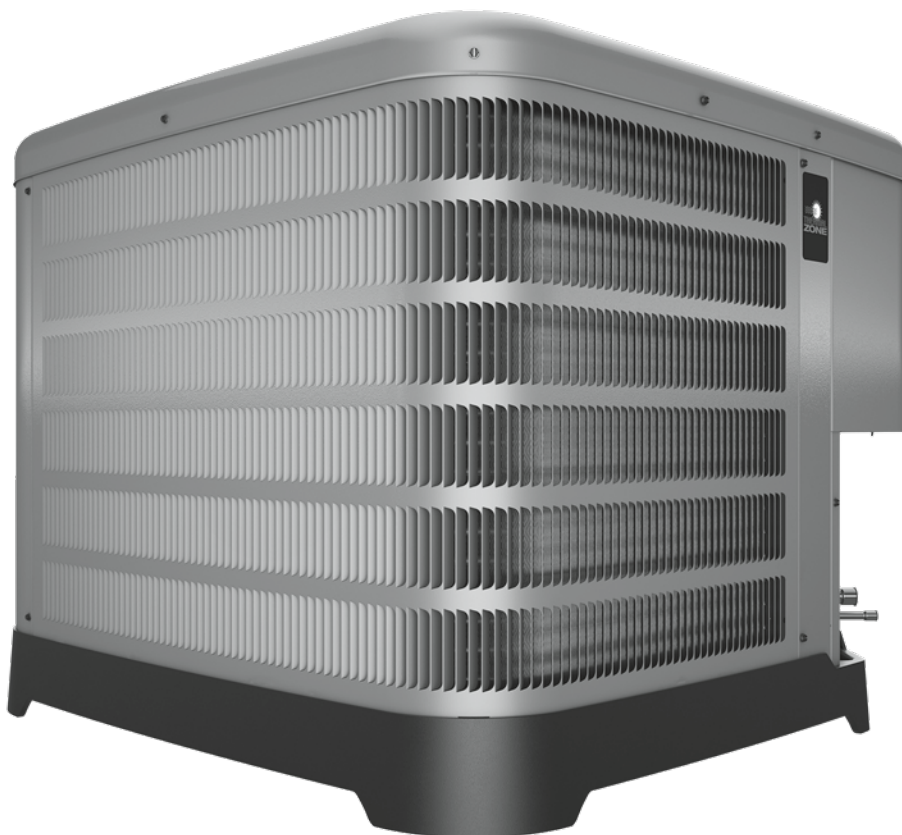




## iM Air Conditioners



### **TZALAS14**

Cooling Efficiency up to: 15.2 SEER2/12 EER2

Nominal Sizes: 1 1/2 to 5 Ton [5.28 to 17.6 kW]

Cooling Capacities: 17.1 to 55.5 kBTU [5.0 to 16.3 kW]

Manufactured for  
**Thermal Zone®**  
Philadelphia, PA



† A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

***\*Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps must be matched with appropriate coil components to meet Energy Star. Ask your Contractor for details or visit [www.energystar.gov](http://www.energystar.gov).***

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## Features and Benefits

- **Lighter Footprint & Less Environmental Impact from New 7mm Condenser Coil:** Provided by a decrease in refrigerant requirements and an overall weight reduction
- **Efficient Cooling:** Up to 14.3 SEER2/11.7 EER2
- **Expanded Value Space:** 3 in. – 4 in. – 5 in. service valve space – provides a minimum working area of 27-square inches for easier access
- **Triple Service Access:** 15 in. wide, industry leading corner service access – makes repairs easier and faster. The two fastener, removable corner allows optimal access to internal unit components. Individual louver panels come out once fastener is removed, for faster coil cleaning and easier cabinet reassembly
- **System Matching Simplicity:** Matches to all tiers of gas furnaces
- **Modern Cabinet Aesthetics:** High curb appeal with visually appealing design
- **Curved Louver Panels:** Provide ultimate coil protection, enhance cabinet strength, and increased cabinet rigidity
- **Diagnostic Service Window:** With two-fastener opening – provides access to the high and low pressure
- **External Gauge Port Access:** Allows easy connection of “low-loss” gauge ports
- **QR Code:** Provides technical information on demand for faster service calls
- **Fan Motor Harness:** With extra-long wires allows unit top to be removed without disconnecting fan wire

# Air Conditioners

<u>TZ</u>	<u>A</u>	<u>14</u>	<u>A</u>	<u>Z</u>	<u>24</u>	<u>A</u>	<u>J</u>	<u>1</u>	<u>N</u>	<u>A</u>	<u>LHP</u>
Brand	Product Category	SEER2	Region	Refrigerant	Capacity BTU/HR	Major Series	Voltage	Type	Controls	Minor Series	Option Code
Thermal Zone	A - Air Conditioners	13.8/14.3 SEER2	A - All	Z - R-410A	18 - 18,000 [5.28 kW] 24 - 24,000 [7.03 kW] 30 - 30,000 [8.79 kW] 36 - 36,000 [10.55 kW] 42 - 42,000 [12.31 kW] 48 - 48,000 [14.07 kW] 60 - 60,000 [17.58 kW]	A - 1st Design	J - 1ph, 208-230/60	1 - Single Stage	N - Non-Communicating	A - 1st Design	LHP - W/HLPC

[ ] Designates Metric Conversions

AVAILABLE MODELS	DESCRIPTION
TZALAS1418AJNA	1 1/2 ton 14.3 SEER2 Single-Stage Air Conditioner-208/230/1/60
TZALAS1418AJNALHP	1 1/2 ton 14.3 SEER2 Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
TZALAS1424AJNA	2 ton 14.3 SEER2 Single-Stage Air Conditioner-208/230/1/60
TZALAS1424AJNALHP	2 ton 14.3 SEER2 Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
TZALAS1430AJNA	2 1/2 ton 14.3 SEER2 Single-Stage Air Conditioner-208/230/1/60
TZALAS1430AJNALHP	2 1/2 ton 14.3 SEER2 Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
TZALAS1436AJNA	3 ton 14.3 SEER2 Single-Stage Air Conditioner-208/230/1/60
TZALAS1436AJNALHP	3 ton 14.3 SEER2 Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
TZALAS1442AJNA	3 1/2 ton 14.3 SEER2 Single-Stage Air Conditioner-208/230/1/60
TZALAS1442AJNALHP	3 1/2 ton 14.3 SEER2 Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
TZALAS1448AJNA	4 ton 14.3 SEER2 Single-Stage Air Conditioner-208/230/1/60
TZALAS1448AJNALHP	4 ton 14.3 SEER2 Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
TZALAS1460AJNA	5 ton 14.3 SEER2 Single-Stage Air Conditioner-208/230/1/60
TZALAS1460AJNALHP	5 ton 14.3 SEER2 Single-Stage Air Conditioner w/ High/Low Pressure-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
Low Ambient capability with Kit
3-4-5 Expanded Valve Space
Composite Basepan
2 Screw Control Box Access
15" Access to Internal Components
Quick release louver panel design
No fasteners to remove along bottom
Optimized Venturi Airflow
Powder coated paint
Rust resistant screws
QR code
External gauge ports
Service trays

<b>General Data</b>							
<b>GENERAL DATA</b>							
<b>Model No.</b>	<b>TZALAS14AZ18</b>	<b>TZALAS14AZ24</b>	<b>TZALAS14AZ30</b>	<b>TZALAS14AZ36</b>	<b>TZALAS14AZ42</b>	<b>TZALAS14AZ48</b>	<b>TZALAS14AZ60</b>
<b>Nominal Tonnage</b>	1.5	2.0	2.5	3.0	3.5	4.0	5.0
<b>Valve Connections</b>							
Liquid Line O.D. – in.	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Suction Line O.D. – in.	3/4	3/4	3/4	3/4	7/8	7/8	7/8
<b>Refrigerant (R410A) furnished oz.<sup>1</sup></b>	94	115	120	124	149	153	203
<b>Compressor Type</b>	Scroll						
<b>Outdoor Coil</b>							
Net face area – Outer Coil	10.9	13.3	14.3	16.4	19.5	19.5	32.5
Net face area – Inner Coil	10.5	12.9	13.9	15.9	18.8	18.8	—
Tube diameter – in.	0.276	0.276	0.276	0.276	0.276	0.276	3/8
Number of rows	2	2	2	2	2	2	1
Fins per inch	24	24	24	24	24	24	22
<b>Outdoor Fan</b>							
Diameter – in.	20	24	24	24	24	24	26
Number of blades	2	2	2	2	3	3	3
Motor hp	1/7	1/6	1/6	1/6	1/5	1/5	1/3
CFM	2156	2723	2830	2991	3655	3655	5178
RPM	1075	825	825	825	850	850	910
watts	152	161	165	145	214	214	271
<b>Shipping weight – lbs.</b>	151	185	171	185	236	228	294
<b>Operating weight – lbs.</b>	144	178	164	178	229	221	287
<b>Electrical Data</b>							
<b>Line Voltage Data (Volts-Phase-Hz)</b>	<b>208/230-1-60</b>	<b>208/230-1-60</b>	<b>208/230-1-60</b>	<b>208/230-1-60</b>	<b>208/230-1-60</b>	<b>208/230-1-60</b>	<b>208/230-1-60</b>
<b>Maximum overcurrent protection (amps)<sup>2</sup></b>	20	25	30	30	40	40	60
<b>Minimum circuit ampacity<sup>3</sup></b>	14	18	19	20	24	24	40
<b>Compressor</b>							
Rated load amps	9	12	14	13	18	18	26
Locked rotor amps	43	60	68	83	110	102	150
<b>Condenser Fan Motor</b>							
Full load amps	0.8	0.8	0.8	0.8	1.0	1.0	2.8
Locked rotor amps	1.5	1.5	1.7	1.7	2.6	2.6	—

<sup>1</sup>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.

<sup>2</sup>HACR type circuit breaker or fuse.

<sup>3</sup>Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements.

## Accessories

MODEL NO.		TZALAS14AZ18	TZALAS14AZ24	TZALAS14AZ30	TZALAS14AZ36	TZALAS14AZ42	TZALAS14AZ48	TZALAS14AZ60
Compressor crankcase heater*		44-17402-44	44-17402-44	44-17402-44	44-17402-44	44-17402-45	44-17402-45	44-17402-45
Low ambient control		RXAD-A08	RXAD-A08	RXAD-A08	RXAD-A08	RXAD-A08	RXAD-A08	RXAD-A08
Compressor sound cover		68-23427-26	68-23427-26	68-23427-26	68-23427-26	68-23427-25	68-23427-25	68-23427-25
Compressor hard start kit		SK-A1	SK-A1	SK-A1	SK-A1	SK-A1	SK-A1	SK-A1
Compressor time delay		RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01
Low pressure control		RXAC-A07	RXAC-A07	RXAC-A07	RXAC-A07	RXAC-A07	RXAC-A07	RXAC-A07
High pressure control		RXAB-A07	RXAB-A07	RXAB-A07	RXAB-A07	RXAB-A07	RXAB-A07	RXAB-A07
Liquid Line Solenoid (24 VAC, 50/60 Hz)	Solenoid Valve	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC
	Solenoid Coil	61-AMG24V	61-AMG24V	61-AMG24V	61-AMG24V	61-AMG24V	61-AMG24V	61-AMG24V
Liquid Line Solenoid (120/240 VAC, 50/60 Hz)	Solenoid Valve	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC
	Solenoid Coil	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V

\*Crankcase Heater recommended with Low Ambient Kit.

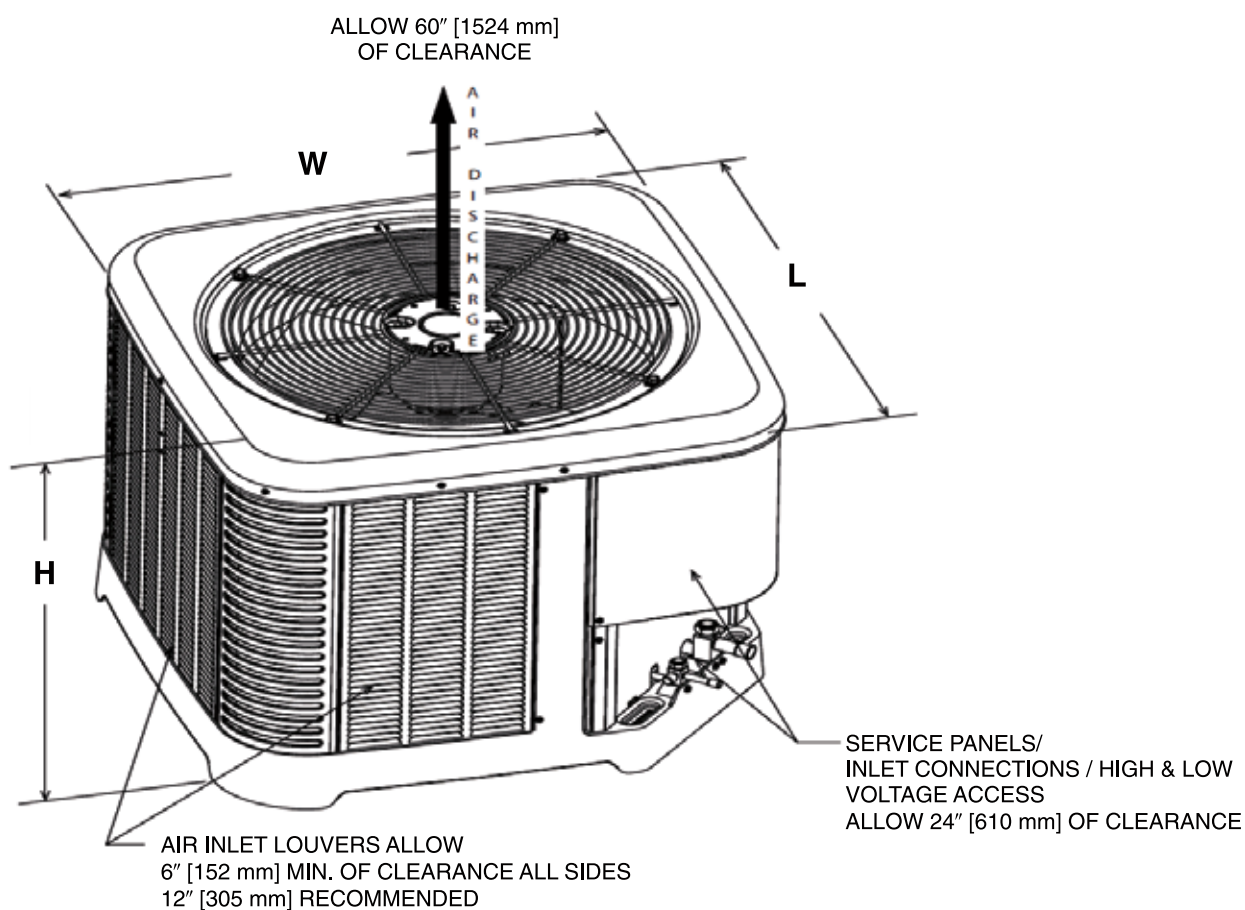
## Weighted Sound Power Level (dBA)

Unit Size - Voltage, Series	Standard Rating (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA without tone adjustment)						
		125	250	500	1000	2000	4000	8000
TZALAS14AZ18	70.7	48.2	56.0	61.9	61.0	56.5	53.5	45.7
TZALAS14AZ24	75.7	46.5	62.0	68.1	64.5	60.8	55.2	48.4
TZALAS14AZ30	76.8	48.2	62.5	68.8	65.8	62.0	57.2	49.6
TZALAS14AZ36	76.1	48.4	58.7	67.3	65.5	62.6	58.8	52.1
TZALAS14AZ42	72.5	46.6	55.3	63.9	62.1	59.4	55.2	48.2
TZALAS14AZ48	74.0	45.4	55.7	64.2	62.9	60.8	56.7	51.2
TZALAS14AZ60	75.8	43.4	59.8	67.2	65.5	62.7	59.2	53.1

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

## Unit Dimensions

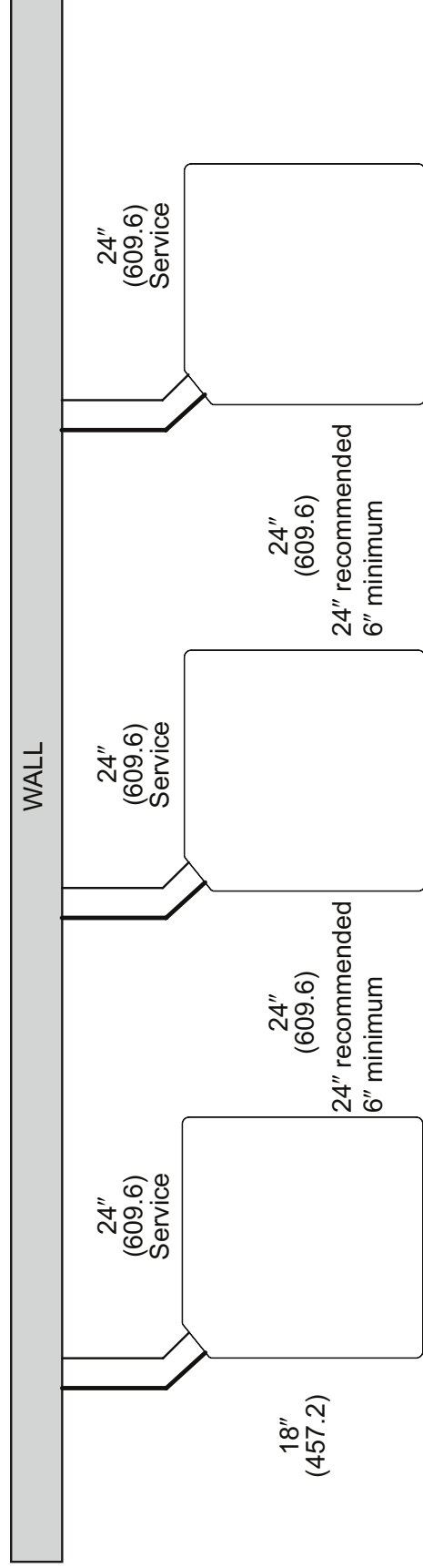
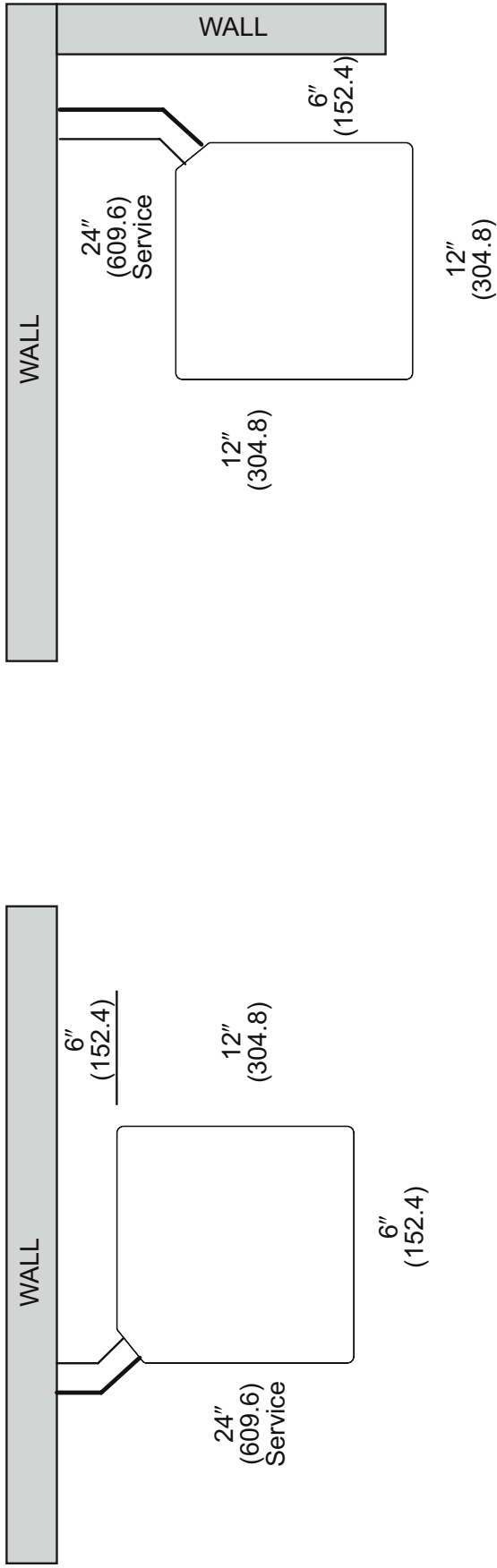
MODEL NO.	OPERATING						SHIPPING					
	H (Height)		L (Length)		W (Width)		H (Height)		L (Length)		W (Width)	
	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm
TZALAS14AZ18	25.00	635	29.75	756	29.75	756	26.50	673	32.38	822	32.38	822
TZALAS14AZ24	25.00	635	33.75	857	33.75	857	26.50	673	36.38	924	36.38	924
TZALAS14AZ30	27.00	686	33.75	857	33.75	857	28.50	724	36.38	924	36.38	924
TZALAS14AZ36	31.00	787	33.75	857	33.75	857	32.50	826	36.38	924	36.38	924
TZALAS14AZ42	35.00	889	33.75	857	33.75	857	36.50	927	36.38	924	36.38	924
TZALAS14AZ48	35.00	889	33.75	857	33.75	857	36.50	927	36.38	924	36.38	924
TZALAS14AZ60	51.00	1295	35.75	908	35.75	908	52.50	1334	38.38	975	38.38	975



[ ] Designates Metric Conversions

ST-A1226-02-00

# CLEARANCES

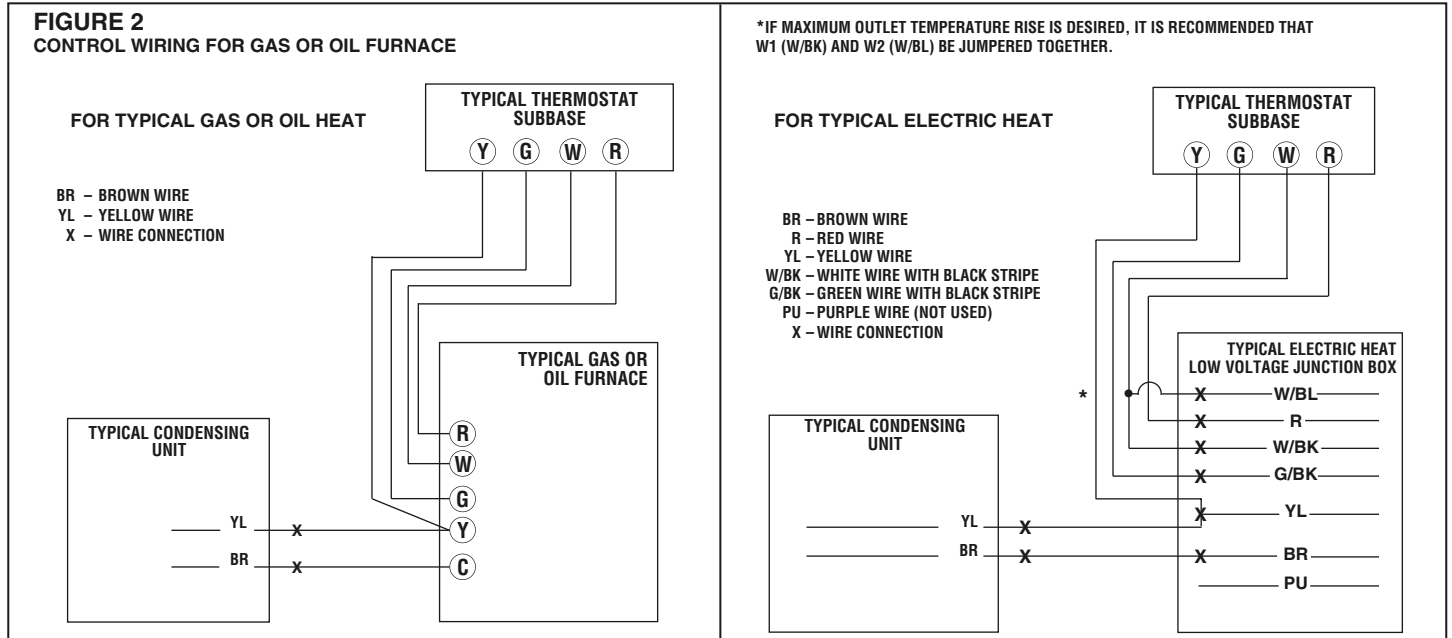


**NOTE: NUMBERS IN ( ) = mm**

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



## Control Wiring



## Application Guidelines

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01 -in. wc.
2. Minimum outdoor operation air temperature for cooling mode without low-ambient operation accessory is 55°F (12.8°C).
3. Maximum outdoor operating air temperature is 125°F (51.7°C).
4. For reliable operation, unit should be level in all horizontal planes.
5. Use only copper wire for electric connections at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
6. Do not apply capillary tube indoor coils to these units.
7. Factory-supplied filter drier must be installed.

# Refrigerant Line Size Information

14.3 SEER2 Single-Stage Air-Conditioners															
Unit Size	Allowable Liquid Line Size	Allowable Suction Line Size	Apply Long Line Guidelines if Linear Line Length Exceeds Those Shown Below (Feet)	Equivalent Length (Feet)											
				< 25	26-50	51-75	76-100	101-125	126-150	151-175	176-200	201-225	226-250		
				Maximum Vertical Rise (Outdoor Unit Below Indoor Unit) * / Capacity Multiplier											
(-)A14AZ				25/1.00	50/0.99	62/0.98	43/0.98	24/0.97	57/0.97	NR	NR	NR	NR	NR	NR
1.5 Ton **SEE NOTE 3	1/4"	5/8"	N/A	25/1.00	50/0.99	62/0.98	43/0.98	24/0.97	57/0.97	NR	NR	NR	NR	NR	NR
	5/16"	5/8"	223	25/1.00	50/0.99	75/0.98	98/0.98	93/0.97	88/0.97	83/0.96	78/0.96	73/0.95	68/0.94	61/0.93	37/0.90
	3/8"	5/8"	148	25/1.00	50/0.99	75/0.98	100/0.98	100/0.97	100/0.97	100/0.96	100/0.96	100/0.95	100/0.94	98/0.93	89/0.90
	1/4"	3/4"	**	25/1.00	50/1.00	62/0.99	43/0.99	24/0.99	57/0.99	NR	NR	NR	NR	NR	NR
	5/16"	3/4"	**	25/1.00	50/1.00	75/0.99	98/0.99	93/0.99	88/0.99	83/0.99	78/0.98	73/0.98	68/0.98	61/0.93	37/0.90
	3/8"	3/4"	**	25/1.00	50/1.00	75/1.00	100/0.99	100/0.99	100/0.99	100/0.99	100/0.99	100/0.98	100/0.98	100/0.98	100/0.98
2 Ton	1/4"	5/8"	N/A	25/0.99	50/0.98	21/0.97	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5/16"	5/8"	213	25/0.99	50/0.98	75/0.97	87/0.96	77/0.95	69/0.94	61/0.93	53/0.92	45/0.91	37/0.90	36/0.90	NR
	3/8"	5/8"	142	25/0.99	50/0.98	75/0.97	100/0.96	100/0.95	100/0.94	98/0.93	95/0.92	92/0.91	89/0.90	90/0.90	NR
	1/4"	3/4"	N/A	25/1.00	50/1.00	21/0.99	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5/16"	3/4"	213	25/1.00	50/1.00	75/0.99	87/0.99	77/0.98	69/0.98	61/0.98	53/0.97	45/0.97	37/0.96	36/0.96	NR
	3/8"	3/4"	142	25/1.00	50/1.00	75/0.99	100/0.99	100/0.98	100/0.98	100/0.98	98/0.98	95/0.97	90/0.96	90/0.96	NR
2.5 Ton	5/16"	5/8"	N/A	25/0.99	50/0.98	75/0.96	70/0.94	59/0.93	48/0.91	36/0.90	NR	NR	NR	NR	NR
	3/8"	5/8"	117	25/0.99	50/0.98	75/0.96	100/0.94	98/0.93	94/0.91	90/0.90	NR	NR	NR	NR	NR
	5/16"	3/4"	175	25/1.00	50/0.99	75/0.99	70/0.98	59/0.98	48/0.97	36/0.96	25/0.96	13/0.95	NR	36/0.96	NR
	3/8"	3/4"	117	25/1.00	50/0.99	75/0.99	100/0.98	98/0.98	94/0.97	90/0.96	86/0.96	82/0.95	78/0.95	90/0.96	NR
	5/16"	5/8"	N/A	25/0.99	50/0.97	66/0.94	49/0.92	32/0.90	NR	NR	NR	NR	NR	NR	NR
	3/8"	5/8"	85	25/0.99	50/0.97	75/0.94	95/0.92	89/0.90	NR	NR	NR	NR	NR	NR	NR
3 Ton	5/16"	3/4"	128	25/1.00	50/0.99	66/0.98	49/0.98	32/0.97	15/0.96	NR	NR	NR	NR	NR	NR
	3/8"	3/4"	85	25/1.00	50/0.99	75/0.98	95/0.98	89/0.97	84/0.96	78/0.95	72/0.94	67/0.93	61/0.93	78/0.95	NR
	1/2"	3/4"	43	25/1.00	50/0.99	75/0.98	100/0.98	100/0.97	100/0.96	100/0.95	100/0.94	100/0.93	100/0.93	100/0.95	NR
	5/16"	7/8"	128	25/1.00	50/1.00	66/1.00	49/0.99	32/0.99	15/0.99	NR	NR	NR	NR	NR	NR
	3/8"	7/8"	85	25/1.00	50/1.00	75/1.00	95/0.99	89/0.99	84/0.99	78/0.98	72/0.98	67/0.98	61/0.97	78/0.98	NR
	1/2"	7/8"	43	25/1.00	50/1.00	75/1.00	100/0.99	100/0.99	100/0.99	100/0.98	100/0.98	100/0.98	100/0.97	100/0.98	NR
3.5 Ton	3/8"	3/4"	102	25/0.99	50/0.98	75/0.97	88/0.96	80/0.95	72/0.94	65/0.92	57/0.91	49/0.90	NR	65/0.92	NR
	1/2"	3/4"	51	25/0.99	50/0.98	75/0.97	100/0.96	100/0.95	100/0.94	100/0.92	100/0.91	100/0.90	NR	100/0.92	NR
	3/8"	7/8"	102	25/1.00	50/1.00	75/0.99	88/0.99	80/0.99	72/0.98	65/0.97	57/0.97	49/0.96	42/0.96	65/0.97	NR
	1/2"	7/8"	51	25/1.00	50/1.00	75/0.99	100/0.99	100/0.99	100/0.98	100/0.98	100/0.97	100/0.96	100/0.96	100/0.97	NR

**NOTES:**

- 1) Do not exceed 200 ft linear line length.
- 2) \*Do not exceed 100 ft vertical separation if outdoor unit is above indoor unit.
- 3) \*\*3/4" suction line should only be used for 1.5 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.)

14.3 SEER2 Single-Stage Air-Conditioners													
Unit Size	Allowable Liquid Line Size	Allowable Suction Line Size	Apply Long Line Guidelines if Linear Line Length Exceeds Those Shown Below (Feet)	Equivalent Length (Feet)									
				< 25	26-50	51-75	76-100	101-125	126-150	151-175	176-200	201-225	226-250
				Maximum Vertical Rise (Outdoor Unit Below Indoor Unit) * / Capacity Multiplier									
4 Ton	3/8"	3/4"	110	25 / 0.99	50 / 0.98	75 / 0.96	77 / 0.95	67 / 0.93	57 / 0.92	46 / 0.91	NR	NR	NR
	1/2"	3/4"	55	25 / 0.99	50 / 0.98	75 / 0.96	100 / 0.95	100 / 0.93	100 / 0.92	100 / 0.91	NR	NR	NR
	3/8"	7/8"	110	25 / 1.00	50 / 0.99	75 / 0.99	77 / 0.98	67 / 0.97	57 / 0.97	46 / 0.96	36 / 0.96	26 / 0.95	15 / 0.95
	1/2"	7/8"	55	25 / 1.00	50 / 0.99	75 / 0.99	100 / 0.98	100 / 0.97	100 / 0.97	100 / 0.96	100 / 0.96	99 / 0.95	97 / 0.95
5 Ton	3/8"	3/4"	0	25 / 0.99	50 / 0.97	75 / 0.94	61 / 0.92	46 / 0.90	NR	NR	NR	NR	NR
	1/2"	3/4"	0	25 / 0.99	50 / 0.97	75 / 0.94	100 / 0.92	100 / 0.90	NR	NR	NR	NR	NR
	3/8"	7/8"	0	25 / 1.00	50 / 0.99	75 / 0.98	61 / 0.97	46 / 0.96	32 / 0.95	18 / 0.94	NR	NR	NR
	1/2"	7/8"	0	25 / 1.00	50 / 0.99	75 / 0.98	100 / 0.97	100 / 0.96	100 / 0.95	97 / 0.94	95 / 0.94	92 / 0.93	89 / 0.92
	3/8"	1-1/8"	0	25 / 1.01	50 / 1.01	75 / 1.00	61 / 1.00	46 / 0.99	32 / 0.99	18 / 0.99	NR	NR	NR
	1/2"	1-1/8"	0	25 / 1.01	50 / 1.01	75 / 1.00	100 / 1.00	100 / 0.99	100 / 0.99	97 / 0.99	95 / 0.99	92 / 0.99	89 / 0.98

**NOTES:**

- 1) Do not exceed 200 ft linear line length.
- 2) \*Do not exceed 100 ft vertical separation if outdoor unit is above indoor unit.
- 3) \*\*3/4" suction line should only be used for 1.5 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.)

14.3 SEER2 Single-Stage Air-Conditioners																					
Unit Size	Allowable Liquid Line Size mm [in.]	Allowable Suction Line Size mm [in.]	Apply Long Line Guidelines if Linear Line Length Exceeds Those Shown Below (Feet)	Equivalent Length (Meters)							Capacity Multiplier										
				< 8	8-15	16-23	24-30	31-38	39-46	47-53		54-61	62-69	70-76							
(-)A14AZ				Maximum Vertical Rise (Outdoor Unit Below Indoor Unit) * / Capacity Multiplier																	
5.3 KW [1.5 Ton] **SEE NOTE 3	6.35 [1/4]	15.88 [5/8]	N/A	8 / 1.00	15 / 0.99	19 / 0.98	13 / 0.98	7 / 0.97	2 / 0.97	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
	7.94 [5/16]	15.88 [5/8]	68	8 / 1.00	15 / 0.99	23 / 0.98	30 / 0.98	28 / 0.97	27 / 0.97	25 / 0.96	24 / 0.96	22 / 0.95	22 / 0.95	21 / 0.94	21 / 0.94	21 / 0.94	21 / 0.94	21 / 0.94	21 / 0.94	21 / 0.94	21 / 0.94
	9.53 [3/8]	15.88 [5/8]	45	8 / 1.00	15 / 0.99	23 / 0.98	30 / 0.98	30 / 0.97	30 / 0.97	30 / 0.97	30 / 0.96	30 / 0.96	30 / 0.95	30 / 0.95	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94
7.0 KW [2 Ton]	6.35 [1/4]	19.05 [3/4]**	N/A	8 / 1.00	15 / 1.00	19 / 0.99	13 / 0.99	7 / 0.99	2 / 0.99	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	7.94 [5/16]	19.05 [3/4]**	68	8 / 1.00	15 / 1.00	23 / 0.99	30 / 0.99	28 / 0.99	27 / 0.99	25 / 0.99	24 / 0.98	22 / 0.98	22 / 0.98	21 / 0.98	21 / 0.98	21 / 0.98	21 / 0.98	21 / 0.98	21 / 0.98	21 / 0.98	21 / 0.98
	9.53 [3/8]	19.05 [3/4]**	Metric	8 / 1.00	15 / 1.00	23 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99
8.8 KW [2.5 Ton]	6.35 [1/4]	15.88 [5/8]	N/A	8 / 0.99	15 / 0.98	6 / 0.97	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	7.94 [5/16]	15.88 [5/8]	59	8 / 0.99	15 / 0.98	23 / 0.97	27 / 0.96	23 / 0.95	21 / 0.94	19 / 0.93	16 / 0.92	14 / 0.91	14 / 0.91	11 / 0.90	11 / 0.90	11 / 0.90	11 / 0.90	11 / 0.90	11 / 0.90	11 / 0.90	11 / 0.90
	9.53 [3/8]	15.88 [5/8]	39	8 / 0.99	15 / 0.98	23 / 0.97	30 / 0.96	30 / 0.95	30 / 0.94	30 / 0.93	29 / 0.92	28 / 0.91	28 / 0.91	27 / 0.90	27 / 0.90	27 / 0.90	27 / 0.90	27 / 0.90	27 / 0.90	27 / 0.90	27 / 0.90
10.6 KW [3 Ton]	6.35 [1/4]	19.05 [3/4]	N/A	8 / 1.00	15 / 1.00	6 / 0.99	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	7.94 [5/16]	19.05 [3/4]	59	8 / 1.00	15 / 1.00	23 / 0.99	27 / 0.99	23 / 0.98	21 / 0.98	18 / 0.93	15 / 0.91	14 / 0.91	14 / 0.91	11 / 0.90	11 / 0.90	11 / 0.90	11 / 0.90	11 / 0.90	11 / 0.90	11 / 0.90	11 / 0.90
	9.53 [3/8]	19.05 [3/4]	36	8 / 1.00	15 / 0.99	23 / 0.99	30 / 0.99	30 / 0.99	30 / 0.98	30 / 0.98	29 / 0.97	28 / 0.97	28 / 0.97	27 / 0.96	27 / 0.96	27 / 0.96	27 / 0.96	27 / 0.96	27 / 0.96	27 / 0.96	27 / 0.96
12.3 KW [3.5 Ton]	7.94 [5/16]	15.88 [5/8]	N/A	8 / 0.99	15 / 0.97	20 / 0.94	15 / 0.92	10 / 0.90	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	9.53 [3/8]	15.88 [5/8]	26	8 / 0.99	15 / 0.97	23 / 0.94	29 / 0.92	27 / 0.90	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	12.70 [1/2]	19.05 [3/4]	13	8 / 1.00	15 / 0.99	20 / 0.98	15 / 0.98	10 / 0.97	5 / 0.96	26 / 0.96	26 / 0.96	24 / 0.95	20 / 0.93	20 / 0.93	20 / 0.93	20 / 0.93	20 / 0.93	20 / 0.93	20 / 0.93	20 / 0.93	20 / 0.93
12.3 KW [3.5 Ton]	6.35 [1/4]	19.05 [3/4]**	N/A	8 / 1.00	15 / 0.99	23 / 0.98	30 / 0.98	30 / 0.97	30 / 0.97	30 / 0.96	30 / 0.94	30 / 0.93	30 / 0.93	30 / 0.93	30 / 0.93	30 / 0.93	30 / 0.93	30 / 0.93	30 / 0.93	30 / 0.93	30 / 0.93
	7.94 [5/16]	22.23 [7/8]	39	8 / 1.00	15 / 1.00	20 / 1.00	15 / 0.99	10 / 0.99	5 / 0.99	26 / 0.96	26 / 0.96	24 / 0.95	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94
	9.53 [3/8]	22.23 [7/8]	26	8 / 1.00	15 / 1.00	23 / 1.00	29 / 0.99	27 / 0.99	27 / 0.99	26 / 0.99	26 / 0.99	24 / 0.98	24 / 0.98	24 / 0.98	24 / 0.98	24 / 0.98	24 / 0.98	24 / 0.98	24 / 0.98	24 / 0.98	24 / 0.98
12.70 [1/2]	6.35 [1/4]	19.05 [3/4]**	N/A	8 / 1.00	15 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00	23 / 1.00
	7.94 [5/16]	22.23 [7/8]	31	8 / 0.99	15 / 0.98	23 / 0.97	27 / 0.96	24 / 0.95	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94	22 / 0.94
	9.53 [3/8]	22.23 [7/8]	15	8 / 0.99	15 / 0.98	23 / 0.97	30 / 0.96	30 / 0.95	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94	30 / 0.94
12.70 [1/2]	6.35 [1/4]	19.05 [3/4]**	N/A	8 / 1.00	15 / 1.00	23 / 0.99	27 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99	24 / 0.99
	7.94 [5/16]	22.23 [7/8]	15	8 / 1.00	15 / 1.00	23 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99	27 / 0.99
	9.53 [3/8]	22.23 [7/8]	31	8 / 1.00	15 / 1.00	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99	23 / 0.99

**NOTES:**

- 1) Do not exceed 200 ft linear line length.
- 2) \*Do not exceed 100 ft vertical separation if outdoor unit is above indoor unit.
- 3) \*\*3/4" suction line should only be used for 1.5 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.)

14.3 SEER2 Single-Stage Air-Conditioners													
Unit Size	Allowable Liquid Line Size mm [in.]	Allowable Suction Line Size mm [in.]	Apply Long Line Guidelines if Linear Line Length Exceeds Those Shown Below (Feet)	Equivalent Length (Meters)									
				< 25	26-50	51-75	76-100	101-125	126-150	151-175	176-200	201-225	226-250
				Maximum Vertical Rise (Outdoor Unit Below Indoor Unit) * / Capacity Multiplier									
14.1 KW [4 Ton]	9.53 [3/8]	19.05 [3/4]	34	8 / 0.99	15 / 0.98	23 / 0.96	24 / 0.95	20 / 0.93	17 / 0.92	14 / 0.91	NR	NR	NR
	12.7 [1/2]	19.05 [3/4]	17	8 / 0.99	15 / 0.98	23 / 0.96	30 / 0.95	30 / 0.93	30 / 0.92	30 / 0.91	NR	NR	NR
	9.53 [3/8]	22.23 [7/8]	34	8 / 1.00	15 / 0.99	23 / 0.99	24 / 0.98	20 / 0.97	17 / 0.97	14 / 0.96	11 / 0.96	8 / 0.95	5 / 0.95
	12.7 [1/2]	22.23 [7/8]	17	8 / 1.00	15 / 0.99	23 / 0.99	30 / 0.98	30 / 0.97	30 / 0.97	30 / 0.96	30 / 0.96	30 / 0.95	30 / 0.95
17.6 KW [5 Ton]	9.53 [3/8]	19.05 [3/4]	0	8 / 0.99	15 / 0.97	23 / 0.94	19 / 0.92	14 / 0.90	NR	NR	NR	NR	NR
	12.7 [1/2]	19.05 [3/4]	0	8 / 0.99	15 / 0.97	23 / 0.94	30 / 0.92	30 / 0.90	NR	NR	NR	NR	NR
	9.53 [3/8]	22.23 [7/8]	0	8 / 1.00	15 / 0.99	23 / 0.98	19 / 0.97	14 / 0.96	10 / 0.95	5 / 0.94	NR	NR	NR
	12.7 [1/2]	22.23 [7/8]	0	8 / 1.00	15 / 0.99	23 / 0.98	30 / 0.97	30 / 0.96	30 / 0.95	30 / 0.94	29 / 0.94	28 / 0.93	27 / 0.92
	9.53 [3/8]	28.58 [1-1/8]	0	8 / 1.01	15 / 1.01	23 / 1.00	19 / 1.00	14 / 0.99	10 / 0.99	5 / 0.99	NR	NR	NR
	12.7 [1/2]	28.58 [1-1/8]	0	8 / 1.01	15 / 1.01	23 / 1.00	30 / 1.00	30 / 0.99	30 / 0.99	30 / 0.99	29 / 0.99	28 / 0.99	27 / 0.98

**NOTES:**

- 1) Do not exceed 200 ft linear line length.
- 2) \*Do not exceed 100 ft vertical separation if outdoor unit is above indoor unit.
- 3) \*\*3/4" suction line should only be used for 1.5 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.

## 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]
TZALAS14AZ18AJ	TCFZ2417STAN	17600 [5.2]	13500 [4.0]	4100 [1.2]	14.3	11.7	600 [283.2]
TZALAS14AZ24AJ	TCFZ2417STAN	22800 [6.7]	17500 [5.1]	5300 [1.6]	14.3	11.7	725 [342.2]
TZALAS14AZ30AJ	TCFZ3617STAN	28800 [8.4]	22100 [6.5]	6700 [2.0]	14.3	11.7	900 [424.8]
TZALAS14AZ36AJ	TCFZ3617STAN	34200 [10.0]	26200 [7.7]	8000 [2.3]	14.3	11.7	1025 [483.7]
TZALAS14AZ42AJ	TCFZ4821STAN	38500 [11.3]	29500 [8.6]	9000 [2.6]	14.3	11.7	1300 [613.5]
TZALAS14AZ48AJ	TCFZ4821STAN	45000 [13.2]	34500 [10.1]	10500 [3.1]	13.8	11.2	1425 [672.5]
TZALAS14AZ60AJ	TCFZ6024STAN	56000 [16.4]	42900 [12.6]	13100 [3.8]	13.8	11.2	1600 [755.1]

**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](http://www.ahridirectory.org).

[ ] Designates Metric Conversions





**GENERAL TERMS OF LIMITED WARRANTY\***

Thermal Zone™ 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 Parts  
(Registration Required)..... 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.**

*"In keeping with its policy of continuous progress and product improvement, Thermal Zone reserves the right to make changes without notice."*