



## AIR CONDITIONERS



### Features

- Composite base pan – dampens sound, eliminates corrosion and reduces number of fasteners needed
- Powder coat paint finish – for a long lasting professional finish
- Copeland scroll compressor – uses 70% fewer moving parts for higher efficiency and increased reliability
- Modern cabinet aesthetics – increased curb appeal with visually appealing design
- Vertical louver panels – provides ultimate coil protection, enhanced cabinet strength, and increased cabinet rigidity
- Optimized fan orifice – optimizes airflow and reduces unit sound
- Rust resistant screws – confirmed through 1500-hour salt spray testing
- 3" between valves, 4" below valves, 5" above valves – provides a minimum working area of 27-square inches for easier access
- 15" wide, industry leading corner service access – makes repairs easier and faster.
- External gauge port access – allows easy connection of "low-loss" gauge ports
- Single-row condenser coil – makes unit lighter and allows thorough coil cleaning to maintain "out of the box" performance
- Fewer cabinet fasteners – allow for faster access to internal components and hassle-free panel removal
- Service trays – hold fasteners or caps during service calls
- 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.

### TZALS-14\*W SERIES

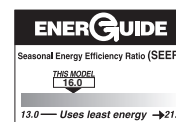
Efficiencies up to 16 SEER/13 EER

Nominal Sizes 1 $\frac{1}{2}$  to 3 $\frac{1}{2}$  Ton [5.28 to 12.3 kW]

Cooling Capacities 17.3 to 60.5 kBTU

[5.7 to 17.7 kW]

"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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## Model Number Identification

<u>TZ</u>	<u>A</u>	<u>L</u>	<u>S</u>	<u>14</u>	<u>18</u>	<u>2</u>	<u>W</u>	<u>A</u>
Brand	Product	Refrigerant	Motor	SEER	Capacity	Voltage	Major Series	Minor Series
TZ = Thermal Zone	A = Air Conditioner	L = R410A	S = Single Stage	14 = 14 SEER	18 - 18,000 BTU 24 - 24,000 BTU 30 - 30,000 BTU 36 - 36,000 BTU 42 - 42,000 BTU	2 = 1 ph 208-230/60 C = 3 ph 208-230/60 D = 3 ph 460/60	W = Southwest Regional Standard Unit	A = First Design Series P = First Design Series with HPC/LPC B = Second Design Series with HPC/LPC

[ ] Designates Metric Conversions

## Available SKUs

Available Models
TZALS14182WA
TZALS14182WP
TZALS14242WB
TZALS14302WB
TZALS14362WA
TZALS14362WP
TZALS1436CWP
TZALS14422WB
TZALS1442CWB

<b>Physical Data</b>					
<b>PHYSICAL DATA</b>					
<b>Model No.</b>	<b>TZALS1418W</b>	<b>TZALS1424W</b>	<b>TZALS1430W</b>	<b>TZALS1436W</b>	<b>TZALS1442W</b>
<b>Nominal Tonnage</b>	1.5	2.0	2.5	3.0	3.5
<b>Valve Connections</b>					
Liquid Line O.D. – in.	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
<b>Refrigerant (R410A) furnished oz.<sup>1</sup></b>	78.4	87	113	103.2	150.0
<b>Compressor Type</b>	Scroll				
<b>Outdoor Coil</b>					
Net face area – Outer Coil	9.9	14.8	16.2	17.3	24.2
Net face area – Inner Coil	—	—	—	—	—
Tube diameter – in.	0.375	0.375	0.375	0.375	0.375
Number of rows	1	1	1	1	1
Fins per inch	22	22	22	22	22
<b>Outdoor Fan</b>					
Diameter – in.	20	24	26	24	26
Number of blades	2	2	3	3	3
Motor hp	1/10	1/6	1/5	1/6	1/3
CFM	2320	2850	3915	3395	4450
RPM	1090	851	710	831	829
watts	139	147	102	177	193
<b>Shipping weight – lbs.</b>	152	149	159	187	212
<b>Operating weight – lbs.</b>	145	142	152	180	205
<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>Maximum overcurrent protection (amps)<sup>2</sup></b>	20	20	30	35	40
<b>Minimum circuit ampacity<sup>3</sup></b>	13	14	18	21	25
<b>Compressor</b>					
Rated load amps	9.7	10.3	12.8	15.4	16.7
Locked rotor amps	46	61.6	67.3	83.9	109
<b>Condenser Fan Motor</b>					
Full load amps	0.6	0.6	1.4	0.8	3.5
Locked rotor amps	1.1	1.5	2.3	1.5	—
<b>Line Voltage Data (Volts-Phase-Hz)</b>	—	—	—	<b>208/230-3-60</b>	<b>208/230-3-60</b>
Maximum overcurrent protection (amps) <sup>2</sup>	—	—	—	20	25
Minimum circuit ampacity <sup>3</sup>	—	—	—	14	18
<b>Compressor</b>					
Rated load amps	—	—	—	10.4	11.2
Locked rotor amps	—	—	—	73	88
<b>Condenser Fan Motor</b>					
Full load amps	—	—	—	0.8	3.5
Locked rotor amps	—	—	—	1.5	—

<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.		TZALS1418	TZALS1424	TZALS1430	TZALS1436	TZALS1442
Compressor crankcase heater*		44-17402-44	44-17402-44	44-17402-44	44-17402-44	44-17402-45
Low ambient control		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
Compressor hard start kit		SK-A1	SK-A1	SK-A1	SK-A1	SK-A1
Compressor time delay		RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01
Low pressure control		RXAC-A07	RXAC-A07	RXAC-A07	RXAC-A07	RXAC-A07
High pressure control		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
	Solenoid Coil	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
	Solenoid Coil	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V

\*Crankcase Heater recommended with Low Ambient Kit.

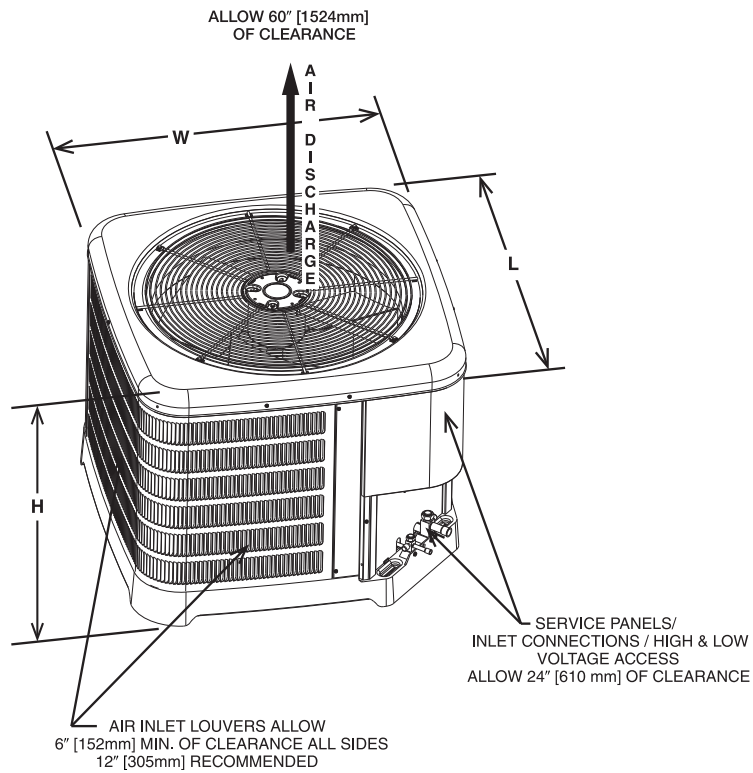
## Weighted Sound Power Level (dBA)

		A-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
TZALS1418W	74.0	47.4	58.0	61.6	65.0	61.6	59.0	52.0
TZALS1424W	75.5	49.9	58.4	61.4	64.1	61.6	57.3	50.8
TZALS1430W	74.3	48.4	57.4	62.6	64.5	61.5	56.5	51.5
TZALS1436W	75.0	51.6	58.7	63.1	66.1	62.3	59.0	55.7
TZALS1442W	70.7	47.5	51.0	60.2	60.7	59.7	53.6	50.4

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

## Unit Dimensions

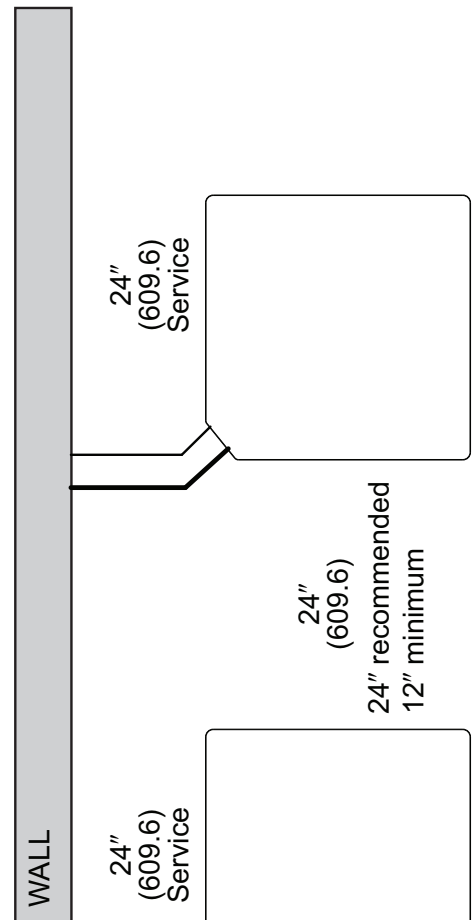
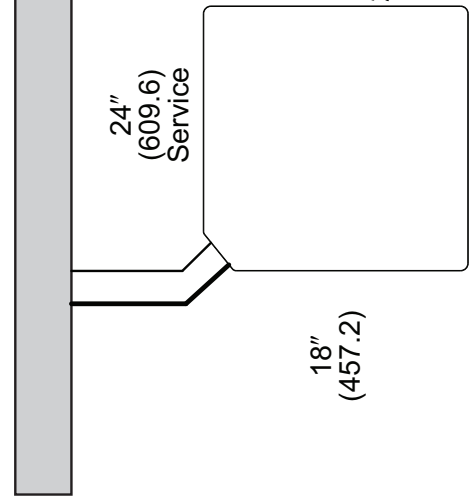
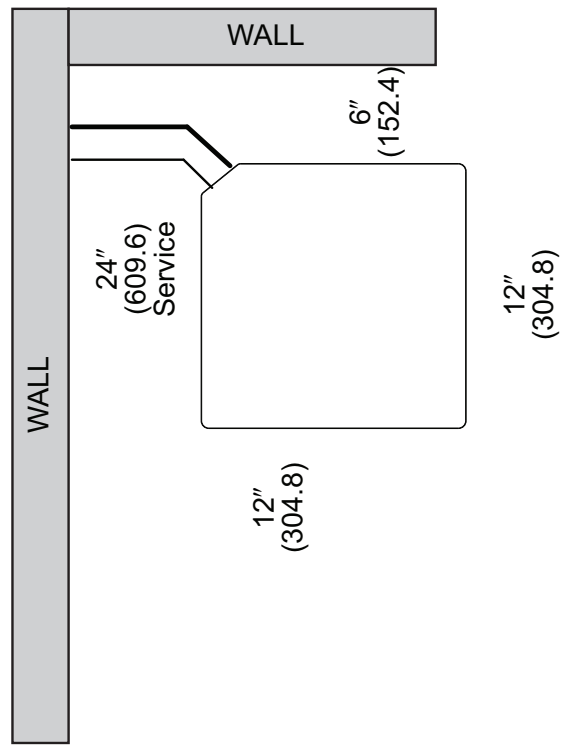
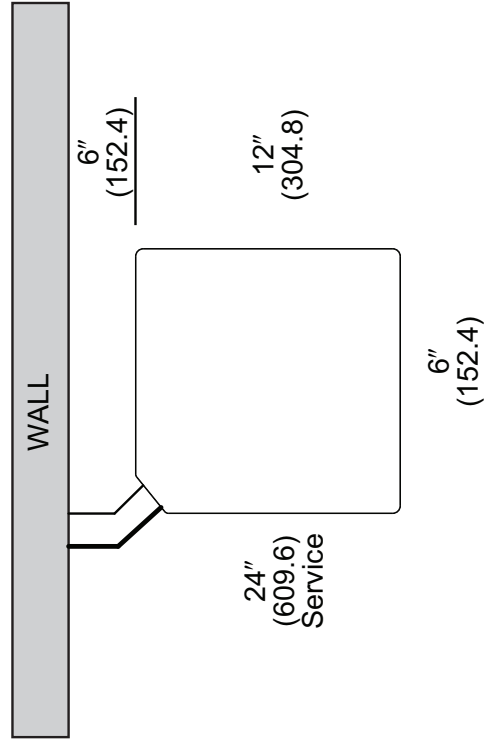
MODEL NO.	OPERATING						SHIPPING					
	H (Height)		L (Length)		W (Width)		H (Height)		L (Length)		W (Width)	
	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm
TZALS1418W	27	685	29.75	755	29.75	755	28.50	723	33.00	838	32.75	831
TZALS1424W	27	685	33.75	857	33.75	857	27.40	695	36.25	921	36.25	921
TZALS1430W	27	685	35.75	908	35.75	908	27.40	695	38.25	972	38.25	972
TZALS1436W	31	787	33.75	857	33.75	857	33.32	846	37.64	956	37.56	954
TZALS1442W	39	990	35.75	908	35.75	908	39.38	1000	38.25	972	38.25	972



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[ ] Designates Metric Conversions

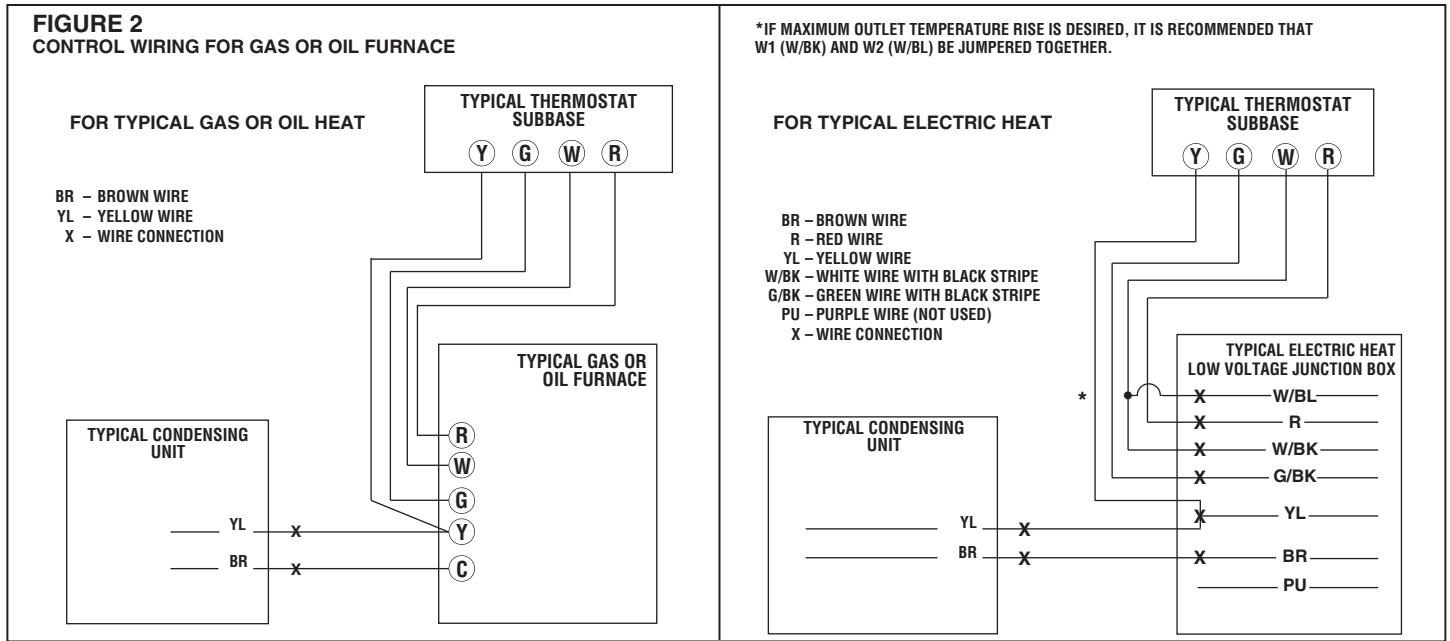
# CLEARANCES



**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

13 - 16 SEER 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)											
			TZALS13	TZALS14	TZALS14 *W	TZALS16	< 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											
1.5 Ton **SEE NOTE 3	1/4"	5/8"	N/A	N/A	N/A	25/1.00	50/0.99	62/0.98	43/0.98	24/0.97	5/0.97	N/R	N/R	N/R	N/R	N/R	N/R
	5/16"	5/8"	N/A	223	198	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		
	3/8"	5/8"	178	148	132	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		
	1/4"	3/4"***	N/A	N/A	N/A	25/1.00	50/1.00	62/0.99	43/0.99	24/0.99	5/0.99	N/R	N/R	N/R	N/R	N/R	N/R
	5/16"	3/4"***	N/A	223	198	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		
	3/8"	3/4"***	178	148	132	25/1.00	50/1.00	75/1.00	100/0.99	100/0.99	100/0.99	100/0.99	100/0.98	100/0.98	100/0.98		
2 Ton	1/4"	5/8"	N/A	N/A	N/A	25/0.99	50/0.98	21/0.97	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	5/16"	5/8"	243	213	175	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		
	3/8"	5/8"	162	142	117	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		
	1/4"	3/4"	N/A	N/A	N/A	25/1.00	50/1.00	21/0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	5/16"	3/4"	243	213	175	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		
	3/8"	3/4"	162	142	117	25/1.00	50/1.00	75/0.99	100/0.99	100/0.98	100/0.98	98/0.98	95/0.97	93/0.97	90/0.96		
2.5 Ton	5/16"	5/8"	N/A	N/A	N/A	25/0.99	50/0.98	75/0.96	70/0.94	59/0.93	48/0.91	36/0.90	N/R	N/R	N/R	N/R	N/R
	3/8"	5/8"	142	117	73	25/0.99	50/0.98	75/0.96	100/0.94	98/0.93	94/0.91	90/0.90	N/R	N/R	N/R	N/R	N/R
	5/16"	3/4"	213	175	110	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	N/R	N/R	N/R
	3/8"	3/4"	142	117	73	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		
	5/16"	5/8"	N/A	N/A	N/A	25/0.99	50/0.97	66/0.94	49/0.92	32/0.90	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	3/8"	5/8"	108	85	90	25/0.99	50/0.97	75/0.94	95/0.92	89/0.90	N/R	N/R	N/R	N/R	N/R	N/R	N/R
3 Ton	5/16"	3/4"	N/A	128	135	25/1.00	50/0.99	66/0.98	49/0.98	32/0.97	15/0.96	N/R	N/R	N/R	N/R	N/R	N/R
	3/8"	3/4"	108	85	90	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		
	1/2"	3/4"	54	43	45	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		
	5/16"	7/8"	N/A	128	135	25/1.00	50/1.00	66/1.00	49/0.99	32/0.99	15/0.99	N/R	N/R	N/R	N/R	N/R	N/R
	3/8"	7/8"	108	85	90	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		
	1/2"	7/8"	54	43	45	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		
3.5 Ton	3/8"	3/4"	150	123	75	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	N/R	N/R	N/R
	1/2"	3/4"	75	62	38	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	N/R	N/R	N/R
	3/8"	7/8"	150	123	75	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		
	1/2"	7/8"	75	62	38	25/1.00	50/1.00	75/0.99	100/0.99	100/0.99	100/0.99	100/0.98	100/0.97	100/0.96	100/0.96		
	3/8"	3/4"	150	123	75	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	N/R	N/R	N/R
	1/2"	3/4"	75	62	38	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	N/R	N/R	N/R

**NOTES:**

- Do not exceed 200 ft linear line length.
- Do not exceed 100 ft vertical separation if outdoor unit is above indoor unit.
- \*\*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.
- Always use the smallest liquid line allowable to minimize refrigerant charge.
- Applications shaded in light gray indicate capacity multipliers between 0.90 and 0.96 which are not recommended, but are allowed.
- Applications shaded in dark gray are not recommended due to excessive liquid or suction pressure drop.

# Refrigerant Line Size Information (con't.)

13 - 16 SEER 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)										
			TZALS13	TZALS14	TZALS14*W	TZALS16	Maximum Vertical Rise (Outdoor Unit Below Indoor Unit) * / Capacity Multiplier									
						< 25	26-50	51-75	76-100	101-125	126-150	151-175	176-200	201-225	226-250	
4 Ton	3/8"	3/4"	148	110	N/A	35	50 / 0.99	50 / 0.98	75 / 0.96	77 / 0.95	67 / 0.93	57 / 0.92	46 / 0.91	N/R	N/R	N/R
	1/2"	3/4"	74	55	N/A	18	25 / 0.99	50 / 0.98	75 / 0.96	100 / 0.95	100 / 0.93	100 / 0.92	100 / 0.91	N/R	N/R	N/R
	3/8"	7/8"	148	110	N/A	35	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"	74	55	N/A	18	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
	3/8"	3/4"	78	55	N/A	0	25 / 0.99	50 / 0.97	75 / 0.94	61 / 0.92	46 / 0.90	N/R	N/R	N/R	N/R	N/R
5 Ton	1/2"	3/4"	39	28	N/A	0	25 / 0.99	50 / 0.97	75 / 0.94	100 / 0.92	100 / 0.90	N/R	N/R	N/R	N/R	N/R
	3/8"	7/8"	78	55	N/A	0	25 / 1.00	50 / 0.99	75 / 0.98	61 / 0.97	46 / 0.96	32 / 0.95	18 / 0.94	N/R	N/R	N/R
	1/2"	7/8"	39	28	N/A	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"	78	55	N/A	0	25 / 1.01	50 / 1.01	75 / 1.00	61 / 1.00	46 / 0.99	32 / 0.99	18 / 0.99	N/R	N/R	N/R
	1/2"	1-1/8"	39	28	N/A	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:**

- Do not exceed 200 ft linear line length.
- \* Do not exceed 100 ft vertical separation if outdoor unit is above indoor unit.
- \*\*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.
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## Refrigerant Line Size Information

13 - 16 SEER 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 (Meters)			Equivalent Length (Meters)												
			TZALS13	TZALS14	TZALS14 *W	TZALS16	< 8	8-15	16-23	24-30	31-38	39-46	47-53	54-61	62-69	70-76		
						Maximum Vertical Rise (Outdoor Unit Below Indoor Unit) * / Capacity Multiplier												
5.3 kW [1.5 Ton] <b>**SEE NOTE 3</b>	6.35 [1/4]	15.88 [5/8]	N/A	N/A	N/A	8 / 1.00	15 / 0.99	19 / 0.98	13 / 0.98	7 / 0.97	2 / 0.97	N/R	N/R	N/R	N/R	N/R	N/R	
	7.94 [5/16]	15.88 [5/8]	N/A	68	60	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	21 / 0.94	21 / 0.94	21 / 0.94	
	9.53 [3/8]	15.88 [5/8]	54	45	40	8 / 1.00	15 / 0.99	23 / 0.98	30 / 0.98	30 / 0.97	30 / 0.97	30 / 0.96	30 / 0.96	30 / 0.95	30 / 0.94	30 / 0.94	30 / 0.94	
	6.35 [1/4]	19.05 [3/4]**	N/A	N/A	N/A	8 / 1.00	15 / 1.00	19 / 0.99	13 / 0.99	7 / 0.99	2 / 0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
7.0 kW [2 Ton]	7.94 [5/16]	19.05 [3/4]**	N/A	68	60	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	21 / 0.98	21 / 0.98	21 / 0.98	
	9.53 [3/8]	19.05 [3/4]**	54	45	40	8 / 1.00	15 / 1.00	23 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.98	30 / 0.98	30 / 0.98	30 / 0.98	30 / 0.98	
	6.35 [1/4]	15.88 [5/8]	N/A	N/A	N/A	8 / 0.99	15 / 0.98	6 / 0.97	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	7.94 [5/16]	15.88 [5/8]	74	65	53	8 / 0.99	15 / 0.98	23 / 0.97	27 / 0.96	23 / 0.95	21 / 0.94	19 / 0.94	16 / 0.92	14 / 0.91	11 / 0.90	11 / 0.90	11 / 0.90	
8.8 kW [2.5 Ton]	9.53 [3/8]	15.88 [5/8]	49	43	36	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	27 / 0.90	27 / 0.90	27 / 0.90	
	6.35 [1/4]	19.05 [3/4]	N/A	N/A	N/A	8 / 1.00	15 / 1.00	6 / 0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	7.94 [5/16]	19.05 [3/4]	74	65	53	8 / 1.00	15 / 1.00	23 / 0.99	27 / 0.99	23 / 0.98	21 / 0.98	19 / 0.98	16 / 0.97	14 / 0.97	11 / 0.96	11 / 0.96	11 / 0.96	
	9.53 [3/8]	19.05 [3/4]	49	43	36	8 / 1.00	15 / 1.00	23 / 0.99	30 / 0.99	30 / 0.98	30 / 0.98	30 / 0.98	29 / 0.97	28 / 0.97	28 / 0.97	28 / 0.97	28 / 0.97	
10.6 kW [3 Ton]	7.94 [5/16]	15.88 [5/8]	N/A	N/A	N/A	8 / 0.99	15 / 0.98	23 / 0.96	21 / 0.94	18 / 0.93	15 / 0.91	11 / 0.90	N/R	N/R	N/R	N/R	N/R	N/R
	9.53 [3/8]	15.88 [5/8]	43	36	22	8 / 0.99	15 / 0.98	23 / 0.96	30 / 0.94	30 / 0.93	29 / 0.91	27 / 0.90	N/R	N/R	N/R	N/R	N/R	
	7.94 [5/16]	19.05 [3/4]	65	53	34	8 / 1.00	15 / 0.99	23 / 0.99	21 / 0.98	18 / 0.98	15 / 0.97	11 / 0.96	8 / 0.96	4 / 0.95	4 / 0.95	4 / 0.95	4 / 0.95	
	9.53 [3/8]	19.05 [3/4]	43	36	22	8 / 1.00	15 / 0.99	23 / 0.99	30 / 0.98	30 / 0.98	29 / 0.97	27 / 0.96	26 / 0.96	25 / 0.95	24 / 0.95	24 / 0.95	24 / 0.95	
12.3 kW [3.5 Ton]	7.94 [5/16]	15.88 [5/8]	N/A	N/A	N/A	8 / 0.99	15 / 0.97	20 / 0.94	15 / 0.92	10 / 0.90	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	9.53 [3/8]	15.88 [5/8]	33	26	27	8 / 0.99	15 / 0.97	23 / 0.94	29 / 0.92	27 / 0.90	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	7.94 [5/16]	19.05 [3/4]	N/A	39	41	8 / 1.00	15 / 0.99	20 / 0.98	15 / 0.98	10 / 0.97	5 / 0.96	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	9.53 [3/8]	19.05 [3/4]	33	26	27	8 / 1.00	15 / 0.99	23 / 0.98	29 / 0.98	27 / 0.97	26 / 0.96	24 / 0.95	22 / 0.94	20 / 0.93	19 / 0.93	19 / 0.93	19 / 0.93	
12.7 [1/2]	12.7 [1/2]	19.05 [3/4]	17	13	14	8 / 1.00	15 / 0.99	23 / 0.98	30 / 0.98	30 / 0.97	30 / 0.96	30 / 0.95	30 / 0.94	30 / 0.93	30 / 0.93	30 / 0.93	30 / 0.93	
	7.94 [5/16]	22.23 [7/8]	N/A	39	41	8 / 1.00	15 / 1.00	20 / 1.00	15 / 0.99	10 / 0.99	5 / 0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	9.53 [3/8]	22.23 [7/8]	33	26	27	8 / 1.00	15 / 1.00	23 / 1.00	29 / 0.99	27 / 0.99	26 / 0.99	24 / 0.98	22 / 0.98	20 / 0.98	19 / 0.97	19 / 0.97	19 / 0.97	
	12.7 [1/2]	22.23 [7/8]	17	13	14	8 / 1.00	15 / 1.00	23 / 1.00	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.98	30 / 0.98	30 / 0.98	30 / 0.98	30 / 0.98	30 / 0.98	
12.3 kW [3.5 Ton]	9.53 [3/8]	19.05 [3/4]	46	38	23	8 / 0.99	15 / 0.98	23 / 0.97	27 / 0.96	24 / 0.95	22 / 0.94	20 / 0.92	17 / 0.91	15 / 0.90	N/R	N/R	N/R	N/R
	12.7 [1/2]	19.05 [3/4]	23	19	11	8 / 0.99	15 / 0.98	23 / 0.97	30 / 0.96	30 / 0.95	30 / 0.94	30 / 0.92	30 / 0.91	30 / 0.90	N/R	N/R	N/R	N/R
	9.53 [3/8]	22.23 [7/8]	46	38	23	8 / 1.00	15 / 1.00	23 / 0.99	27 / 0.99	24 / 0.99	22 / 0.98	20 / 0.97	17 / 0.97	15 / 0.96	13 / 0.96	13 / 0.96	13 / 0.96	
	12.7 [1/2]	22.23 [7/8]	23	19	11	8 / 1.00	15 / 1.00	23 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.97	30 / 0.97	30 / 0.96	30 / 0.96	30 / 0.96	30 / 0.96	

**NOTES:**

- Do not exceed 61 meters line length.
- Do not exceed 30 meters vertical separation if outdoor unit is above indoor unit.
- \* 19.05 mm [3/4 in.] 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.
- Always use the smallest liquid line allowable to minimize refrigerant charge.
- Applications shaded in light gray indicate capacity multipliers between 0.90 and 0.96 which are not recommended, but are allowed.
- Applications shaded in dark gray are not recommended due to excessive liquid or suction pressure drop.

## Refrigerant Line Size Information (con't.)

13 - 16 SEER 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 (Meters)			Equivalent Length (Meters)									
			TZALS13	TZALS14	TZALS14 *W	TZALS16	Maximum Vertical Rise (Outdoor Unit Below Indoor Unit) * / Capacity Multiplier								
						< 8	8-15	16-23	24-30	31-38	39-46	47-53	54-61	62-69	70-76
14.1 kW [4 Ton]	9.53 [3/8]	19.05 [3/4]	45	34	N/A	11	8 / 0.99	15 / 0.98	23 / 0.96	24 / 0.95	20 / 0.93	17 / 0.92	14 / 0.91	N/R	N/R
	12.7 [1/2]	19.05 [3/4]	23	17	N/A	5	8 / 0.99	15 / 0.98	23 / 0.96	30 / 0.95	30 / 0.93	30 / 0.92	30 / 0.91	N/R	N/R
	9.53 [3/8]	22.23 [7/8]	45	34	N/A	11	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
	12.7 [1/2]	22.23 [7/8]	23	17	N/A	5	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
17.6 kW [5 Ton]	9.53 [3/8]	19.05 [3/4]	24	17	N/A	0	8 / 0.99	15 / 0.97	23 / 0.94	19 / 0.92	14 / 0.90	N/R	N/R	N/R	N/R
	12.7 [1/2]	19.05 [3/4]	12	8	N/A	0	8 / 0.99	15 / 0.97	23 / 0.94	30 / 0.92	30 / 0.90	N/R	N/R	N/R	N/R
	9.53 [3/8]	22.23 [7/8]	24	17	N/A	0	8 / 1.00	15 / 0.99	23 / 0.98	19 / 0.97	14 / 0.96	10 / 0.95	5 / 0.94	N/R	N/R
	12.7 [1/2]	22.23 [7/8]	12	8	N/A	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
	9.53 [3/8]	28.58 [1-1/8]	24	17	N/A	0	8 / 1.01	15 / 1.01	23 / 1.00	19 / 1.00	14 / 0.99	10 / 0.99	5 / 0.99	N/R	N/R
	12.7 [1/2]	28.58 [1-1/8]	12	8	N/A	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

**NOTES:**

- Do not exceed 61 meters line length.
- Do not exceed 30 meters vertical separation if outdoor unit is above indoor unit.
- \*19.05 mm [3/4 in.] 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.
- Always use the smallest liquid line allowable to minimize refrigerant charge.
- Applications shaded in light gray indicate capacity multipliers between 0.90 and 0.96 which are not recommended, but are allowed.
- 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]	SEER	EER	Indoor CFM [L/s]
TZALS1418*W	TCF2417STA	18000 [5.3]	13700 [4.0]	4300 [1.3]	14.00	12.20	600 [283.2]
TZALS1424*W	TCF2417STA	23800 [7.0]	17300 [5.1]	6500 [1.9]	14.00	12.20	800 [376.0]
TZALS1436*W	TCF3617STA	35800 [10.5]	25500 [7.5]	10300 [3.0]	14.00	12.20	1100 [519.1]
TZALS1430*W	TCF3617STA	27800 [8.1]	21000 [6.2]	6800 [2.0]	14.00	12.20	1025 [481.8]
TZALS1442*W	TCF4821STA	40000 [11.7]	29300 [8.6]	10700 [3.1]	14.00	12.20	1425 [669.8]

**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

## GUIDE SPECIFICATIONS

### General

#### System Description

Outdoor-mounted, air-cooled, split-system air conditioner composite base pan unit suitable for ground or rooftop installation. Unit consists of a hermetic compressor, an air-cooled coil, propeller-type condenser fan, suction and legend line service valve, and a control box. Unit will discharge supply air upward as shown on contract drawings. Unit will be used in a refrigeration circuit to match up to a coil unit.

#### Quality Assurance

- Unit will be rated in accordance with the latest edition of AHRI Standard 210.
- Unit will be certified for capacity and efficiency, and listed in the latest AHRI directory.
- Unit construction will comply with latest edition of ANSI/ASHRAE and with NEC.
- Unit will be constructed in accordance with UL standards and will carry the UL label of approval. Unit will have c-UL-us approval.
- Unit cabinet will be capable of withstanding ASTM B117 1000-hr salt spray test.
- Air-cooled condenser coils will be leak tested at 150 psig and pressure tested at 550 psig.
- Unit constructed in ISO9001 approved facility.

#### Delivery, Storage, and Handling

- Unit will be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

**Warranty (for inclusion by specifying engineer)** — U.S. and Canada only.

### Products

#### Equipment

Factory assembled, single piece, air-cooled air conditioner unit. Contained within the unit enclosure is all factory wiring, piping, controls, compressor, refrigerant charge R-410A, and special features required prior to field start-up.

#### Unit Cabinet

- Unit cabinet will be constructed of galvanized steel, bonderized, and coated with a powder coat paint.
- All units constructed with louver coil protection and corner post. Louver can be removed by removing one fastener per louver panel.

### AIR-COOLED, SPLIT-SYSTEM AIR CONDITIONER

#### TZALS-14\*W

#### 1-1/2 TO 3-1/2 NOMINAL TONS

#### Fans

- Condenser fan will be direct-drive propeller type, discharging air upward.
- Condenser fan motors will be totally enclosed, 1-phase type with class B insulation and permanently lubricated bearings. Shafts will be corrosion resistant.
- Fan blades will be statically and dynamically balanced.
- Condenser fan openings will be equipped with coated steel wire safety guards.

#### Compressor

- Compressor will be hermetically sealed.
- Compressor will be mounted on rubber vibration isolators.

#### Condenser Coil

- Condenser coil will be air cooled.
- Coil will be constructed of aluminum fins mechanically bonded to copper tubes.

#### Refrigeration Components

- Refrigeration circuit components will include liquid-line shutoff valve with sweat connections, vapor-line shutoff valve with sweat connections, system charge of R-410A refrigerant, and compressor oil.
- Unit will be equipped with filter drier for R-410A refrigerant for field installation.

#### Operating Characteristics

- The capacity of the unit will meet or exceed \_\_\_\_\_ Btuh at a suction temperature of \_\_\_\_\_ °F/°C. The power consumption at full load will not exceed \_\_\_\_\_ kW.
- Combination of the unit and the evaporator or fan coil unit will have a total net cooling capacity of \_\_\_\_\_ Btuh or greater at conditions of \_\_\_\_\_ CFM entering air temperature at the evaporator at \_\_\_\_\_ °F/°C wet bulb and \_\_\_\_\_ °F/°C dry bulb, and air entering the unit at \_\_\_\_\_ °F/°C.
- The system will have a SEER of \_\_\_\_\_ Btuh/watt or greater at DOE conditions.

#### Electrical Requirements

- Nominal unit electrical characteristics will be \_\_\_\_\_ v, single phase, 60 hz. The unit will be capable of satisfactory operation within voltage limits of \_\_\_\_\_ v to \_\_\_\_\_ v.
- Nominal unit electrical characteristics will be \_\_\_\_\_ v, three phase, 60 hz. The unit will be capable of satisfactory operation within voltage limits of \_\_\_\_\_ v to \_\_\_\_\_ v.
- Unit electrical power will be single point connection.
- Control circuit will be 24v.

#### Special Features

- Refer to section of this literature identifying accessories and descriptions for specific features and available enhancements.

**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

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**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.**

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