.26	773	0.32	818	0.37	861	0.44	901	0.50	940	0.57	976	0.63	1011	0.70
2160	649	0.17	702	0.23	751	0.29	797	0.34	841	0.41	882	0.47	922	0.54	960	0.60	996	0.67	1031	0.74
2280	679	0.20	730	0.25	777	0.31	822	0.38	864	0.44	905	0.51	943	0.57	981	0.64	1017	0.72	1051	0.79
2400	709	0.22	758	0.28	804	0.35	847	0.41	888	0.48	928	0.54	965	0.61	1002	0.69	1037	0.76	1071	0.84
2520	739	0.25	787	0.31	831	0.38	873	0.45	913	0.52	951	0.59	988	0.66	1023	0.73	1058	0.81	1091	0.89
2640	770	0.28	816	0.35	858	0.42	899	0.49	938	0.56	975	0.63	1012	0.71	1046	0.78	1080	0.86	1113	0.94
2760	800	0.31	845	0.38	886	0.46	925	0.53	963	0.60	1000	0.68	1035	0.76	1069	0.83	1102	0.91	1134	1.00
2880	831	0.35	874	0.42	914	0.50	952	0.57	989	0.65	1025	0.73	1059	0.81	1093	0.89	1125	0.97	1156	1.05
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																		
1800	1008	0.69	1041	0.75	1073	0.82	1103	0.89	1133	0.97	1162	1.04	1190	1.11	1219	1.19	1248	1.27	1276	1.35
1920	1026	0.73	1059	0.8	1090	0.87	1121	0.94	1150	1.02	1179	1.09	1207	1.17	1234	1.24	1260	1.32	1287	1.41
2040	1044	0.77	1077	0.84	1108	0.92	1138	0.99	1168	1.07	1196	1.14	1224	1.22	1251	1.3	1277	1.38	1303	1.47
2160	1064	0.82	1096	0.89	1126	0.97	1156	1.04	1186	1.12	1214	1.2	1241	1.28	1268	1.36	1294	1.45	1320	1.53
2280	1084	0.86	1115	0.94	1145	1.02	1175	1.1	1204	1.18	1232	1.26	1259	1.34	1286	1.43	1312	1.51	1337	1.6
2400	1104	0.91	1135	0.99	1165	1.07	1194	1.15	1222	1.24	1250	1.32	1277	1.41	1304	1.49	1330	1.58	1355	1.67
2520	1124	0.97	1155	1.05	1185	1.13	1214	1.21	1242	1.3	1269	1.38	1296	1.47	1322	1.56	1348	1.65	1373	1.74
2640	1144	1.02	1175	1.11	1205	1.19	1234	1.28	1262	1.36	1289	1.45	1315	1.54	1341	1.63	1366	1.72	1391	1.82
2760	1165	1.08	1196	1.17	1225	1.25	1254	1.34	1282	1.43	1309	1.52	1335	1.61	1360	1.71	1385	1.8	1410	1.9
2880	1187	1.14	1217	1.23	1246	1.32	1274	1.41	1302	1.5	1328	1.6	1355	1.69	1380	1.78	1405	1.88	1429	1.98

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. For direct drive evaporator fan speed (rpm), refer to the applicable table in the fan performance section.
3. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
4. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
5. Direct drive fan motor heat is negligible.
6. 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 - 6 ton (model YSJ), horizontal, high heat

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									
1800	631 0.17	684 0.22	732 0.27	777 0.32	819 0.37	859 0.43	896 0.48	932 0.54	968 0.60	1002 0.67
1920	665 0.20	716 0.25	763 0.30	806 0.36	847 0.41	886 0.47	923 0.53	957 0.59	991 0.65	1024 0.72
2040	700 0.23	749 0.28	794 0.34	836 0.40	875 0.46	913 0.52	949 0.58	983 0.64	1016 0.71	1047 0.77
2160	736 0.27	782 0.32	825 0.38	866 0.44	904 0.50	941 0.57	976 0.63	1010 0.70	1042 0.77	1073 0.83
2280	771 0.31	816 0.37	858 0.43	897 0.49	934 0.55	970 0.62	1004 0.69	1037 0.76	1069 0.83	1099 0.90
2400	807 0.35	850 0.41	890 0.48	928 0.54	964 0.61	999 0.68	1033 0.75	1065 0.82	1096 0.89	1126 0.97
2520	843 0.40	885 0.46	923 0.53	960 0.60	995 0.67	1029 0.74	1061 0.81	1093 0.89	1123 0.96	1153 1.04
2640	879 0.45	919 0.52	957 0.59	992 0.66	1026 0.73	1059 0.81	1091 0.88	1122 0.96	1152 1.04	1180 1.12
2760	915 0.51	954 0.58	990 0.65	1025 0.73	1058 0.80	1090 0.88	1121 0.96	1150 1.04	1180 1.12	1208 1.20
2880	951 0.57	989 0.65	1024 0.72	1058 0.80	1090 0.88	1121 0.96	1151 1.04	1180 1.12	1209 1.20	1237 1.29
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									
1800	1034 0.73	1066 0.79	1096 0.86	1126 0.93	1156 1.00	1185 1.07	1213 1.15	1241 1.22	1267 1.30	1293 1.38
1920	1057 0.78	1088 0.85	1118 0.92	1147 0.99	1175 1.06	1203 1.13	1231 1.21	1258 1.29	1285 1.36	1311 1.44
2040	1079 0.84	1110 0.91	1140 0.98	1169 1.05	1197 1.13	1224 1.20	1250 1.27	1276 1.35	1303 1.43	1329 1.52
2160	1103 0.90	1133 0.97	1162 1.05	1191 1.12	1219 1.20	1246 1.27	1272 1.35	1297 1.43	1322 1.51	1347 1.59
2280	1129 0.97	1157 1.04	1185 1.11	1214 1.19	1241 1.27	1268 1.35	1294 1.43	1319 1.51	1344 1.59	1368 1.68
2400	1155 1.04	1183 1.12	1210 1.19	1236 1.27	1264 1.35	1290 1.43	1316 1.51	1341 1.59	1366 1.68	1390 1.77
2520	1182 1.12	1209 1.20	1236 1.27	1262 1.35	1287 1.43	1313 1.52	1339 1.60	1364 1.69	1388 1.77	1412 1.86
2640	1209 1.20	1236 1.28	1262 1.36	1288 1.44	1313 1.52	1337 1.61	1362 1.69	1386 1.78	1411 1.87	1434 1.96
2760	1236 1.28	1263 1.37	1289 1.45	1315 1.54	1339 1.62	1363 1.71	1387 1.79	1410 1.88	1434 1.97	1457 2.07
2880	1264 1.37	1290 1.46	1316 1.55	1341 1.64	1366 1.73	1390 1.81	1413 1.90	1436 1.99	1458 2.08	1480 2.17

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. For direct drive evaporator fan speed (rpm), refer to the applicable table in the fan performance section.
3. Data includes pressure drop due to standard filters and wet coils. No accessories or options are included in pressure drop data.
4. To determine static pressure drop due to other options/accessories, refer to the applicable table in the fan performance section.
5. Direct drive fan motor heat is negligible.
6. 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.

Fan Performance

Table 45. Outdoor sound power level

Tons	Unit Model Number	Octave Center Frequency								Overall dBA
		63	125	250	500	1000	2000	4000	8000	
6	YSJ072A*	83	84	84	85	82	76	73	67	86
7.5	YSJ090A*	83	84	84	85	82	76	73	67	86
8.5	YSJ102A*	83	84	84	85	82	76	73	67	86
10	YSJ120A*	87	88	86	83	81	77	73	68	86
12.5	YSJ150A*	89	92	89	87	84	80	75	68	89
15	YSJ180A*	83	87	87	85	82	77	74	69	87
17.5	YSJ210A*	89	89	91	89	86	82	79	73	91
20	YSJ240A*	89	89	91	89	86	82	79	73	91
25	YSJ300A*	94	90	92	91	88	84	81	75	93

Notes:

1. Outdoor sound rating shown is tested in accordance with AHRI 270/370-2015. For additional information reference the outdoor sound power level data in the performance section.
2. Taken in accordance with AHRI 270/370-2015.
3. Indoor sound in accordance with AHRI 260 is available through Trane's selection software.

Table 46. Static pressure drop through accessories (inches water column) - standard efficiency- economizer

Tons	Unit Model Number	cfm ^(a)	Standard Filters ^(b)	2" MERV 8 Filter ^(c)	2" MERV 13 Filter	Reheat Coil	Economizer with OA/RA Dampers ^(d)							
							Downflow		Horizontal		Low Leak Downflow ^(e)		Low Leak Horizontal	
							100% OA	100% RA	100% OA	100% RA	100% OA	100% RA	100% OA	100% RA
6	YSJ072A	1800	0.03	0.04	0.07	0.04	0.05	0.01	0.04	0.02	0.09	0.00	-	-
		2400	0.04	0.06	0.10	0.06	0.10	0.01	0.06	0.03	0.16	0.01	-	-
		2880	0.04	0.07	0.13	0.07	0.14	0.02	0.08	0.04	0.24	0.01	-	-
7.5	YSJ090A	2250	0.03	0.05	0.09	0.05	0.09	0.01	0.05	0.02	0.14	0.01	-	-
		3000	0.05	0.08	0.13	0.07	0.15	0.02	0.09	0.04	0.26	0.01	-	-
		3600	0.05	0.10	0.17	0.09	0.22	0.02	0.12	0.06	0.39	0.02	-	-
8.5	YSJ102A	2550	0.04	0.06	0.11	0.06	0.11	0.01	0.06	0.03	0.19	0.01	-	-
		3400	0.05	0.09	0.16	0.09	0.20	0.02	0.11	0.05	0.34	0.02	-	-
		4080	0.06	0.12	0.20	0.1	0.28	0.03	0.15	0.07	0.50	0.03	-	-
10	YSJ120A	3000	0.05	0.08	0.13	0.07	0.15	0.02	0.09	0.04	0.26	0.01	-	-
		4000	0.06	0.12	0.20	0.10	0.27	0.03	0.15	0.07	0.48	0.03	-	-
		4800	0.07	0.16	0.25	0.12	0.39	0.03	0.20	0.09	0.71	0.05	-	-
12.5	YSJ150A	3750	0.05	0.09	0.16	0.08	0.24	0.02	0.13	0.06	0.42	0.02	-	-
		5000	0.07	0.13	0.22	0.1	0.42	0.04	0.22	0.10	0.78	0.06	-	-
		6000	0.09	0.16	0.27	0.12	0.60	0.05	0.31	0.13	1.16	0.10	-	-
15	YSJ180A	4500	0.03	0.05	0.09	0.04	0.13	0.02	0.13	0.02	0.14	0.11	0.07	0.12
		6000	0.04	0.08	0.13	0.05	0.20	0.04	0.20	0.04	0.23	0.17	0.12	0.18
		7200	0.06	0.10	0.17	0.07	0.27	0.05	0.27	0.05	0.32	0.23	0.16	0.25
17.5	YSJ210A	5250	0.04	0.06	0.11	0.05	0.16	0.03	0.16	0.03	0.19	0.14	0.09	0.15
		7000	0.05	0.10	0.17	0.06	0.26	0.05	0.26	0.05	0.30	0.22	0.15	0.24
		8400	0.07	0.13	0.22	0.08	0.35	0.06	0.35	0.06	0.42	0.29	0.21	0.33
20	YSJ240A	6000	0.04	0.08	0.13	0.05	0.20	0.04	0.20	0.04	0.23	0.17	0.12	0.18
		8000	0.07	0.12	0.21	0.08	0.32	0.06	0.32	0.06	0.39	0.27	0.19	0.3
		9600	0.09	0.16	0.27	0.10	0.44	0.07	0.44	0.07	0.54	0.37	0.27	0.41
25	YSJ300A	7500	0.06	0.11	0.19	0.07	0.29	0.05	0.29	0.05	0.34	0.24	0.17	0.27
		10000	0.09	0.17	0.29	0.11	0.48	0.08	0.48	0.08	0.58	0.40	0.29	0.45
		12000	0.12	0.23	0.39	0.14	0.66	0.11	0.66	0.11	0.82	0.55	0.39	0.62

- 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.
- Tested with: 2-in filters 6 to 25 Tons.
- Difference in pressure drop should be considered when utilizing optional 2-in pleated filters.
- OA = Outside Air and RA = Return Air.
- 6-12.5 Ton Low Leak static pressure does not differentiate between Dowflow and Horizontal.

Table 47. Static pressure drop through accessories (inches water column) - standard efficiency- gas heater

Tons	Unit Model Number	cfm ^(a)	Gas Heater ^(b)					
			Downflow			Horizontal		
			L	M	H	L	M	H
6	YSJ072A	1800	0.04	0.04	-	0.13	0.13	-
		2400	0.05	0.05	-	0.24	0.24	-
		2880	0.07	0.07	-	0.35	0.35	-
7.5	YSJ090A	2250	0.11	0.11	-	0.19	0.19	-
		3000	0.17	0.17	-	0.33	0.33	-
		3600	0.24	0.24	-	0.46	0.46	-
8.5	YSJ102A	2550	0.13	0.13	-	0.24	0.24	-
		3400	0.22	0.22	-	0.41	0.41	-
		4080	0.31	0.31	-	0.59	0.59	-
10	YSJ120A	3000	0.16	0.16	-	0.16	0.16	-
		4000	0.28	0.28	-	0.28	0.28	-
		4800	0.44	0.44	-	0.44	0.44	-
12.5	YSJ150A	3750	0.23	0.23	-	0.11	0.11	-
		5000	0.42	0.42	-	0.27	0.27	-
		6000	0.64	0.64	-	0.46	0.46	-
15	YSJ180A	4500	-0.07	-0.05	-0.06	0.08	0.08	0.10
		6000	-0.03	-0.02	-0.02	0.12	0.13	0.16
		7200	-0.01	-0.00	0.01	0.11	0.13	0.19
17.5	YSJ210A	5250	-0.05	-0.03	-0.04	0.11	0.11	0.13
		7000	-0.01	-0.01	0.00	0.11	0.13	0.18
		8400	0.02	0.02	0.04	0.10	0.13	0.20
20	YSJ240A	6000	-0.03	-0.02	-0.02	0.12	0.13	0.16
		8000	0.01	0.01	0.03	0.10	0.13	0.19
		9600	0.04	0.05	0.07	0.10	0.14	0.21
25	YSJ300A	7500	0.00	0.00	0.01	0.11	0.13	0.19
		10000	0.06	0.07	0.08	0.11	0.15	0.21
		12000	0.14	0.15	0.14	0.16	0.21	0.31

^(a) 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.

^(b) Model digit 11 selection of Low Gas Heat is 5x5, Medium Gas Heat is 7x7, and High Gas Heat is 8x8 for 15 to 25T units.

Heating Performance

Table 48. Gas fired heating capacities - standard efficiency

Tons	Unit Model Number	Heating Input BTU (High / Low Stage)	Heating Output BTU (High / Low Stage)	Air Temperature Rise°F
6	YSJ072A**(0,A)L	80,000 / 56,000	64,800 / 45,300	10 - 40
	YSJ072A**(0,A)M	120,000 / 84,000	97,200 / 68,000	20 - 50
	YSJ072A**(0,A)H	150,000 / 105,000	121,500 / 85,000	30 - 60
7.5	YSJ090A**(0,A)L	120,000 / 84,000	97,200 / 68,000	15 - 45
	YSJ090A**(0,A)M	150,000 / 105,000	121,500 / 85,000	20 - 50
	YSJ090A**(0,A)H	200,000 / 140,000	162,000 / 113,400	30 - 60
8.5	YSJ102A**(0,A)L	120,000 / 84,000	97,200 / 68,000	15 - 45
	YSJ102A**(0,A)M	150,000 / 105,000	121,500 / 85,000	20 - 50
	YSJ102A**(0,A)H	200,000 / 140,000	162,000 / 113,400	30 - 60
10	YSJ120A**(0,A)L	150,000 / 105,000	121,500 / 85,000	15 - 45
	YSJ120A**(0,A)M	200,000 / 140,000	162,000 / 113,400	25 - 55
	YSJ120A**(0,A)H	240,000 / 168,000	194,400 / 136,000	30 - 60
12.5	YSJ150A**(0,A)L	150,000 / 105,000	121,500 / 85,000	10 - 40
	YSJ150A**(0,A)M	200,000 / 140,000	162,000 / 113,400	15 - 45
	YSJ150A**(0,A)H	250,000 / 175,000	202,500 / 141,750	25 - 55
15	YSJ180A**(0,A)L	250,000 / 175,000	202,500 / 141,750	15 - 45
	YSJ180A**(0,A)M	320,000 / 224,000	259,200 / 181,440	20 - 50
	YSJ180A**(0,A)H	400,000 / 280,000	324,000 / 226,800	25 - 55
17.5	YSJ210A**(0,A)L	250,000 / 175,000	202,500 / 141,750	15 - 45
	YSJ210A**(0,A)M	320,000 / 224,000	259,200 / 181,440	20 - 50
	YSJ210A**(0,A)H	400,000 / 280,000	324,000 / 226,800	25 - 55
20	YSJ240A**(0,A)L	250,000 / 175,000	202,500 / 141,750	10 - 40
	YSJ240A**(0,A)M	320,000 / 224,000	259,200 / 181,440	15 - 45
	YSJ240A**(0,A)H	400,000 / 280,000	324,000 / 226,800	20 - 50
25	YSJ300A**(0,A)L	250,000 / 175,000	202,500 / 141,750	10 - 40
	YSJ300A**(0,A)M	320,000 / 224,000	259,200 / 181,440	15 - 45
	YSJ300A**(0,A)H	400,000 / 280,000	324,000 / 226,800	20 - 50