



FRIEDRICH

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Endeavor® Line F-Series™ iM Air Conditioners



FRA14AZ

Cooling Efficiencies up to: 16 SEER2 / 13 EER2

Nominal Sizes: 1.5 to 5 Ton [5.28 to 17.6 kW]

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



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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 16 SEER2/13 EER2
- **PlusOne® Expanded Valve Space:** 3 in. – 4 in. – 5 in. service valve space – provides a minimum working area of 27-square inches for easier access
- **PlusOne® 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>FR</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
FR - 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 - 1ph, 208-230/60	1 - Single Stage	N - Non-Communicating	A - 1st Design	LHP - W/HLPC

[] Designates Metric Conversions

AVAILABLE MODELS	DESCRIPTION
FRA14AZ18AJ1NA	Endeavor® Line F-Series™ 1 1/2 ton 14.3 SEER2 Single-Stage iM Air Conditioner-208/230/1/60
FRA14AZ18AJ1NALHP	Endeavor® Line F-Series™ 1 1/2 ton 14.3 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60
FRA14AZ24AJ1NA	Endeavor® Line F-Series™ 2 ton 14.3 SEER2 Single-Stage iM Air Conditioner-208/230/1/60
FRA14AZ24AJ1NALHP	Endeavor® Line F-Series™ 2 ton 14.3 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60
FRA14AZ30AJ1NA	Endeavor® Line F-Series™ 2 1/2 ton 14.3 SEER2 Single-Stage iM Air Conditioner-208/230/1/60
FRA14AZ30AJ1NALHP	Endeavor® Line F-Series™ 2 1/2 ton 14.3 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60
FRA14AZ36AJ1NA	Endeavor® Line F-Series™ 3 ton 14.3 SEER2 Single-Stage iM Air Conditioner-208/230/1/60
FRA14AZ36AJ1NALHP	Endeavor® Line F-Series™ 3 ton 14.3 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60
FRA14AZ42AJ1NA	Endeavor® Line F-Series™ 3 1/2 ton 14.3 SEER2 Single-Stage iM Air Conditioner-208/230/1/60
FRA14AZ42AJ1NALHP	Endeavor® Line F-Series™ 3 1/2 ton 14.3 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60
FRA14AZ48AJ1NA	Endeavor® Line F-Series™ 4 ton 14.3 SEER2 Single-Stage iM Air Conditioner-208/230/1/60
FRA14AZ48AJ1NALHP	Endeavor® Line F-Series™ 4 ton 14.3 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60
FRA14AZ60AJ1NA	Endeavor® Line F-Series™ 5 ton 14.3 SEER2 Single-Stage iM Air Conditioner-208/230/1/60
FRA14AZ60AJ1NALHP	Endeavor® Line F-Series™ 5 ton 14.3 SEER2 Single-Stage iM 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

General Data							
MODEL NO.	FRA14AZ18	FRA14AZ24	FRA14AZ30	FRA14AZ36	FRA14AZ42	FRA14AZ48	FRA14AZ60
Nominal Tonnage	1.5	2.0	2.5	3.0	3.5	4.0	5.0
Valve Connections							
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
Refrigerant (R410A) furnished oz.¹	94	115	120	124	149	153	203
Compressor Type	Scroll						
Outdoor Coil							
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
Outdoor Fan							
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
Shipping weight – lbs.	151	185	197	217	259	250	294
Operating weight – lbs.	144	178	190	210	252	243	287
Electrical Data							
Line Voltage Data (Volts-Phase-Hz)	208/230-1-60						
Maximum overcurrent protection (amps)²	20	25	30	30	40	40	60
Minimum circuit ampacity³	14	18	19	20	24	24	40
Compressor							
Rated load amps	9	12	14	13	18	18	26
Locked rotor amps	43	60	68	83	110	102	150
Condenser Fan Motor							
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	—

¹Refrigerant 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.

²HACR type circuit breaker or fuse.

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

FRA14AZ**Accessories**

MODEL NO.		FRA14AZ18	FRA14AZ24	FRA14AZ30	FRA14AZ36	FRA14AZ42	FRA14AZ48	FRA14AZ60
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						
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						
Compressor time delay		RXMD-B01						
Low pressure control		RXAC-A07						
High pressure control		RXAB-A07						
Liquid Line Solenoid (24 VAC, 50/60 Hz)	Solenoid Valve	200RD2T3TVLC						
	Solenoid Coil	61-AMG24V						
Liquid Line Solenoid (120/240 VAC, 50/60 Hz)	Solenoid Valve	200RD2T3TVLC						
	Solenoid Coil	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.

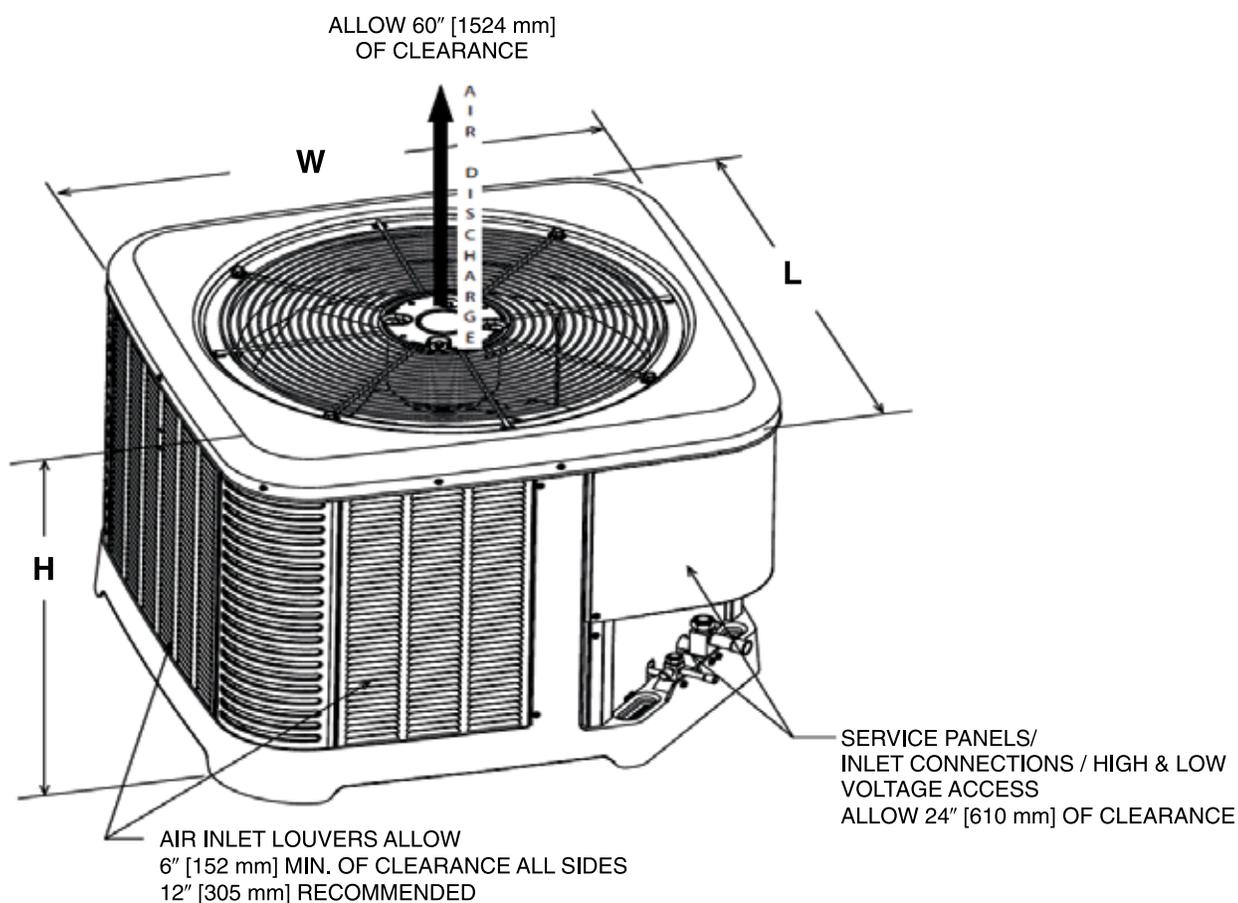
Weighted Sound Power Level (dBA)

UNIT SIZE- VOLTAGE, SERIES	STANDARD RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA without tone adjustment)						
		125	250	500	1000	2000	4000	8000
FRA14AZ18	70.7	48.2	56.0	61.9	61.0	56.5	53.5	45.7
FRA14AZ24	68.5	44.6	53.6	58.7	58.0	55.5	50.5	45.7
FRA14AZ30	70.8	45.1	54.5	59.8	59.0	56.8	53.8	45.9
FRA14AZ36	71.6	45.4	52.6	60.2	60.8	58.7	55.9	48.4
FRA14AZ42	72.5	46.6	55.3	63.9	62.1	59.4	55.2	48.2
FRA14AZ48	74.0	45.4	55.7	64.2	62.9	60.8	56.7	51.2
FRA14AZ60	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

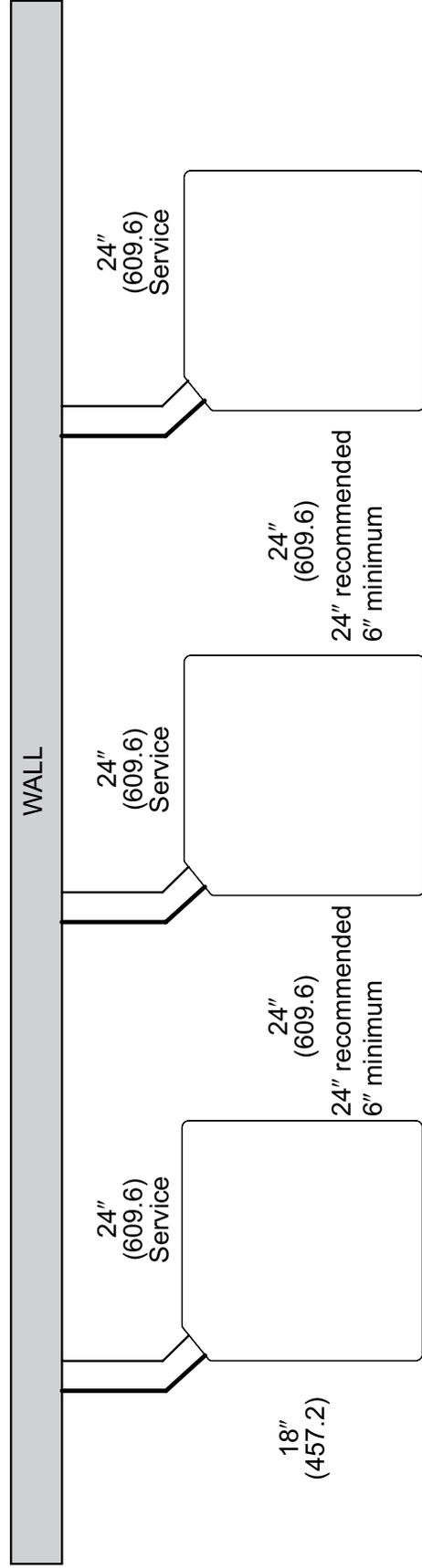
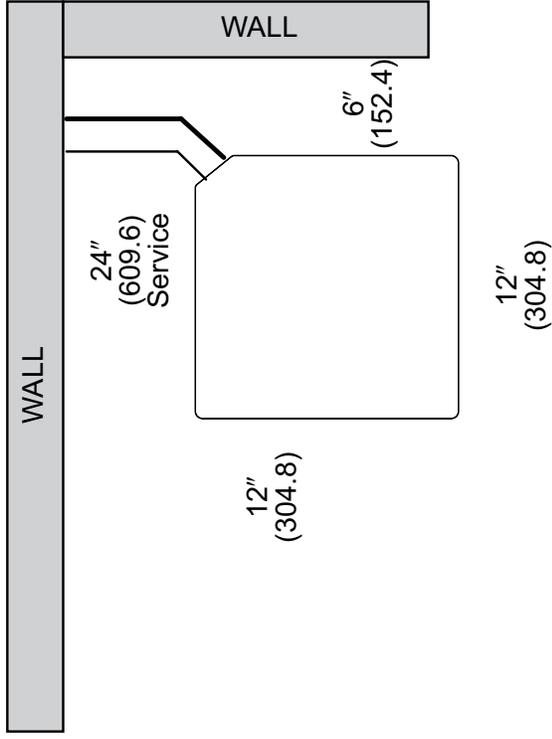
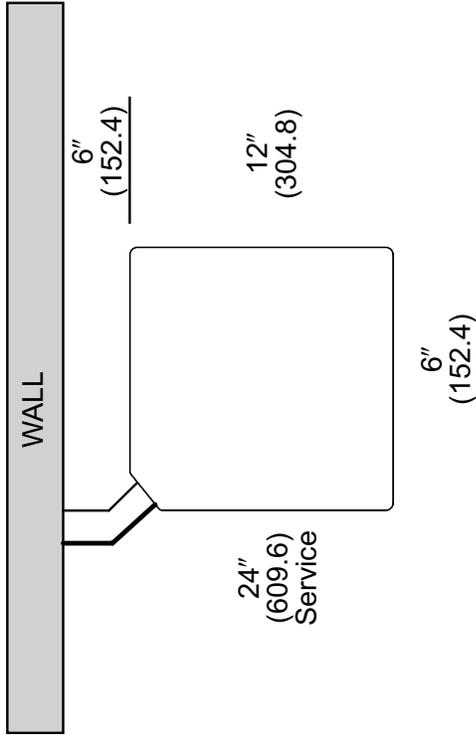
MODEL NO.	OPERATING						SHIPPING					
	H (Height)		L (Length)		W (Width)		H (Height)		L (Length)		W (Width)	
	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm
FRA14AZ18	25.00	635	29.75	756	29.75	756	26.50	673	32.38	822	32.38	822
FRA14AZ24	25.00	635	33.75	857	33.75	857	26.50	673	36.38	924	36.38	924
FRA14AZ30	27.00	686	33.75	857	33.75	857	28.50	724	36.38	924	36.38	924
FRA14AZ36	31.00	787	33.75	857	33.75	857	32.50	826	36.38	924	36.38	924
FRA14AZ42	35.00	889	33.75	857	33.75	857	36.50	927	36.38	924	36.38	924
FRA14AZ48	35.00	889	33.75	857	33.75	857	36.50	927	36.38	924	36.38	924
FRA14AZ60	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.

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													
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	5 / 0.97	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	100 / 0.94	100 / 0.94	100 / 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 / 0.97	100 / 0.96	100 / 0.96	100 / 0.95	100 / 0.94	100 / 0.94	100 / 0.94	
	1/4"	3/4"	N/A	25 / 1.00	50 / 1.00	62 / 0.99	43 / 0.99	24 / 0.99	5 / 0.99	NR	NR						
	5/16"	3/4"	223	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	100 / 0.98	100 / 0.98	100 / 0.98	
	3/8"	3/4"	148	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	100 / 0.98	
2 Ton	1/4"	5/8"	N/A	25 / 0.99	50 / 0.98	21 / 0.97	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	90 / 0.90	90 / 0.90	90 / 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	89 / 0.90		
	1/4"	3/4"	N/A	25 / 1.00	50 / 1.00	21 / 0.99	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	90 / 0.96	90 / 0.96	90 / 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	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	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	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	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								
	3/8"	5/8"	85	25 / 0.99	50 / 0.97	75 / 0.94	95 / 0.92	89 / 0.90	84 / 0.90	80 / 0.90	76 / 0.90	72 / 0.90	68 / 0.90	64 / 0.90	60 / 0.90		
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							
	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	100 / 0.93	100 / 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	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	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	100 / 0.97	100 / 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 / 0.99	100 / 0.98	100 / 0.98	100 / 0.98	100 / 0.98	100 / 0.98		
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	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	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	100 / 0.96	100 / 0.96		
	1/2"	7/8"	51	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 / 0.97	100 / 0.96	100 / 0.96	100 / 0.96		
	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	NR		
	1/2"	7/8"	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	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
	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
5 Ton	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

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								
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	24 / 0.96	22 / 0.95
	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 / 0.96	30 / 0.95
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	24 / 0.98	22 / 0.98
	9.53 [3/8]	19.05 [3/4]**	45	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	16 / 0.92	14 / 0.91
	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
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 / 0.98	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	NR	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]	15.88 [5/8]	53	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
12.70 [1/2]	6.35 [1/4]	19.05 [3/4]	36	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]	N/A	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]	39	8 / 1.00	15 / 0.99	20 / 0.98	15 / 0.98	10 / 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	22 / 0.94	20 / 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 / 0.94	30 / 0.93
12.70 [1/2]	6.35 [1/4]	22.23 [7/8]	39	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]	26	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
	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]	31	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]	6.35 [1/4]	22.23 [7/8]	15	8 / 1.00	15 / 1.00	23 / 0.99	30 / 0.99	30 / 0.99	30 / 0.98	30 / 0.97	30 / 0.97	30 / 0.96
	7.94 [5/16]	22.23 [7/8]	26	8 / 1.00	15 / 1.00	23 / 0.99	30 / 0.99	30 / 0.99	30 / 0.98	30 / 0.98	30 / 0.97	30 / 0.96
	9.53 [3/8]	22.23 [7/8]	13	8 / 1.00	15 / 1.00	23 / 0.99	30 / 0.99	30 / 0.99	30 / 0.98	30 / 0.97	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 (IN.)	ALLOWABLE SUCTION LINE SIZE (IN.)	APPLY LONG LINE GUIDELINES IF LINEAR LINE LENGTH EXCEEDS THOSE SHOWN BELOW (METERS) (-JA14AZ)	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]
FRA14AZ18AJ1	RCFZ2417STAN	17,100 [5.0]	13,100 [3.8]	4,000 [1.2]	14.3	11.7	600 [283.2]
FRA14AZ24AJ1	RCFZ2417STAN	22,800 [6.7]	17,500 [5.1]	5,300 [1.6]	14.3	11.7	725 [342.2]
FRA14AZ30AJ1	RCFZ3617STAN	28,600 [8.4]	21,800 [6.4]	6,800 [2.0]	14.3	11.7	900 [424.8]
FRA14AZ36AJ1	RCFZ3617STAN	34,200 [10.0]	26,200 [7.7]	8,000 [2.3]	14.3	11.7	1,025 [483.7]
FRA14AZ42AJ1	RCFZ4821STAN	38,500 [11.3]	29,500 [8.6]	9,000 [2.6]	14.3	11.7	1,300 [613.5]
FRA14AZ48AJ1	RCFZ4821STAN	45,000 [13.2]	34,500 [10.1]	10,500 [3.1]	13.8	11.2	1,425 [672.5]
FRA14AZ60AJ1	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.ahridirectory.org.

[] Designates Metric Conversions



FRIEDRICH

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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.

Conditional Parts
(Registration Required)..... Ten (10) 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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In keeping with its policy of continuous progress and product improvement, manufacturer reserves the right to make changes without notice.

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