



**FRIEDRICH**

1 8 8 3

## Endeavor™ Line E-Series iC Air Conditioners



### **FWA14AZ**

Cooling Efficiencies up to: 16 SEER2/13 EER2

Nominal Sizes: 1½ to 5 Ton [5.28 to 17.6 kW]

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



† 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

- **Fully Louvered Steel Cabinet:** Features durable construction to add protection from yard hazards, weather corrosion
- **Optimized 7 mm Coil Design:** Allows for improved airflow, heat transfer and energy consumption
- **Easily Accessible Control Box:** Ease of installation and serviceability

# Air Conditioners

<u>FW</u>	<u>A</u>	<u>14</u>	<u>A</u>	<u>Z</u>	<u>18</u>	<u>A</u>	<u>J</u>	<u>1</u>	<u>N</u>	<u>A</u>
Brand	Product Category	SEER2	Region	Refrigerant	Capacity BTU/HR	Major Series	Voltage	Type	Controls	Minor Series
FW - Friedrich	A - Air Conditioners	14 - 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 - 208/230/1/60	1 - 1-Stage	N - Non-Communicating	A - 1st Design

[ ] Designates Metric Conversions

Available Models
FWA14AZ18AJ1NA
FWA14AZ24AJ1NA
FWA14AZ30AJ1NA
FWA14AZ36AJ1NA
FWA14AZ42AJ1NA
FWA14AZ48AJ1NA
FWA14AZ60AJ1NA

Standard Equipment
R410-A 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
Optimized Venturi Airflow
Rust Resistant Screws
QR Code
External Gauge Ports

<b>General Data</b>							
Model No.	FWA14AZ18	FWA14AZ24	FWA14AZ30	FWA14AZ36	FWA14AZ42	FWA14AZ48	FWA14AZ60
<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	0.375
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>	<b>COMING SOON</b>						
<b>Operating weight – lbs.</b>							
<b>Electrical Data</b>							
Line Voltage Data (Volts-Phase-Hz)	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
<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.		FWA14AZ18	FWA14AZ24	FWA14AZ30	FWA14AZ36	FWA14AZ42	FWA14AZ48	FWA14AZ60
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
Classic Top Cap w/Label		91-101123-21	91-101123-21	91-101123-21	91-101123-21	91-101123-21	91-101123-21	91-101123-21

\*Crankcase Heater recommended with Low Ambient Kit.

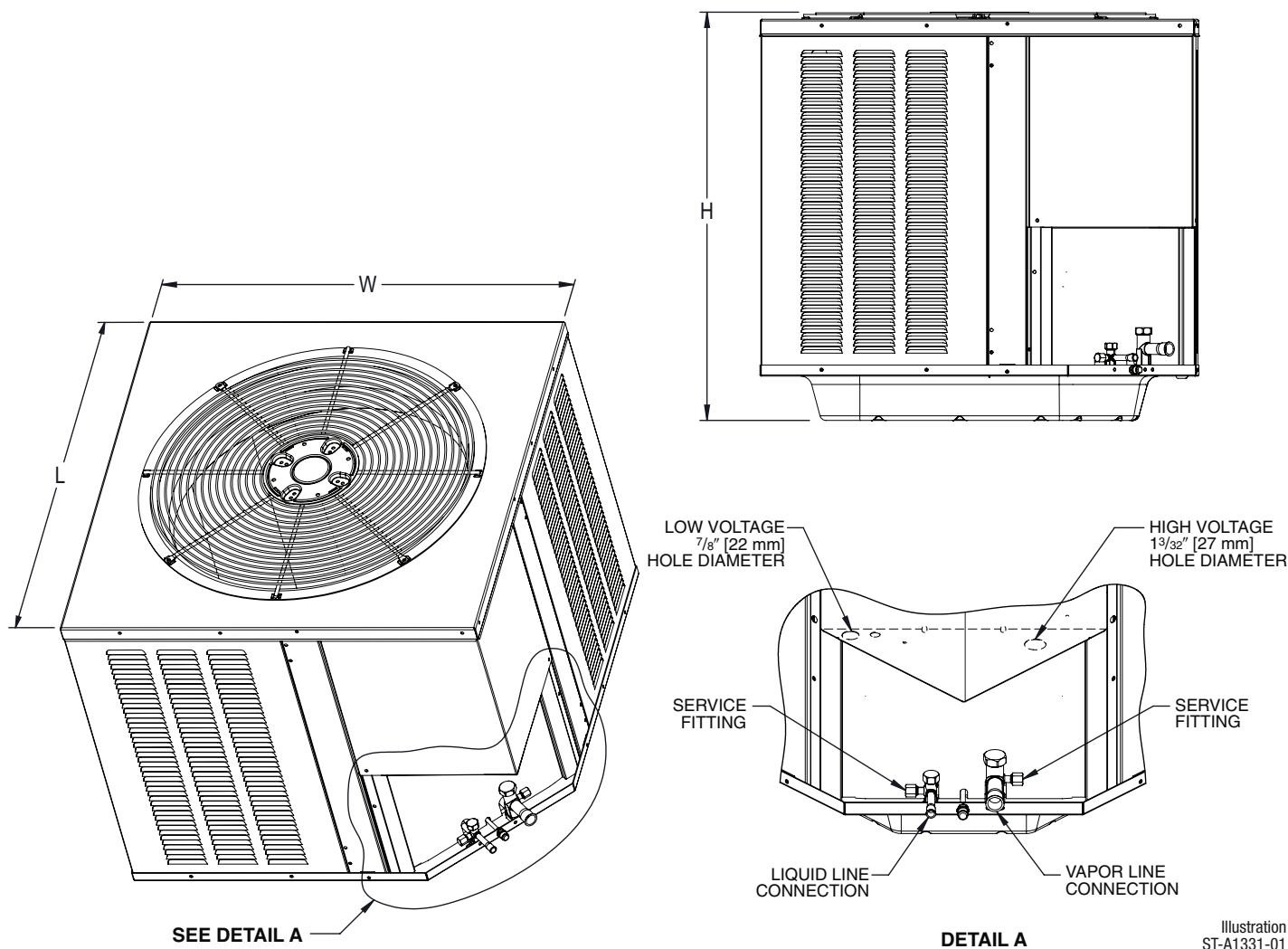
## Weighted Sound Power Level (dBA)

Unit Size - Voltage, Series	Standard Rating (dBA)	Typical Octave Band Spectrum (dBA without tone adjustment)						
		125	250	500	1000	2000	4000	8000
FWA14AZ18	70.7	48.2	56.0	61.9	61.0	56.5	53.5	45.7
FWA14AZ24	68.5	44.6	53.6	58.7	58.0	55.5	50.5	45.7
FWA14AZ30	70.8	45.1	54.5	59.8	59.0	56.8	53.8	45.9
FWA14AZ36	71.6	45.4	52.6	60.2	60.8	58.7	55.9	48.4
FWA14AZ42	72.5	46.6	55.3	63.9	62.1	59.4	55.2	48.2
FWA14AZ48	74.0	45.4	55.7	64.2	62.9	60.8	56.7	51.2
FWA14AZ60	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
FWA14AZ18	25.17	639	29.54	750	29.54	750	27.06	687	32.63	829	32.63	829
FWA14AZ24	25.17	639	33.66	855	33.66	855	27.06	687	36.63	930	36.63	930
FWA14AZ30	27.17	690	33.66	855	33.66	855	29.06	738	36.63	930	36.63	930
FWA14AZ36	31.17	792	33.66	855	33.66	855	33.06	840	36.63	930	36.63	930
FWA14AZ42	35.17	893	33.66	855	33.66	855	37.06	941	36.63	930	36.63	930
FWA14AZ48	35.17	893	33.66	855	33.66	855	37.06	941	36.63	930	36.63	930
FWA14AZ60	51.17	1300	35.54	903	35.54	903	53.06	1348	38.63	981	38.63	981

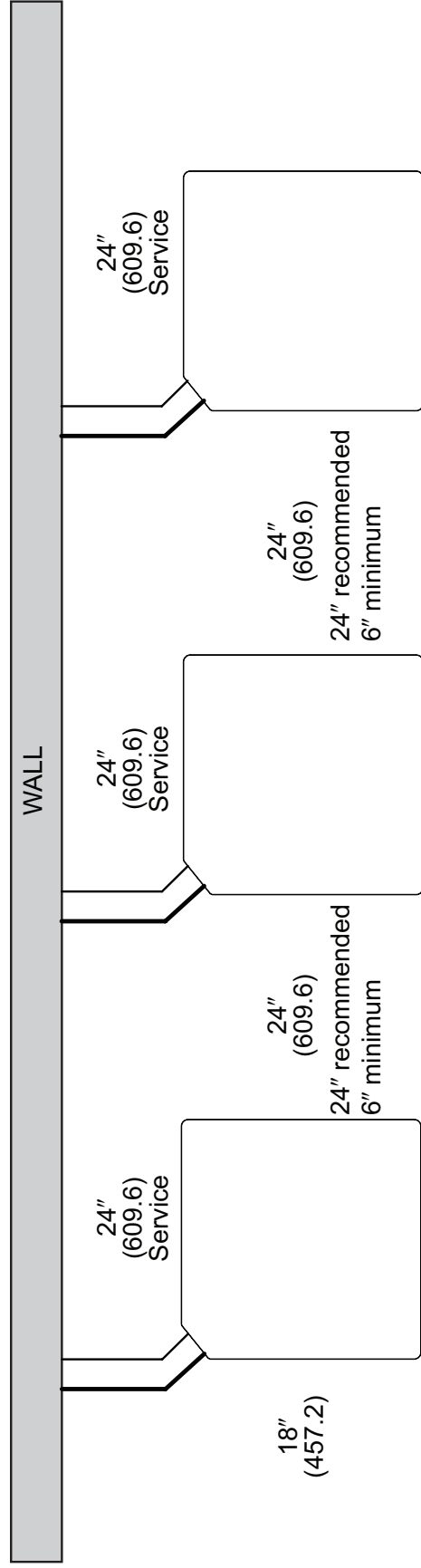
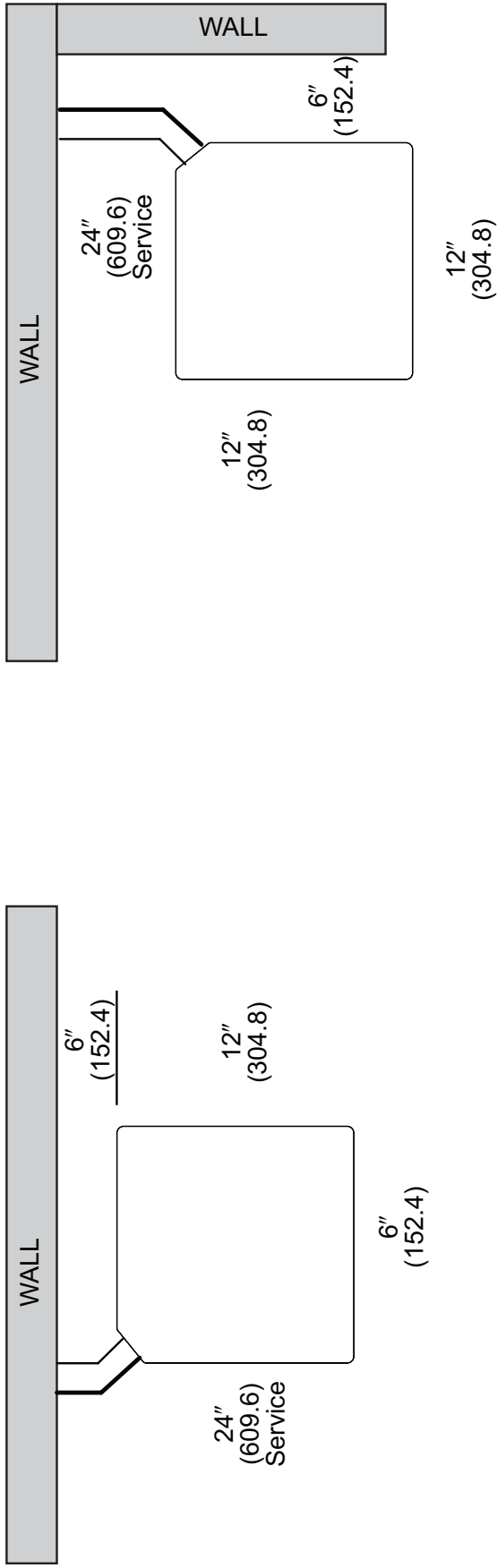


NOTE: Illustrations show the deep drawn basepan.

[ ] Designates Metric Conversions

Illustration  
ST-A1331-01  
Rev. 10-20-2022

# CLEARANCES

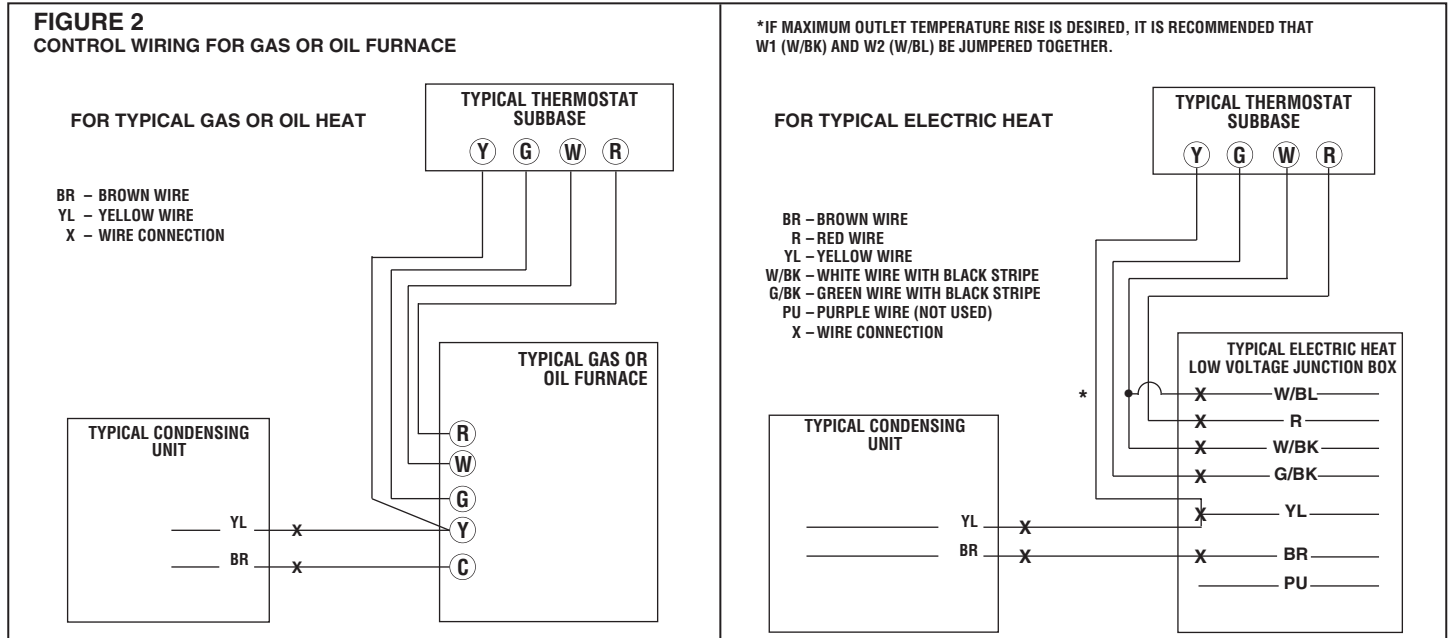


**NOTE: NUMBERS IN ( ) = mm**

**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
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
	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	68/0.94
	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	100/0.94
	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
	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	68/0.98
	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
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
	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	37/0.90
	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	89/0.90
	1/4"	3/4"	N/A	25/1.00	50/1.00	21/0.99	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	37/0.96
	3/8"	3/4"	142	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	90/0.96
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
	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
	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	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	78/0.95
	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
	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
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
	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	61/0.93
	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	100/0.93
	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
	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	61/0.97
	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	100/0.97
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	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	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	42/0.96
	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	100/0.96

**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 (Meters)	Equivalent Length (Meters)							70-76	
				< 8	8-15	16-23	24-30	31-38	39-46	47-53		54-61
				Maximum Vertical Rise (Outdoor Unit Below Indoor Unit) * / Capacity Multiplier								
(-)A14AZ				8 / 1.00	15 / 0.99	19 / 0.98	13 / 0.98	7 / 0.97	2 / 0.97	NR	NR	NR
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
	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	22 / 0.95	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 / 0.96	30 / 0.95	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
	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	22 / 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 / 0.98	30 / 0.98
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
	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	14 / 0.91	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	28 / 0.91	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
	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	19 / 0.98	16 / 0.97	14 / 0.97
	9.53 [3/8]	19.05 [3/4]	39	8 / 1.00	15 / 1.00	23 / 0.99	30 / 0.99	30 / 0.99	30 / 0.98	30 / 0.98	29 / 0.97	28 / 0.97
12.3 KW [3.5 Ton]	6.35 [1/4]	15.88 [5/8]	N/A	8 / 0.99	15 / 0.98	23 / 0.96	21 / 0.94	18 / 0.93	15 / 0.91	11 / 0.90	NR	NR
	7.94 [5/16]	15.88 [5/8]	36	8 / 0.99	15 / 0.98	23 / 0.96	30 / 0.94	30 / 0.93	29 / 0.91	27 / 0.90	NR	NR
	9.53 [3/8]	19.05 [3/4]	53	8 / 1.00	15 / 0.99	23 / 0.99	21 / 0.98	18 / 0.98	15 / 0.97	11 / 0.96	8 / 0.95	4 / 0.95
12.70 [1/2]	6.35 [1/4]	19.05 [3/4]	N/A	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
	7.94 [5/16]	15.88 [5/8]	26	8 / 0.99	15 / 0.97	20 / 0.94	15 / 0.92	10 / 0.90	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
12.70 [1/2]	6.35 [1/4]	19.05 [3/4]	N/A	8 / 1.00	15 / 0.99	23 / 0.98	20 / 0.98	15 / 0.97	5 / 0.96	NR	NR	NR
	7.94 [5/16]	19.05 [3/4]	26	8 / 1.00	15 / 0.99	23 / 0.98	29 / 0.98	27 / 0.97	26 / 0.96	24 / 0.95	20 / 0.93	19 / 0.93
	9.53 [3/8]	19.05 [3/4]	13	8 / 1.00	15 / 0.99	23 / 0.98	30 / 0.98	30 / 0.97	30 / 0.96	30 / 0.95	30 / 0.93	30 / 0.93
12.70 [1/2]	6.35 [1/4]	22.23 [7/8]	N/A	8 / 1.00	15 / 1.00	20 / 1.00	15 / 0.99	10 / 0.99	5 / 0.99	NR	NR	NR
	7.94 [5/16]	22.23 [7/8]	31	8 / 1.00	15 / 1.00	23 / 1.00	29 / 0.99	27 / 0.99	26 / 0.99	24 / 0.98	20 / 0.98	19 / 0.97
	9.53 [3/8]	22.23 [7/8]	13	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 / 0.97
12.70 [1/2]	6.35 [1/4]	19.05 [3/4]	N/A	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
	7.94 [5/16]	19.05 [3/4]	15	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
	9.53 [3/8]	22.23 [7/8]	31	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
12.70 [1/2]	22.23 [7/8]	15	8 / 1.00	15 / 1.00	23 / 0.99	30 / 0.99	30 / 0.99	30 / 0.99	30 / 0.98	30 / 0.97	30 / 0.96	

**NOTES:**

- 1) Do not exceed 61m linear line length.
- 2) \*Do not exceed 30m vertical separation if outdoor unit is above indoor unit.
- 3) \*\*19.05mm 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 (Meters)	Equivalent Length (Meters)							226-250		
				< 25	26-50	51-75	76-100	101-125	126-150	151-175		176-200	201-225
				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 61m linear line length.
- 2) \*Do not exceed 30m vertical separation if outdoor unit is above indoor unit.
- 3) \*\*19.05mm 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]
FWA14AZ18AJ1	RCFZ2417STAN	17,100 [5.0]	13,100 [3.8]	4,000 [1.2]	14.3	11.7	600 [283.2]
FWA14AZ24AJ1	RCFZ2417STAN	22,800 [6.7]	17,500 [5.1]	5,300 [1.6]	14.3	11.7	725 [342.2]
FWA14AZ30AJ1	RCFZ3617STAN	28,600 [8.4]	21,800 [6.4]	6,800 [2.0]	14.3	11.7	900 [424.8]
FWA14AZ36AJ1	RCFZ3617STAN	34,200 [10.0]	26,200 [7.7]	8,000 [2.3]	14.3	11.7	1,025 [483.7]
FWA14AZ42AJ1	RCFZ4821STAN	38,500 [11.3]	29,500 [8.6]	9,000 [2.6]	14.3	11.7	1,300 [613.5]
FWA14AZ48AJ1	RCFZ4821STAN	45,000 [13.2]	34,500 [10.1]	10,500 [3.1]	13.8	11.2	1,425 [672.5]
FWA14AZ60AJ1	RCFZ6024STAN	56,000 [16.4]	42,900 [12.6]	13,100 [3.8]	13.8	11.2	1,600 [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.ahrirectory.org](http://www.ahrirectory.org).

[ ] Designates Metric Conversions





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**GENERAL TERMS OF LIMITED WARRANTY\***

Friedrich® 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.

Parts .....Five (5) Years

**\*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.**

**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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