



The new degree of comfort.®

## Endeavor™ Line Classic® Series iM Air Conditioners

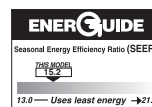


### RA13NZ

Cooling Efficiencies up to: 15.2 SEER2/12 EER2

Nominal Sizes: 1.5 to 5 Ton [5.3 to 17.6 kW]

Cooling Capacities: 17.1 to 55.5 kBTU [5.0 to 16.3 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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## Features and Benefits

- **7 mm Condenser Copper Coil:** Requires less refrigerant allowing for a smaller and lighter footprint while enhancing reliability
- **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, two fastener, removeable corner and individual louver panels - makes repairs easier and faster

# Air Conditioners

| <u>R</u>  | <u>A</u>             | <u>13</u>       | <u>N</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  |
| R - Rheem | A - Air Conditioners | 13 - 13.4 SEER2 | N - North | Z - R-410A  | 18 - 18,000 [5.28 kW]<br>24 - 24,000 [7.03 kW]<br>30 - 30,000 [8.79 kW]<br>36 - 36,000 [10.55 kW]<br>42 - 42,000 [12.31 kW]<br>48 - 48,000 [14.07 kW]<br>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   |
|------------------|---|
| RA13NZ18AJ1NA    | Endeavor™ Line <i>Classic</i> ® Series 1 1/2 ton 13.4 SEER2 Single-Stage iM Air Conditioner-208/230/1/60                      |
| RA13NZ18AJ1NALHP | Endeavor™ Line <i>Classic</i> ® Series 1 1/2 ton 13.4 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60 |
| RA13NZ24AJ1NA    | Endeavor™ Line <i>Classic</i> ® Series 2 ton 13.4 SEER2 Single-Stage iM Air Conditioner-208/230/1/60                          |
| RA13NZ24AJ1NALHP | Endeavor™ Line <i>Classic</i> ® Series 2 ton 13.4 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60     |
| RA13NZ30AJ1NA    | Endeavor™ Line <i>Classic</i> ® Series 2 1/2 ton 13.4 SEER2 Single-Stage iM Air Conditioner-208/230/1/60                      |
| RA13NZ30AJ1NALHP | Endeavor™ Line <i>Classic</i> ® Series 2 1/2 ton 13.4 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60 |
| RA13NZ36AJ1NA    | Endeavor™ Line <i>Classic</i> ® Series 3 ton 13.4 SEER2 Single-Stage iM Air Conditioner-208/230/1/60                          |
| RA13NZ36AJ1NALHP | Endeavor™ Line <i>Classic</i> ® Series 3 ton 13.4 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60     |
| RA13NZ42AJ1NA    | Endeavor™ Line <i>Classic</i> ® Series 3 1/2 ton 13.4 SEER2 Single-Stage iM Air Conditioner-208/230/1/60                      |
| RA13NZ42AJ1NALHP | Endeavor™ Line <i>Classic</i> ® Series 3 1/2 ton 13.4 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60 |
| RA13NZ48AJ1NA    | Endeavor™ Line <i>Classic</i> ® Series 4 ton 13.4 SEER2 Single-Stage iM Air Conditioner-208/230/1/60                          |
| RA13NZ48AJ1NALHP | Endeavor™ Line <i>Classic</i> ® Series 4 ton 13.4 SEER2 Single-Stage iM Air Conditioner w/ High/Low Pressure-208/230/1/60     |
| RA13NZ60AJ1NA    | Endeavor™ Line <i>Classic</i> ® Series 5 ton 13.4 SEER2 Single-Stage iM Air Conditioner-208/230/1/60                          |
| RA13NZ60AJ1NALHP | Endeavor™ Line <i>Classic</i> ® Series 5 ton 13.4 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           |
| Single row condenser coil           |
| Powder coated paint                 |
| Rust resistant screws               |
| QR code                             |
| External gauge ports                |
| Service trays                       |

| <b>General Data</b>                                  |                 |                 |                 |                 |                 |                 |                 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>Model No.</b>                                     | <b>RA13NZ18</b> | <b>RA13NZ24</b> | <b>RA13NZ30</b> | <b>RA13NZ36</b> | <b>RA13NZ42</b> | <b>RA13NZ48</b> | <b>RA13NZ60</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> | 70              | 78              | 86              | 106             | 126             | 121             | 186             |
| <b>Compressor Type</b>                               | Scroll          |                 |                 |                 |                 |                 |                 |
| <b>Outdoor Coil</b>                                  |                 |                 |                 |                 |                 |                 |                 |
| Net face area – Outer Coil                           | 10.9            | 13.3            | 13.3            | 13.3            | 14.3            | 23.5            | 28.4            |
| Net face area – Inner Coil                           | —               | —               | —               | 12.9            | 13.9            | —               | —               |
| Tube diameter – in.                                  | 0.276           | 0.276           | 0.276           | 0.276           | 0.276           | 0.276           | 0.375           |
| Number of rows                                       | 1               | 1               | 1               | 2               | 2               | 1               | 1               |
| Fins per inch  | 24              | 24              | 24              | 24              | 24              | 24              | 22              |
| <b>Outdoor Fan</b>                                   |                 |                 |                 |                 |                 |                 |                 |
| Diameter – in.                                       | 20              | 24              | 24              | 24              | 24              | 26              | 26              |
| Number of blades                                     | 2               | 3               | 3               | 3               | 2               | 3               | 3               |
| Motor hp   | 1/7             | 1/6             | 1/6             | 1/6             | 1/5             | 1/5             | 1/5             |
| CFM  | 1765            | 3439            | 3439            | 2957            | 2830            | 4095            | 4189            |
| RPM  | 1075            | 825             | 825             | 825             | 825             | 850             | 850             |
| Watts  | 154             | 197             | 197             | 188             | 145             | 203             | 204             |
| <b>Shipping weight – lbs.</b>                        | 148             | 166             | 170             | 193             | 224             | 251             | 279             |
| <b>Operating weight – lbs.</b>                       | 141             | 159             | 163             | 186             | 217             | 244             | 272             |

| <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                  | 50                  | 50                  |
| <b>Minimum circuit ampacity<sup>3</sup></b>              | 12                  | 16                  | 19                  | 18                  | 25                  | 33                  | 34                  |
| <b>Compressor</b>  |                     |                     |                     |                     |                     |                     |                     |
| Rated load amps  | 9                   | 12                  | 14                  | 13                  | 19                  | 25                  | 26                  |
| Locked rotor amps  | 43                  | 60                  | 68                  | 83                  | 110                 | 120                 | 150                 |
| <b>Condenser Fan Motor</b>                               |                     |                     |                     |                     |                     |                     |                     |
| Full load amps   | 0.8                 | 0.8                 | 0.8                 | 0.8                 | 0.8                 | 1.0                 | 1.0                 |
| Locked rotor amps  | 1.5                 | 1.5                 | 1.5                 | 1.7                 | 1.5                 | 2.4                 | 2.4                 |

<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.                                       | RA13NZ18       | RA13NZ24       | RA13NZ30       | RA13NZ36       | RA13NZ42       | RA13NZ48       | RA13NZ60       |                |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 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<br>(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<br>(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.

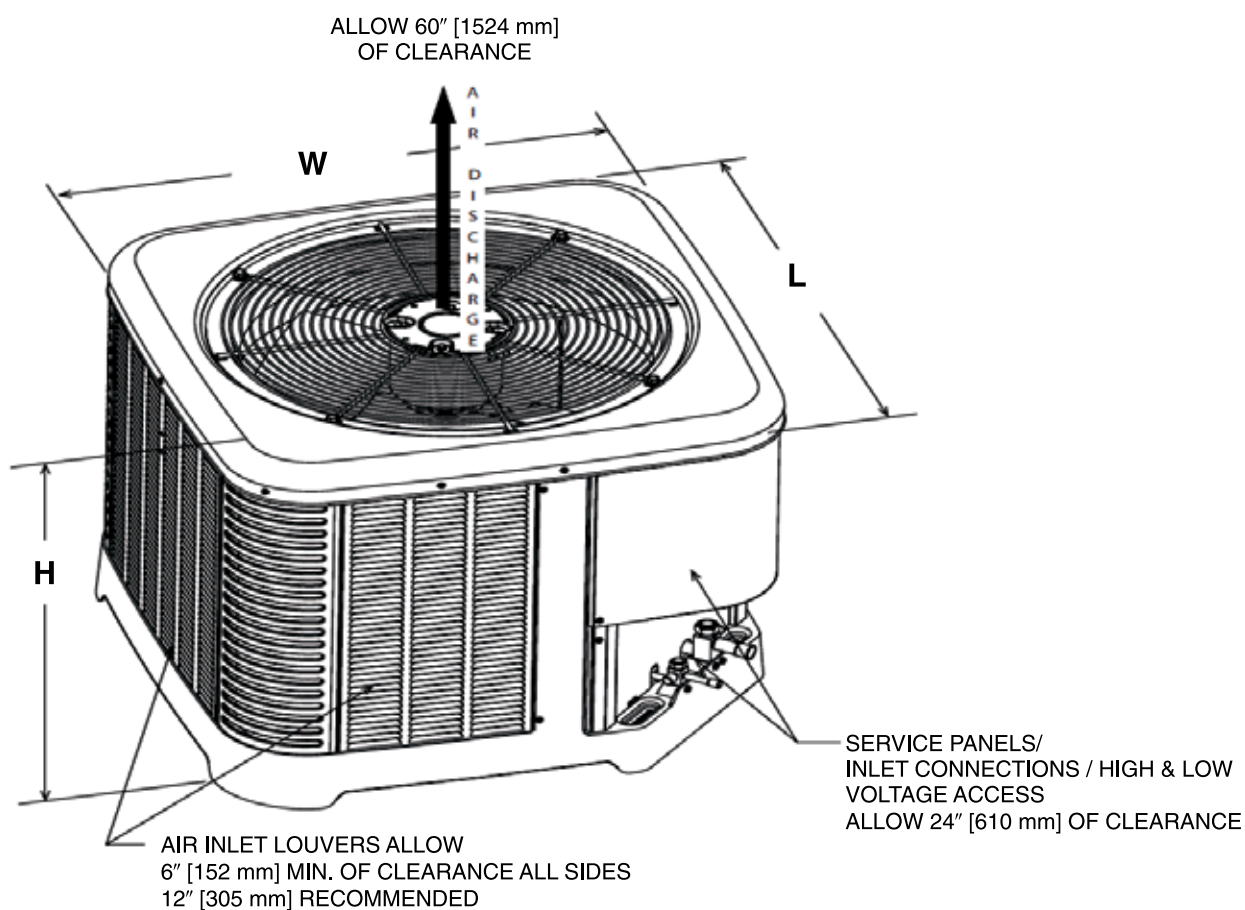
## Weighted Sound Power Level (dBA)

| Unit Size - Voltage, Series | Standard Rating (dBA) | TYPICAL OCTAVE BAND SPECTRUM (dBA without tone adjustment) |      |      |      |      |      |      |
|-----------------------------|-----------------------|--|------|------|------|------|------|------|
|                             |                       | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| RA13NZ18                    | 70                    | 46.7   | 54.5 | 60.8 | 59.9 | 58.2 | 53.4 | 46.9 |
| RA13NZ24                    | 71                    | 46.3   | 58.4 | 62.7 | 59.0 | 58.0 | 52.4 | 47.3 |
| RA13NZ30                    | 71                    | 47.0   | 62.4 | 62.6 | 59.3 | 57.2 | 55.7 | 47.1 |
| RA13NZ36                    | 71                    | 45.5   | 58.4 | 63.9 | 59.2 | 56.6 | 52.1 | 47.7 |
| RA13NZ42                    | 68                    | 46.4   | 53.7 | 59.7 | 55.9 | 55.3 | 53.6 | 50.3 |
| RA13NZ48                    | 71                    | 49.2   | 56.2 | 62.3 | 59.5 | 57.9 | 49.9 | 40.7 |
| RA13NZ60                    | 76                    | 49.1   | 58.7 | 68.7 | 65.2 | 63.5 | 60.1 | 55.7 |

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

## Unit Dimensions

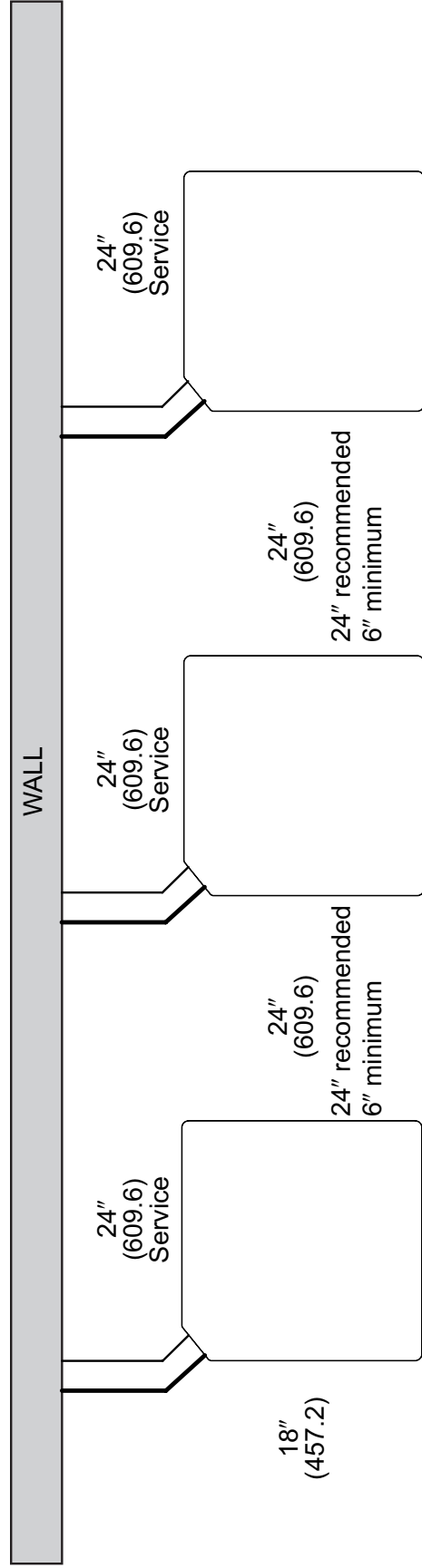
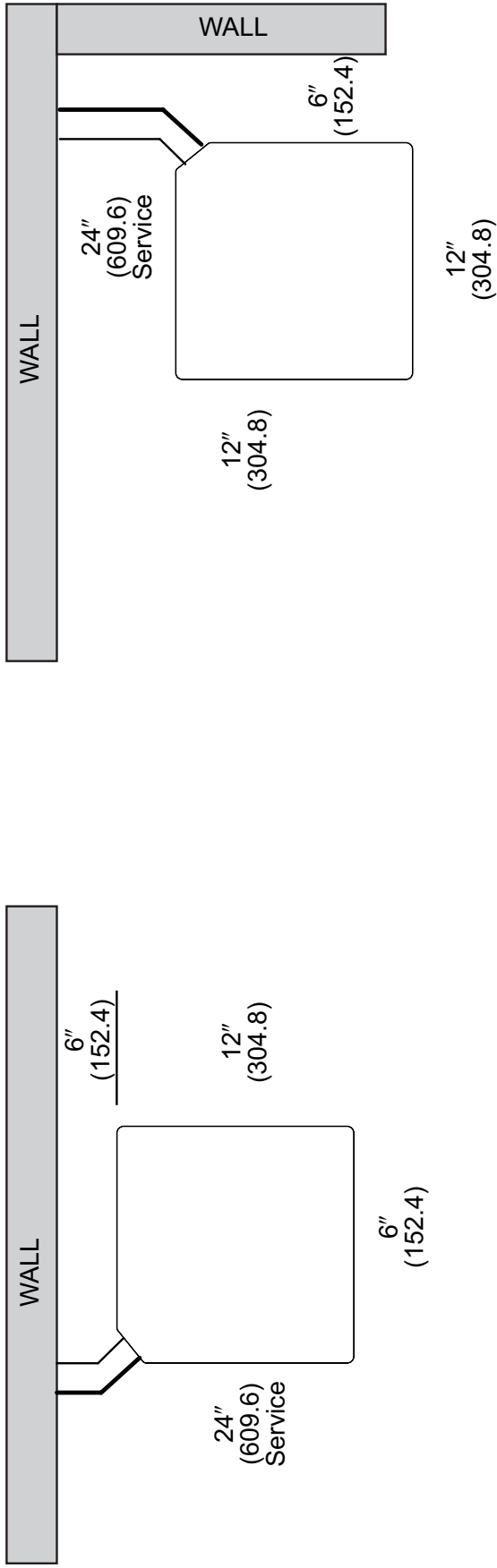
| Model No. | OPERATING  |      |            |     |           |     | SHIPPING   |      |            |     |           |     |
|-----------|------------|------|------------|-----|-----------|-----|------------|------|------------|-----|-----------|-----|
|           | H (Height) |      | L (Length) |     | W (Width) |     | H (Height) |      | L (Length) |     | W (Width) |     |
|           | INCHES     | mm   | INCHES     | mm  | INCHES    | mm  | INCHES     | mm   | INCHES     | mm  | INCHES    | mm  |
| RA13NZ18  | 25.00      | 635  | 29.75      | 756 | 29.75     | 756 | 26.50      | 673  | 32.38      | 822 | 32.38     | 822 |
| RA13NZ24  | 25.00      | 635  | 33.75      | 857 | 33.75     | 857 | 26.50      | 673  | 36.38      | 924 | 36.38     | 924 |
| RA13NZ30  | 25.00      | 635  | 33.75      | 857 | 33.75     | 857 | 26.50      | 673  | 36.38      | 924 | 36.38     | 924 |
| RA13NZ36  | 25.00      | 635  | 33.75      | 857 | 33.75     | 857 | 26.50      | 673  | 36.38      | 924 | 36.38     | 924 |
| RA13NZ42  | 27.00      | 686  | 33.75      | 857 | 33.75     | 857 | 28.50      | 724  | 36.38      | 924 | 36.38     | 924 |
| RA13NZ48  | 39.00      | 991  | 35.75      | 908 | 35.75     | 908 | 40.50      | 1029 | 38.38      | 975 | 38.38     | 975 |
| RA13NZ60  | 45.00      | 1143 | 35.75      | 908 | 35.75     | 908 | 46.50      | 1181 | 38.38      | 975 | 38.38     | 975 |



[ ] Designates Metric Conversions

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# CLEARANCES

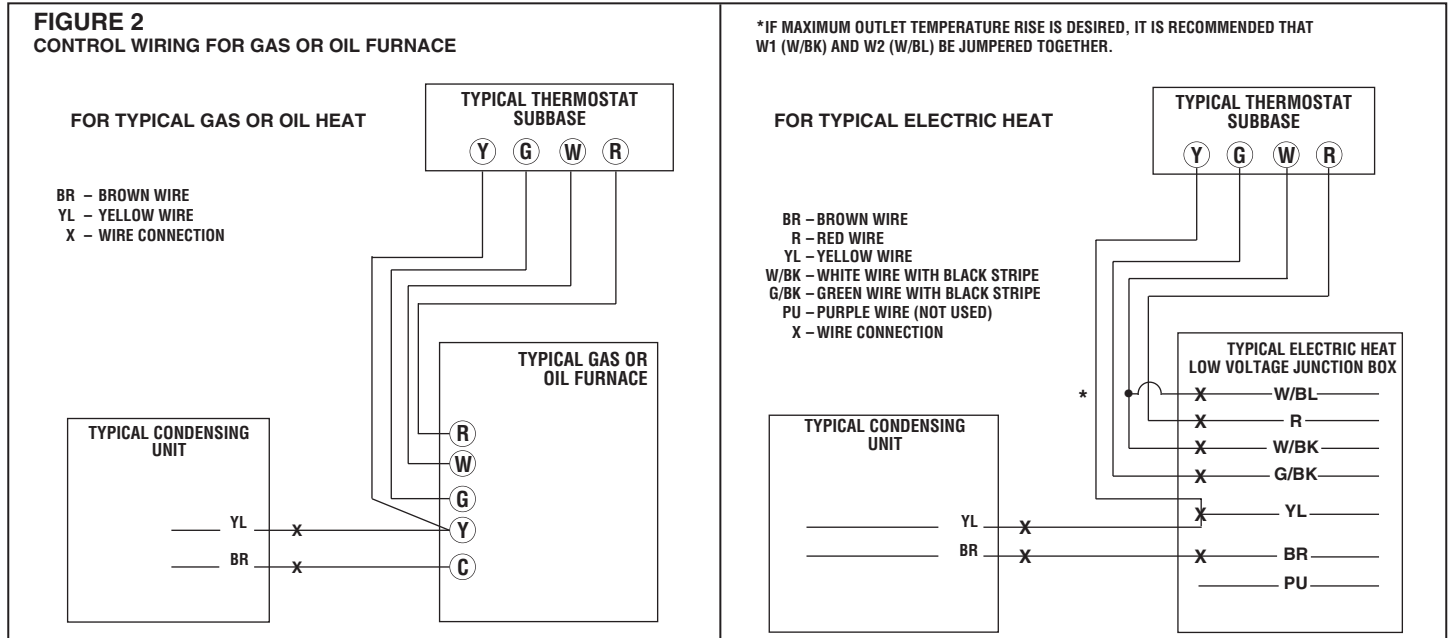


**NOTE: NUMBERS IN ( ) = mm**

**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

| 13.4 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)   |         |         |          |          |          |          |          |          |          |
|  |                            |                             |   | 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  |
| 1.5 Ton<br>**SEE<br>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       | NR       | NR       | NR       |
|  | 5/16"                      | 5/8"                        | N/A   | 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   | 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   | 25/1.00  | 50/1.00 | 62/0.99 | 43/0.99  | 24/0.99  | 5/0.99   | NR       | NR       | NR       | NR       |
|  | 5/16"                      | 3/4"                        | N/A   | 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   | 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 |
|  | 1/4"                       | 5/8"                        | N/A   | 25/0.99  | 50/0.98 | 21/0.97 | NR       | NR       | NR       | NR       | NR       | NR       | NR       |
| 2 Ton                                    | 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  |
|  | 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  |
|  | 1/4"                       | 3/4"                        | N/A   | 25/1.00  | 50/1.00 | 21/0.99 | 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  |
|  | 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  |
|  | 5/16"                      | 5/8"                        | N/A   | 25/0.99  | 50/0.98 | 75/0.96 | 70/0.94  | 59/0.93  | 48/0.91  | NR       | NR       | NR       | NR       |
|  | 3/8"                       | 5/8"                        | 142   | 25/0.99  | 50/0.98 | 75/0.96 | 100/0.94 | 98/0.93  | 94/0.91  | NR       | NR       | NR       | NR       |
| 2.5 Ton                                  | 5/16"                      | 3/4"                        | 213   | 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       |
|  | 3/8"                       | 3/4"                        | 142   | 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   | 25/0.99  | 50/0.97 | 66/0.94 | 49/0.92  | 32/0.90  | NR       | NR       | NR       | NR       | NR       |
|  | 3/8"                       | 5/8"                        | 108   | 25/0.99  | 50/0.97 | 75/0.94 | 95/0.92  | 89/0.90  | NR       | NR       | NR       | NR       | NR       |
|  | 5/16"                      | 3/4"                        | N/A   | 25/1.00  | 50/0.99 | 66/0.98 | 49/0.98  | 32/0.97  | 15/0.96  | NR       | NR       | NR       | NR       |
|  | 3/8"                       | 3/4"                        | 108   | 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  | 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 |
| 3 Ton                                    | 5/16"                      | 7/8"                        | N/A   | 25/1.00  | 50/1.00 | 66/1.00 | 49/0.99  | 32/0.99  | 15/0.99  | NR       | NR       | NR       | NR       |
|  | 3/8"                       | 7/8"                        | 108   | 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  | 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 |
|  | 3/8"                       | 3/4"                        | 150   | 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       |
|  | 1/2"                       | 3/4"                        | 75  | 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       |
|  | 3/8"                       | 7/8"                        | 150   | 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  | 25/1.00  | 50/1.00 | 75/0.99 | 100/0.99 | 100/0.99 | 100/0.98 | 100/0.97 | 100/0.97 | 100/0.97 | 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.)

| 13.4 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"                        | 148   | 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"                        | 74  | 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"                        | 148   | 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  | 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  | 25 / 0.99  | 50 / 0.97 | 75 / 0.94 | 61 / 0.92  | 46 / 0.90  | NR         | NR         | NR         | NR        | NR        |
|  | 1/2"                       | 3/4"                        | 39  | 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"                        | 78  | 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"                        | 39  | 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  | 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"                      | 39  | 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.)

| 13.4 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 |           |           |           |           |           |           |           |           |
| (-)A13NZ                                 |                                     |                                      |   | 8 / 1.00   | 15 / 0.99 | 19 / 0.98 | 13 / 0.98 | 7 / 0.97  | 2 / 0.97  | NR        | NR        | NR        |
| 5.3 KW<br>[1.5 Ton]<br>**SEE<br>NOTE 3   | N/A                                 | 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        |
|  | N/A                                 | 15.88 [5/8]                          | N/A   | 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 |
|  | 54                                  | 15.88 [5/8]                          | 54  | 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<br>[2 Ton]                        | N/A                                 | 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        |
|  | N/A                                 | 19.05 [3/4]**                        | N/A   | 8 / 1.00   | 15 / 1.00 | 23 / 0.99 | 30 / 0.99 | 30 / 0.99 | 30 / 0.99 | 25 / 0.99 | 22 / 0.98 | 21 / 0.98 |
|  | 54                                  | 19.05 [3/4]**                        | 54  | 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<br>[2.5 Ton]                      | N/A                                 | 15.88 [5/8]                          | N/A   | 8 / 0.99   | 15 / 0.98 | 6 / 0.97  | NR        | NR        | NR        | NR        | NR        | NR        |
|  | N/A                                 | 15.88 [5/8]                          | 65  | 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 |
|  | 43                                  | 15.88 [5/8]                          | 43  | 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<br>[3 Ton]                       | N/A                                 | 19.05 [3/4]                          | N/A   | 8 / 1.00   | 15 / 1.00 | 6 / 0.99  | NR        | NR        | NR        | NR        | NR        | NR        |
|  | N/A                                 | 19.05 [3/4]                          | 65  | 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 |
|  | 43                                  | 19.05 [3/4]                          | 43  | 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<br>[3.5 Ton]                     | N/A                                 | 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        |
|  | N/A                                 | 15.88 [5/8]                          | 33  | 8 / 0.99   | 15 / 0.97 | 23 / 0.94 | 29 / 0.92 | 27 / 0.90 | NR        | NR        | NR        | NR        |
|  | 17                                  | 19.05 [3/4]                          | 17  | 8 / 1.00   | 15 / 0.99 | 20 / 0.98 | 15 / 0.98 | 10 / 0.97 | 5 / 0.96  | NR        | NR        | NR        |
| 12.3 KW<br>[3.5 Ton]                     | N/A                                 | 19.05 [3/4]                          | N/A   | 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 |
|  | N/A                                 | 19.05 [3/4]                          | 33  | 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 |
|  | 17                                  | 19.05 [3/4]                          | 17  | 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 |
| 12.3 KW<br>[3.5 Ton]                     | N/A                                 | 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        |
|  | N/A                                 | 22.23 [7/8]                          | 33  | 8 / 1.00   | 15 / 1.00 | 23 / 1.00 | 29 / 0.99 | 27 / 0.99 | 26 / 0.99 | 24 / 0.98 | 22 / 0.98 | 19 / 0.97 |
|  | 17                                  | 22.23 [7/8]                          | 17  | 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 |
| 12.3 KW<br>[3.5 Ton]                     | N/A                                 | 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 |
|  | N/A                                 | 19.05 [3/4]                          | 23  | 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 |
|  | 46                                  | 22.23 [7/8]                          | 46  | 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 |
| 23                                       | 22.23 [7/8]                         | 23                                   | 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.)

| 13.4 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)   |           |           |           |           |           |           |           |           |           |
|  |                                     |                                      |   | < 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 |           |           |           |           |           |           |           |           |           |
| 14.1 KW<br>[4 Ton]                       | 9.53 [3/8]                          | 19.05 [3/4]                          | 45  | 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]                          | 23  | 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]                          | 45  | 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]                          | 23  | 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 |
|  | 9.53 [3/8]                          | 19.05 [3/4]                          | 24  | 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]                          | 12  | 8 / 0.99   | 15 / 0.97 | 23 / 0.94 | 30 / 0.92 | 30 / 0.90 | NR        | NR        | NR        | NR        | NR        |
| 17.6 KW<br>[5 Ton]                       | 9.53 [3/8]                          | 22.23 [7/8]                          | 24  | 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]                          | 12  | 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]                        | 24  | 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]                        | 12  | 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<br>BTU/H [kW] | Net Sensible<br>BTU/H [kW] | Net Latent<br>BTU/H [kW] | SEER2 | EER2 | Indoor CFM<br>[L/s] |
| RA13NZ18AJ1                         | RCFZ2417STAN | 17,100 [5.0]                 | 13,000 [3.8]               | 4,100                    | 13.4  | 9.0  | 600 [283.2]         |
| RA13NZ24AJ1                         | RCFZ2417STAN | 22,800 [6.7]                 | 17,000 [5.0]               | 5,800                    | 13.4  | 9.0  | 735 [346.9]         |
| RA13NZ30AJ1                         | RCFZ3617STAN | 28,400 [8.3]                 | 20,800 [6.1]               | 7,600                    | 13.4  | 9.0  | 910 [429.5]         |
| RA13NZ36AJ1                         | RCFZ3617STAN | 34,200 [10.0]                | 24,600 [7.2]               | 9,600                    | 13.4  | 9.0  | 1,025 [483.7]       |
| RA13NZ42AJ1                         | RCFZ4821STAN | 40,000 [11.7]                | 29,500 [8.6]               | 10,500                   | 13.4  | 9.0  | 1,300 [613.5]       |
| RA13NZ48AJ1                         | RCFZ4821STAN | 46,000 [13.5]                | 33,500 [9.8]               | 12,500                   | 13.4  | 9.0  | 1,425 [672.5]       |
| RA13NZ60AJ1                         | RCFZ6024STAN | 55,500 [16.3]                | 39,000 [11.4]              | 16,500                   | 13.4  | 9.0  | 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](http://www.ahridirectory.org).

[ ] Designates Metric Conversions





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**GENERAL TERMS OF LIMITED WARRANTY\***

Rheem 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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