Vantix™ Line
iM Air Conditioners

This product meets a stringent set of our internally defined sustainability standards

SA16AZ

EcoNet® Enabled

Cooling Efficiencies up to: 17 SEER2/10.5 EER2

Nominal Sizes: 2 to 5 Tons [7.0 to 17.6 kW]

Cooling Capacities: 23.5 kBTU to 56 kBTU [6.9 to 16.4 kW]

ISO 9001:2015

c (UL) us LISTED

AHRI CERTIFIED™
www.ahridirectory.org
Unitary Small AC
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

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Features and Benefits

- **EcoNet® Enabled:** Automatic system configuration and optimization

- **Diagnostics & Bluetooth®[1] Connectivity:** With the Sure Comfort Contractor & EcoNet® Apps, built-in technology makes advanced set-up, monitoring, troubleshooting and repairing the product easier than ever before

- **Variable Speed Twin Rotary Compressor & Inverter Drive:** Features Inverter operation from 45 to 70% capacity or 100% capacity with the EcoNet® Smart Thermostat

- **3-Speed Operation:** When installed with a 24V two-stage thermostat

- **Provides Precise Temperature Control:** Advanced humidity control and greater efficiency

- **Brushless DC Condenser Motors (BLDC):** Enhances reliability and allows for easier serviceability

- **Swept Wing Fan Technology:** Features quieter operation and improved unit acoustics

- **7mm Condenser Copper Coil:** Requires less refrigerant allowing for a smaller and lighter footprint while enhancing reliability

- **Expanded Valve Space:** 3 in. – 4 in. – 5 in. service valve space—provides a minimum working area of 27-square inches for easier access[2]

- **Triple Service Access:** 15 in. wide, industry leading access makes repairs easier and faster

[1]The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Rheem® is under license. Other trademarks and trade names are those of their respective owners.

[2]Does not apply to 2 and 3 ton models.

Air Conditioners

S	A	16	A	Z	24	A	J	3	C	A	LHP
Brand	**Product Category**	**SEER2**	**Region**	**Refrigerant**	**Capacity BTU/HR**	**Major Series**	**Voltage**	**Type**	**Controls**	**Minor Series**	**Option Code**
S - Sure Comfort	A - Air Conditioners	16 - 16 SEER2	A - All	Z - R-410A	24 - 24,000 [7.03 kW] 36 - 36,000 [10.55 kW] 48 - 48,000 [14.07 kW] 60 - 60,000 [17.58 kW]	A - 1st Design	J - 1ph, 208-230/60	3 - 3+ Stage	C - Communicating	A - 1st Design	LHP - W/HLPC

[ ] Designates Metric Conversions

AVAILABLE MODELS	DESCRIPTION
SA16AZ24AJ3CA	Vantix™ Line 2 ton EcoNet® Enabled 3+ Speed iM Air Conditioner – 208/230/1/60
SA16AZ36AJ3CA	Vantix™ Line 3 ton EcoNet® Enabled 3+ Speed iM Air Conditioner – 208/230/1/60
SA16AZ48AJ3CA	Vantix™ Line 4 ton EcoNet® Enabled 3+ Speed iM Air Conditioner – 208/230/1/60
SA16AZ60AJ3CA	Vantix™ Line 5 ton EcoNet® Enabled 3+ Speed iM Air Conditioner – 208/230/1/60

STANDARD EQUIPMENT
R-410A Refrigerant
Scroll Compressor
Field Installed Filter Drier
Front Seating Service Valves
Internal Pressure Relief Valve
Internal Thermal Overload
Long Line capability
3-4-5 Expanded Valve Space
Composite Basepan
2 Screw Control Box Access
15" Access to Internal Components
No fasteners to remove along bottom
Optimized Venturi Airflow
Single row condenser coil
Powder coated paint
Rust resistant screws
QR code
External gauge ports
Service trays

*5T Model SEER2: 15.5 SEER2

General Data

MODEL NO.	SA16AZ24AJ3	SA16AZ36AJ3	SA16AZ48AJ3	SA16AZ60AJ3
Nominal Tonnage	2.0	3.0	4.0	5.0
Valve Connections				
Liquid Line O.D. – in.	3/8	3/8	3/8	3/8
Suction Line O.D. – in.	3/4	3/4	7/8	7/8
Refrigerant (R410A) furnished oz.[1]	91	119	130	154
Compressor Type	Twin Rotary			
Outdoor Coil				
Net face area – Outer Coil	11.79	14.4	16.42	17.88
Net face area – Inner Coil	—	—	—	—
Tube diameter – in.	0.276	0.276	0.276	0.276
Number of rows	1	1	1	1
Fins per inch	24	24	24	24
Outdoor Fan				
Diameter – in.	20	24	24	26
Number of blades	3	3	3	3
Motor hp	1/5	1/5	1/3	1/2
CFM	2883	4138	4508	5348
RPM	1075	1000	1075	1075
watts	168	267	297	379
Shipping weight – lbs.	153	157	195	211
Operating weight – lbs.	146	150	188	204

Electrical Data

Line Voltage Data (Volts-Phase-Hz)	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
Maximum overcurrent protection (amps)[2]	20	30	40	50
Minimum circuit ampacity[3]	12	20	25	32
Compressor				
Rated load amps	10	15	20	25
Locked rotor amps	65	70	96	119

[1]Refrigerant charge sufficient for 15 ft. length of refrigerant lines. For longer line set requirements see the installation instructions for information about set length and additional refrigerant charge required.
[2]HACR type circuit breaker of fuse.
[3]Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements.

Accessories

MODEL NO.		SA16AZ24AJ3	SA16AZ36AJ3	SA16AZ48AJ3	SA16AZ60AJ3
Compressor crankcase heater*		x	x	x	x
Compressor sound cover		Factory Installed	Factory Installed	Factory Installed	Factory Installed
Compressor hard start kit		Factory Installed	Factory Installed	Factory Installed	Factory Installed
Compressor time delay		Factory Installed	Factory Installed	Factory Installed	Factory Installed
Low pressure control		x	x	x	x
High pressure control		Factory Installed	Factory Installed	Factory Installed	Factory Installed
Liquid Line Solenoid (24 VAC, 50/60 Hz)	Solenoid Valve	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC
	Solenoid Coil	61-AMG24V	61-AMG24V	61-AMG24V	61-AMG24V
Liquid Line Solenoid (120/240 VAC, 50/60 Hz)	Solenoid Valve	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC
	Solenoid Coil	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V

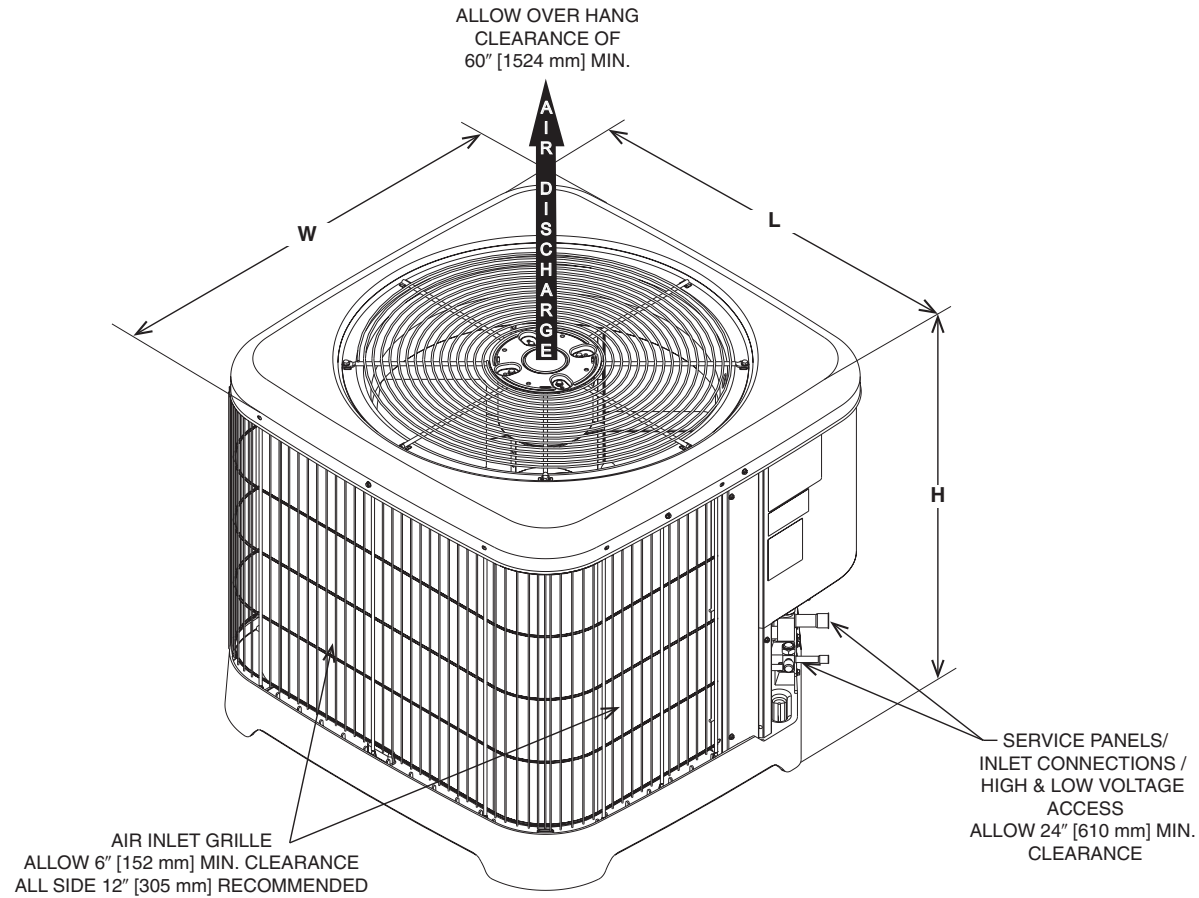*Crankcase Heater recommended with Low Ambient Kit.

Weighted Sound Power Level (dBA)

UNIT SIZE - VOLTAGE, SERIES	STANDARD RATING (DBA)	TYPICAL OCTAVE BAND SPECTRUM (DBA WITHOUT TONE ADJUSTMENT)							SOUND POWER LEVEL [DB(A)] WITH SOUND BLANKET
		125	250	500	1000	2000	4000	8000	
SA16AZ24AJ3	63.3	35.9	47.9	55.3	53.2	50.4	47.1	43.8	Sound Blankets - Standard
	71.7	46.1	59.1	63.2	60.8	58.7	56.5	47.9	
SA16AZ36AJ3	61.4	38.5	48.0	53.8	49.2	45.9	47.0	47.4	
	72.9	47.5	59.5	64.9	60.7	62.6	57.0	49.6	
SA16AZ48AJ3	63.8	42.3	45.9	53.5	48.9	45.8	59.1	36.4	
	76.2	49.4	61.4	68.1	53.9	60.8	57.4	48.5	
SA16AZ60AJ3	65.7	39.7	49.0	58.2	54.5	52.2	53.8	41.3	
	76.7	49.3	64.6	68.1	65.1	62.6	58.6	53.0	

NOTE: Tested in accordance with AHRI Standard 270-08 (not listed in AHRI)

Unit Dimensions

MODEL NO.	OPERATING						SHIPPING					
	H (Height)		L (Length)		W (Width)		H (Height)		L (Length)		W (Width)	
	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm
SA16AZ24AJ3	27.00	686	29.75	756	29.75	756	28.50	724	32.38	822	32.38	822
SA16AZ36AJ3	27.00	686	33.75	857	33.75	857	28.50	724	36.38	924	36.38	924
SA16AZ48AJ3	31.00	787	33.75	857	33.75	857	32.50	826	36.38	924	36.38	924
SA16AZ60AJ3	31.00	787	35.75	908	35.75	908	32.50	826	38.38	975	38.38	975

ALLOW OVER HANG CLEARANCE OF 60″ [1524 mm] MIN.

AIR DISCHARGE

W

L

H

SERVICE PANELS/ INLET CONNECTIONS / HIGH & LOW VOLTAGE ACCESS ALLOW 24″ [610 mm] MIN. CLEARANCE

AIR INLET GRILLE ALLOW 6″ [152 mm] MIN. CLEARANCE ALL SIDE 12″ [305 mm] RECOMMENDED

[ ] Designates Metric Conversions

ST-A1226-24-00

CLEARANCES

WALL

WALL

24"
(609.6)
Service

6"
(152.4)

12"
(304.8)

12"
(304.8)

WALL

6"
(152.4)

12"
(304.8)

24"
(609.6)
Service

6"
(152.4)

WALL

24"
(609.6)
Service

24"
(609.6)
24" recommended
6" minimum

24"
(609.6)
Service

24"
(609.6)
24" recommended
6" minimum

24"
(609.6)
Service

18"
(457.2)

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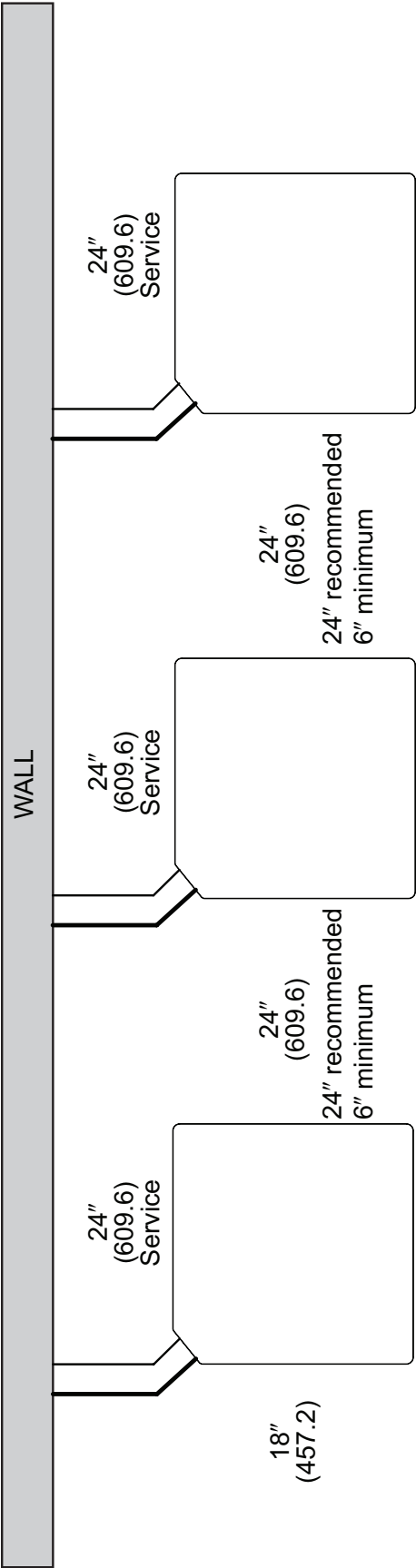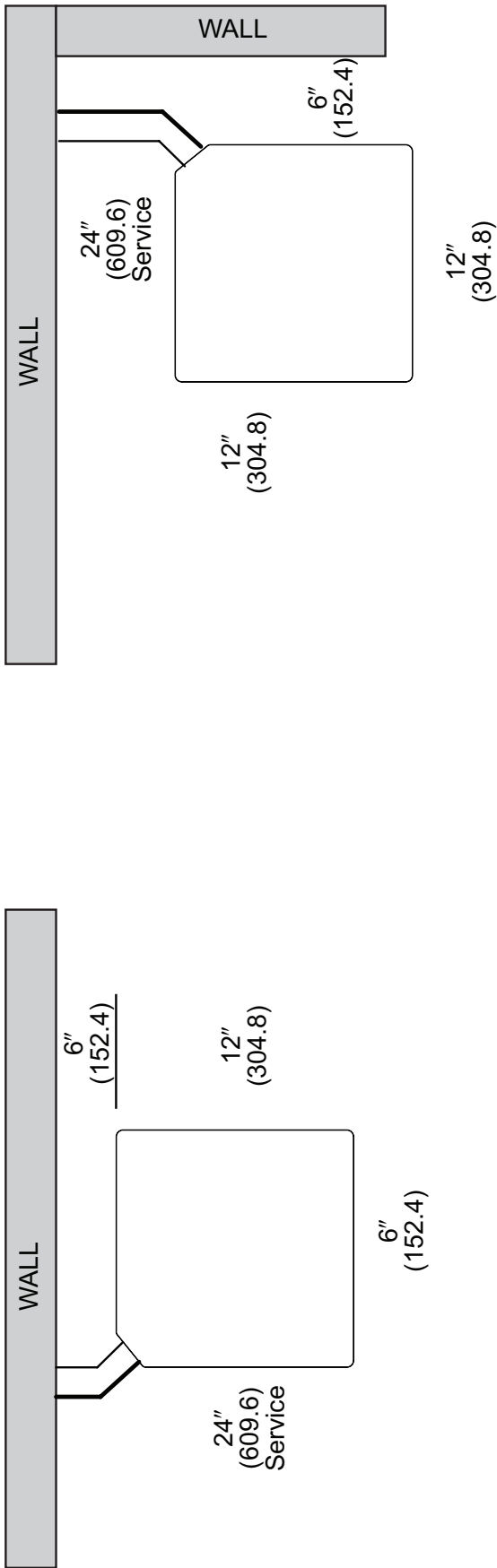
NOTE: NUMBERS IN ( ) = mm

IMPORTANT: When installing multiple units in an alcove, roof well or partially enclosed area, ensure there is adequate ventillation to prevent re-circulation of discharge air.

Refrigerant Line Size Information

UNIT SIZE	ALLOWABLE LIQUID LINE SIZE	ALLOWABLE VAPOR LINE SIZE	OUTDOOR UNIT ABOVE OR BELOW INDOOR UNIT EQUIVALENT LENGTH (FEET)					
			< 25	26-50	51-75	76-100	101-125	126-150
			MAXIMUM VERTICAL SEPARATION / CAPACITY MULTIPLIER					
2.0 Ton **SEE NOTE 3	1/4"	5/8"	25/1.00	50/0.99	32/0.98	40/0.97	NR	NR
	5/16"	5/8"	25/1.00	50/0.99	50/0.98	50/0.97	50/0.96	50/0.95
	3/8"	5/8"	25/1.00	50/0.99	50/0.98	50/0.97	50/0.96	50/0.95
	1/4"	3/4"**	25/1.00	50/1.00	32/0.99	40/0.99	NR	NR
	5/16"	3/4"**	25/1.00	50/1.00	50/0.99	50/0.99	50/0.99	50/0.98
	3/8"	3/4"**	25/1.00	50/1.00	50/0.99	50/0.99	50/0.99	50/0.98
3 Ton	5/16"	5/8"	25/0.99	50/0.97	50/0.95	50/0.93	37/0.91	NR
	3/8"	5/8"	25/0.99	50/0.97	50/0.95	50/0.93	50/0.91	NR
	5/16"	3/4"	25/1.00	50/0.99	50/0.99	50/0.98	37/0.97	22/0.96
	3/8"	3/4"	25/1.00	50/0.99	50/0.99	50/0.98	50/0.97	50/0.96
	1/2"	3/4"	25/1.00	50/0.99	50/0.99	50/0.98	50/0.97	50/0.96
4 Ton	3/8"	3/4"	25/0.99	50/0.98	50/0.97	50/0.96	50/0.94	50/0.93
	1/2"	3/4"	25/0.99	50/0.98	50/0.97	50/0.96	50/0.94	50/0.93
	3/8"	7/8"	25/1.00	50/0.99	50/0.99	50/0.98	50/0.98	50/0.97
	1/2"	7/8"	25/1.00	50/0.99	50/0.99	50/0.98	50/0.98	50/0.97
5 Ton	3/8"	3/4"	25/0.99	50/0.97	50/0.95	50/0.93	50/0.91	NR
	1/2"	3/4"	25/0.99	50/0.97	50/0.95	50/0.93	50/0.91	NR
	3/8"	7/8"	25/1.00	50/0.99	50/0.98	50/0.98	50/0.97	38/0.96
	1/2"	7/8"	25/1.00	50/0.99	50/0.98	50/0.98	50/0.97	50/0.96

NOTES:

1) Do not exceed 150 ft. linear line length.
2) *Do not exceed 50 ft. vertical separation if outdoor unit is above indoor unit.
3) **3/4" suction line should only be used for 2 ton systems if outdoor unit is below or at same level as indoor to assure proper oil return.
4) Always use the smallest liquid line allowable to minimize refrigerant charge.
5) Applications shaded in light gray indicate capacity multipliers between 0.90 and 0.96 which are not recommended, but are allowed.
6) Applications shaded in dark gray are not recommended due to excessive liquid or suction pressure drop.

Refrigerant Line Size Information (Con't.)

UNIT SIZE	ALLOWABLE LIQUID LINE SIZE	ALLOWABLE VAPOR LINE SIZE	15/16 SEER2 VARIABLE SPEED AIR CONDITIONERS					
			OUTDOOR UNIT ABOVE OR BELOW INDOOR UNIT EQUIVALENT LENGTH (METERS)					
			< 25	26-50	51-75	76-100	101-125	126-150
			MAXIMUM VERTICAL SEPARATION / CAPACITY MULTIPLIER					
2.0 Ton **SEE NOTE 3	6.35 [1/4]	15.88 [5/8]	8/1.00	15/0.99	10/0.98	10/0.97	NR	NR
	7.94 [5/16]	15.88 [5/8]	8/1.00	15/0.99	15/0.98	15/0.97	15/0.96	15/0.95
	9.53 [3/8]	15.88 [5/8]	8/1.00	15/0.99	15/0.98	15/0.97	15/0.96	15/0.95
	6.35 [1/4]	19.05 [3/4]**	8/1.00	15/0.99	10/0.99	12/0.99	NR	NR
	7.94 [5/16]	19.05 [3/4]**	8/1.00	15/0.99	15/0.99	15/0.99	15/0.99	15/0.98
	9.53 [3/8]	19.05 [3/4]**	8/1.00	15/0.99	15/0.99	15/0.99	15/0.99	15/0.98
3 Ton	7.94 [5/16]	15.88 [5/8]	8/0.99	15/0.97	15/0.95	15/0.93	11/0.91	NR
	9.53 [3/8]	15.88 [5/8]	8/0.99	15/0.97	15/0.95	15/0.93	15/0.91	NR
	7.94 [5/16]	19.05 [3/4]	8/1.00	15/0.99	15/0.99	15/0.98	11/0.97	7/0.96
	9.53 [3/8]	19.05 [3/4]	8/1.00	15/0.99	15/0.99	15/0.98	15/0.97	15/0.96
	12.7 [1/2]	19.05 [3/4]	8/1.00	15/0.99	15/0.99	15/0.98	15/0.97	15/0.96
4 Ton	9.53 [3/8]	19.05 [3/4]	8/0.99	15/0.98	15/0.97	15/0.96	15/0.94	15/0.93
	12.7 [1/2]	19.05 [3/4]	8/0.99	15/0.98	15/0.97	15/0.96	15/0.94	15/0.93
	9.53 [3/8]	22.23 [7/8]	8/1.00	15/0.99	15/0.99	15/0.98	15/0.98	15/0.97
	12.7 [1/2]	22.23 [7/8]	8/1.00	15/0.99	15/0.99	15/0.98	15/0.98	15/0.97
5 Ton	9.53 [3/8]	19.05 [3/4]	8/0.99	15/0.97	15/0.95	15/0.93	15/0.91	NR
	12.7 [1/2]	19.05 [3/4]	8/0.99	15/0.97	15/0.95	15/0.93	15/0.91	NR
	9.53 [3/8]	22.23 [7/8]	8/1.00	15/0.99	15/0.98	15/0.98	15/0.97	12/0.96
	12.7 [1/2]	22.23 [7/8]	8/1.00	15/0.99	15/0.98	15/0.98	15/0.97	15/0.97

NOTES:
1) Do not exceed 46 meters linear line length.
2) *Do not exceed 15 meters vertical separation between indoor and outdoor units.
3) **19.05mm [3/4"] vapor line should only be used for 2 ton systems if outdoor unit is below or at same level as indoor unit to assure proper oil return.
4) Always use the smallest liquid line allowable to minimize refrigerant charge.
5) Applications shaded in light gray indicate capacity multipliers between 0.90 and 0.96 which are not recommended, but are allowed.
6) Applications shaded in dark gray are not recommended due to excessive liquid or suction pressure drop.

ADDITIONAL OIL, OZ.											
LINESET LENGTH	50	60	70	80	90	100	110	120	130	140	150
2T	N/A	N/A	N/A	N/A	N/A	1	2	3	5	6	7
3T	N/A	N/A	N/A	N/A	N/A	N/A	1	2	3	5	6
4T	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5T	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Performance Data @ AHRI Standard Conditions – Cooling

DESIGNATED TESTED COMBINATION (DTC)							
OUTDOOR UNIT	INDOOR COIL	TOTAL CAPACITY BTU/H [KW]	NET SENSIBLE BTU/H [KW]	NET LATENT BTU/H [KW]	SEER2	EER2	INDOOR CFM [L/S]
SA16AZ24AJ3C	SH3VZ2417STACN	22,800 [6.7]	17,600 [5.2]	5,200 [1.5]	16.0	10.5	750 [354.0]
SA16AZ36AJ3C	SH3VZ3617STACN	34,200 [10.0]	26,600 [7.8]	7,600 [2.2]	16.0	10.5	1,125 [530.9]
SA16AZ48AJ3C	SH3VZ4821STACN	45,500 [13.3]	35,500 [10.4]	10,000 [2.9]	16.0	10.5	1,425 [672.5]
SA16AZ60AJ3C	SH3VZ6024STACN	55,500 [16.3]	43,000 [12.6]	12,500 [3.7]	15.5	9.8	1,675 [790.5]

NOTE: This data includes DTC (Designated Test Combination) ratings and is for reference purposes only. A full listing of official ratings and system match-ups, along with downloadable certificates, can be accessed from the AHRI website: www.ahridirectory.org.

[   ] Designates Metric Conversions

Integrated Controls

EcoNet® is smart, technology that allows Heating and Cooling, products to communicate with each other on one integrated network.

THE ECONET® SMART THERMOSTAT

BUILT-IN WIFI

4.3" LCD TOUCH SCREEN

**LOCAL WEATHER –** Current conditions plus 6-day forecast

5 OPERATING MODES – Heat, Cool, Auto, Emergency Heat and Fan Only

7-DAY PROGRAMMABLE SCHEDULE – Offers comfort without thought

ONE-TOUCH AWAY – Quickly switch to your energy-saving away preferences

VACATION SCHEDULING – Allows you to save while you're away and come home to comfort

STANDBY SCREEN – Displays indoor temperature and current weather
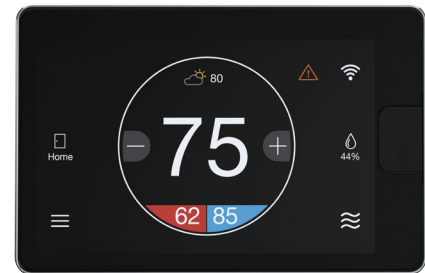
CETST800SYS

OPERATIONAL FEATURES

AUTOMATIC CHANGEOVER – Transitions between heating and cooling automatically to keep the house comfortable

INTEGRATED WATER CONTROL – Enables easy water heater management

SMOOTH ARRIVAL – Prompts the system to start ahead of schedule to ensure the home is at the desired temperature at the scheduled time

HUMIDITY CONTROL – Supports humidifier accessories or over-cool based dehumidification

DETAILED OPERATING STATUS – View pertinent equipment status information and run times

CONTINUOUS FAN – Offers 5 speeds (Low, Medium Low, Medium, Medium High, High)

SHORT-CYCLE PROTECTION – Avoids damage to equipment from short run cycles

MONITORING & REMOTE CONTROL FEATURES

ACTIVE MONITORING – Alerts to problems that need immediate attention

REMOTE CONTROL – Allows adjusting of comfort and settings from anywhere using a mobile device

SERVICE ALERTS – Sends routine maintenance reminders

AIR FILTER MONITORING – Detects when it's time to replace the air filter

ALARM HISTORY – Displays time-stamped alarm codes with clear descriptions

GENERAL TERMS OF LIMITED WARRANTY*

Sure Comfort® will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

 *For complete details of the Limited and Conditional Warranties, including applicable terms and conditions, contact your local contractor or the Manufacturer for a copy of the product warranty certificate.

Conditional Unit Replacement
 (Registration Required)....................................Ten (10) Years
Parts ....Ten (10) Years

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.