

### 14 SEER HEAT PUMP ENVIRONMENTALLY BALANCED R-410A REFRIGERANT 1½ THRU 5 TONS SPLIT SYSTEM 208/230 Volt 1-phase, 208/230 Volt 3-phase, 460 Volt 3-phase; 60 Hz

#### REFRIGERATION CIRCUIT

- Scroll compressors on all models
- Suction line accumulator factory installed
- Bi-flow filter-drier included for field installation
- Integrated solid state control with Time-Temperature Defrost
- High and Low pressure switches
- Copper tube / aluminum fin coil

#### EASY TO INSTALL AND SERVICE

- Easy Access service valves on all models
- External high and low refrigerant service ports
- Only two screws to access control panel
- Factory charged with R-410A refrigerant

#### BUILT TO LAST

- Baked-on powder coat finish over galvanized steel
- Post-painted (black) coil fins
- Coated, weather-resistant cabinet screws
- Coated inlet grille with 3/8 (10mm) grille spacing for extra protection

#### LIMITED WARRANTY\*

- 5 year parts limited warranty (including compressor and coil)
  - With timely registration, an additional 5 year parts limited warranty (including compressor and coil)

\* For residential applications only. See warranty certificate for complete details and restrictions, including warranty coverage for other applications.



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to [www.ahrirectory.org](http://www.ahrirectory.org).



| Model Number | Size (tons) | Nominal Btu/hr | Min. Circuit Ampacity | Max. Fuse or Breaker | Operating Dimensions length x width x height inches (mm) | Operating/Ship Weight lbs. (kg) |
|--------------|-------------|----------------|-----------------------|----------------------|--|---------------------------------|
| N4H418GKG    | 1½          | 18,000         | 11.8                  | 20                   | 23- 1/8 x 23- 1/8 x 35- 1/2<br>(587 x 587 x 902)         | 136 / 166<br>(61 / 75)          |
| N4H424GKG    | 2           | 24,000         | 14.2                  | 25                   | 25- 3/4 x 25- 3/4 x 35- 1/2<br>(654 x 654 x 902)         | 144 / 175<br>(65 / 79)          |
| N4H430GKG    | 2½          | 30,000         | 16.9                  | 30                   | 31- 3/16 x 31- 3/16 x 32- 1/16<br>(792 x 792 x 815)      | 158 / 180<br>(72 / 82)          |
| N4H436G*G    | 3           | 36,000         | 19.5                  | 30                   | 31- 3/16 x 31- 3/16 x 38- 7/8<br>(792 x 792 x 988)       | 170 / 201<br>(77 / 91)          |
| N4H442GKG    | 3½          | 42,000         | 24.0                  | 40                   | 31- 3/16 x 31- 3/16 x 38- 7/8<br>(792 x 792 x 988)       | 201 / 235<br>(91 / 107)         |
| N4H448G*G    | 4           | 48,000         | 25.2                  | 40                   | 31- 3/16 x 31- 3/16 x 28- 11/16<br>(792 x 792 x 729)     | 197 / 232<br>(89 / 105)         |
| N4H460G*G    | 5           | 60,000         | 32.0                  | 50                   | 31- 3/16 x 31- 3/16 x 32- 1/16<br>(792 x 792 x 815)      | 212 / 248<br>(96 / 113)         |

\* K = 208/230V Single- Phase; H = 208/230V Three- Phase; L = 460V Three- Phase

| OUTDOOR UNIT MODEL NUMBER IDENTIFICATION GUIDE (single phase)  |          |          |          |          |           |          |          |          |          |          |          |
|--|----------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|
| Digit Position:  | 1        | 2        | 3        | 4        | 5, 6      | 7        | 8        | 9        | 10       | 11       | 12       |
| Example Part Number:   | <b>N</b> | <b>4</b> | <b>H</b> | <b>4</b> | <b>18</b> | <b>G</b> | <b>K</b> | <b>G</b> | <b>1</b> | <b>0</b> | <b>0</b> |
| C = Comfortmaker Mainline<br>N = Comfortmaker Entry <b>BRANDING</b>  |          |          |          |          |           |          |          |          |          |          |          |
| 4 = R-410A <b>REFRIGERANT</b>  |          |          |          |          |           |          |          |          |          |          |          |
| H = Heat Pump <b>TYPE</b>  |          |          |          |          |           |          |          |          |          |          |          |
| 4 = 14 SEER <b>NOMINAL EFFICIENCY</b>  |          |          |          |          |           |          |          |          |          |          |          |
| 18 = 18,000 BTUH = 1½ tons<br>24 = 24,000 BTUH = 2 tons<br>30 = 30,000 BTUH = 2½ tons<br>36 = 36,000 BTUH = 3 tons<br>42 = 42,000 BTUH = 3½ tons<br>48 = 48,000 BTUH = 4 tons<br>60 = 60,000 BTUH = 5 tons <b>NOMINAL CAPACITY</b> |          |          |          |          |           |          |          |          |          |          |          |
| G = Coil Guard Grille, 3/8 (10mm) spacing <b>FEATURES</b>  |          |          |          |          |           |          |          |          |          |          |          |
| K = 208/230- 1- 60<br>H = 208/230- 3- 60<br>L = 460- 3- 60 <b>VOLTAGE</b>  |          |          |          |          |           |          |          |          |          |          |          |
| Sales Code   |          |          |          |          |           |          |          |          |          |          |          |
| Engineering Revision   |          |          |          |          |           |          |          |          |          |          |          |
| Extra Digit  |          |          |          |          |           |          |          |          |          |          |          |
| Extra Digit  |          |          |          |          |           |          |          |          |          |          |          |

| ACCESSORIES PART NUMBER IDENTIFICATION GUIDE                   |          |          |          |          |          |           |           |           |  |
|--|----------|----------|----------|----------|----------|-----------|-----------|-----------|--|
| Digit Position:  | 1        | 2        | 3        | 4        | 5        | 6, 7      | 8, 9      | 10, 11    |  |
| Example Part Number:   | <b>N</b> | <b>A</b> | <b>S</b> | <b>A</b> | <b>0</b> | <b>01</b> | <b>01</b> | <b>CH</b> |  |
| N = Non- Branded <b>BRANDING</b>                               |          |          |          |          |          |           |           |           |  |
| A = Accessory <b>PRODUCT GROUP</b>                             |          |          |          |          |          |           |           |           |  |
| S = Split System (AC & HP) <b>KIT USAGE</b>                    |          |          |          |          |          |           |           |           |  |
| A = Original<br>B = 2nd Generation <b>MAJOR SERIES</b>         |          |          |          |          |          |           |           |           |  |
| 0 = Generic or Not Applicable<br>4 = R-410A <b>REFRIGERANT</b> |          |          |          |          |          |           |           |           |  |
| Product Identifier Number                                      |          |          |          |          |          |           |           |           |  |
| Package Quantity   |          |          |          |          |          |           |           |           |  |
| Type of Kit(Example: CH = Crankcase Heater)                    |          |          |          |          |          |           |           |           |  |

PHYSICAL DATA

| UNIT SIZE SERIES             | 18GKG   | 24GKG     | 30GKG     | 36G*G       | 42GKG       | 48G*G       | 60G*G       |
|------------------------------|---|-----------|-----------|-------------|-------------|-------------|-------------|
| Compressor Type              | Scroll  |           |           |             |             |             |             |
| REFRIGERANT                  | R- 410A                                       |           |           |             |             |             |             |
| Control                      | TXV (R- 410A Hard Shutoff)                    |           |           |             |             |             |             |
| Charge lb (kg)               | 5.3 (2.4)                                     | 5.6 (2.5) | 6.4 (2.9) | 7.67 (3.48) | 8.25 (3.74) | 8.68 (3.94) | 10.6 (4.81) |
| COND FAN                     | Forward Swept or Propeller Type, Direct Drive |           |           |             |             |             |             |
| Air Discharge                | Vertical                                      |           |           |             |             |             |             |
| Motor HP                     | 1/12  | 1/10      | 1/4       | 1/5         | 1/4         | 1/4         | 1/4         |
| Motor RPM                    | 1100  | 1100      | 1100      | 1100        | 1100        | 1100        | 800         |
| Air Qty. (CFM)               | 1792  | 2196      | 3365      | 2365        | 3700        | 3365        | 3700        |
| VALVE CONNECT. (In. ID)      |   |           |           |             |             |             |             |
| Vapor                        | 5/8   | 5/8       | 3/4       | 3/4         | 7/8         | 7/8         | 7/8         |
| Liquid                       | 3/8   |           |           |             |             |             |             |
| REFRIGERANT TUBES** (In. OD) |   |           |           |             |             |             |             |
| Rated Vapor                  | 5/8   | 5/8       | 3/4       | 3/4         | 7/8         | 7/8         | 1 - 1/8     |
| Max Liquid Line              | 3/8   |           |           |             |             |             |             |

\* K = 208/230V Single-Phase; H = 208/230V Single-Phase; L = 460V Three-Phase

\*\* Units are rated with 25 ft (7.6 m) of lineset length. See Vapor Line Sizing and Cooling Capacity Loss table when using other sizes and lengths of lineset.

Note: See unit Installation Instruction for proper installation.

ELECTRICAL DATA

| UNIT SIZE | V/PH      | OPER VOLTS* |     | COMPR |       | FAN  | MCA  | MAX FUSE** or CKT BRK AMPS |
|-----------|-----------|-------------|-----|-------|-------|------|------|----------------------------|
|           |           | MAX         | MIN | LRA   | RLA   | FLA  |      |                            |
| 18GKG     | 208/230/1 | 253         | 197 | 48.0  | 9.0   | 0.50 | 11.8 | 20                         |
| 24GKG     |           |             |     | 62.9  | 10.9  | 0.60 | 14.2 | 25                         |
| 30GKG     |           |             |     | 72.5  | 13.5  | 1.40 | 18.3 | 30                         |
| 36GKG     |           |             |     | 75.0  | 14.7  | 1.10 | 19.5 | 30                         |
| 42GKG     |           |             |     | 105.5 | 18.1  | 1.40 | 24.0 | 40                         |
| 48GKG     |           |             |     | 108.0 | 19.0  | 1.40 | 25.2 | 40                         |
| 60GKG     |           |             |     | 144.2 | 24.4  | 1.52 | 32.0 | 50                         |
| 36GHG     | 208/230/3 | 253         | 187 | 70.0  | 8.46  | 1.10 | 11.7 | 20                         |
| 48GHG     |           |             |     | 123.0 | 10.44 | 1.40 | 14.5 | 25                         |
| 60GHG     |           |             |     | 110.0 | 15.96 | 1.52 | 21.5 | 30                         |
| 36GLG     | 460/3     | 506         | 414 | 31.0  | 3.85  | 0.60 | 5.4  | 15                         |
| 48GLG     |           |             |     | 60.0  | 6.0   | 0.77 | 8.3  | 15                         |
| 60GLG     |           |             |     | 52.0  | 7.75  | 0.77 | 10.5 | 15                         |

\* Permissible limits of the voltage range at which the unit will operate satisfactorily

\*\* Time-Delay fuse.

FLA - Full Load Amps

LRA - Locked Rotor Amps

MCA - Minimum Circuit Amps

RLA - Rated Load Amps

NOTE: Control circuit is 24- V on all units and requires external power source. Copper wire must be used from service disconnect to unit.

All motors/compressors contain internal overload protection.

Complies with 2007 requirements of ASHRAE Standards 90.1

A- WEIGHTED SOUND POWER

| UNIT SIZE       | STANDARD RATING (dBA) | TYPICAL OCTAVE BAND SPECTRUM (dBA, without tone adjustment) |      |      |      |      |      |      |
|-----------------|-----------------------|---|------|------|------|------|------|------|
|                 |                       | 125   | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| 18GKG           | 69                    | 45  | 48   | 56   | 62   | 55   | 53   | 47   |
| 24GKG           | 76                    | 46  | 56   | 59   | 63   | 63   | 60   | 55   |
| 30GKG           | 77                    | 52  | 62   | 67   | 68   | 65   | 62   | 55   |
| 36GKG, GHG, GLG | 77                    | 51  | 62   | 66   | 69   | 64   | 61   | 53   |
| 42GKG           | 76                    | 49  | 61   | 63   | 65   | 62   | 60   | 52   |
| 48GKG, GHG, GLG | 79                    | 53  | 66   | 69   | 71   | 67   | 64   | 57   |
| 60- GKG         | 73                    | 50  | 63   | 62   | 63   | 60   | 58   | 52   |
| 60GHG, GLG      | 76                    | 52.4  | 62.4 | 63.3 | 66.3 | 64.7 | 59   | 56.9 |

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

A- WEIGHTED SOUND POWER WITH SOUND HOOD

| UNIT SIZE       | STANDARD RATING | TYPICAL OCTAVE BAND SPECTRUM (dBA, without tone adjustment) |      |      |      |      |      |      |
|-----------------|-----------------|---|------|------|------|------|------|------|
|                 |                 | 125   | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| 18GKG           | 68              | 47  | 48   | 56   | 61   | 55   | 52   | 46   |
| 24GKG           | 74              | 47  | 57   | 59   | 62   | 61   | 58   | 51   |
| 30GKG           | 77              | 52  | 62   | 67   | 67   | 65   | 62   | 54   |
| 36GKG, GHG, GLG | 76              | 52  | 62   | 66   | 67   | 64   | 60   | 52   |
| 42GKG           | 74              | 50  | 61   | 63   | 64   | 61   | 58   | 49   |
| 48GKG, GHG, GLG | 79              | 54  | 66   | 69   | 70   | 67   | 64   | 56   |
| 60GKG           | 73              | 51  | 64   | 62   | 63   | 59   | 56   | 49   |
| 60GHG, GLG      | 76              | 52.4  | 62.4 | 63.3 | 66.3 | 64.7 | 59   | 56.9 |

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

**CHARGING SUBCOOLING (TXV- TYPE EXPANSION DEVICE)**

| UNIT SIZE- SERIES | REQUIRED SUBCOOLING ° F (° C) |
|-------------------|-------------------------------|
| 18GKG             | 11 (6.1)                      |
| 24GKG             | 11 (6.1)                      |
| 30GKG             | 10 (5.6)                      |
| 36GKG             | 10 (5.6)                      |
| 36GHG, GLG        | 11 (6.1)                      |
| 42GKG             | 10 (5.6)                      |
| 48GKG, GHG, GLG   | 14 (7.7)                      |
| 60GKG, GHG, GLG   | 15 (8.3)                      |

**HP ONLY REPLACEMENT WITH PISTON INDOORS**

When the N4H4 is used as a replacement component in a system with a piston fan coil, use the indoor piston size specified below:

| UNIT SIZE | PISTON SIZE |       |           |
|-----------|-------------|-------|-----------|
|           | FEM4P       | FMA4  | FM(C,U)4P |
| 18        | 0.052       | 0.050 | 0.050     |
| 24        | 0.057       | 0.057 | 0.056     |
| 30        | 0.067       | 0.070 | 0.067     |
| 36        | 0.070       | 0.072 | 0.069     |
| 42        | 0.078       |       |           |
| 48        | 0.084       |       |           |
| 60        |             |       |           |

**VAPOR LINE SIZING AND COOLING CAPACITY LOSS**

Acceptable vapor line diameters provide adequate oil return to the compressor while avoiding excessive capacity loss. The suction line diameters shown in the chart below are acceptable for HP systems with R- 410A refrigerant:

**Vapor Line Sizing and Cooling Capacity Losses - R-410A Refrigerant 1- Stage Heat Pump Applications**

| Unit Nominal Size (Btuh)  | Acceptable Vapor Line Diameters (In. OD) | Cooling Capacity Loss (%) Total Equivalent Line Length (ft) |           |           |  |             |             |             |             |             |             |             |  |
|---------------------------|--|---|-----------|-----------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|
|                           |  | Standard Application  |           |           | Long Line Application Requires Accessories |             |             |             |             |             |             |             |  |
|                           |  | 25 (7.62)   | 50 (15.2) | 80 (24.4) | 80+ (24.4+)                                | 100 (30.48) | 125 (38.10) | 150 (45.72) | 175 (53.34) | 200 (60.96) | 225 (68.58) | 250 (76.20) |  |
| 18000 1- Stage HP         | 1/2                                      | 1   | 2         | 3         | 3  | 4           | 6           | 7           | 8           | 9           | 10          | 12          |  |
|                           | 5/8                                      | 0   | 0         | 1         | 1  | 1           | 1           | 2           | 2           | 3           | 3           | 3           |  |
| 24000 1- Stage HP         | 5/8                                      | 0   | 1         | 1         | 1  | 2           | 3           | 3           | 4           | 4           | 5           | 6           |  |
|                           | 3/4                                      | 0   | 0         | 0         | 0  | 0           | 1           | 1           | 1           | 1           | 1           | 2           |  |
| 30000 1- Stage HP         | 5/8                                      | 1   | 2         | 3         | 3  | 3           | 4           | 5           | 6           | 7           | 8           | 9           |  |
|                           | 3/4                                      | 0   | 0         | 1         | 1  | 1           | 1           | 2           | 2           | 2           | 3           | 3           |  |
|                           | 7/8                                      | 0   | 0         | 0         | 0  | 0           | 1           | 1           | 1           | 1           | 1           | 1           |  |
| 36000 1- Stage HP         | 5/8                                      | 1   | 2         | 4         | 4  | 5           | 6           | 7           | 9           | 10          | 11          | 13          |  |
|                           | 3/4                                      | 0   | 0         | 1         | 1  | 1           | 2           | 2           | 3           | 3           | 4           | 4           |  |
|                           | 7/8                                      | 0   | 0         | 0         | 0  | 0           | 1           | 1           | 1           | 1           | 2           | 2           |  |
| 42000 1- Stage HP         | 3/4                                      | 0   | 1         | 2         | 2  | 2           | 3           | 4           | 4           | 5           | 6           | 6           |  |
|                           | 7/8                                      | 0   | 0         | 1         | 1  | 1           | 1           | 2           | 2           | 2           | 3           | 3           |  |
| 48000 1- Stage HP         | 3/4                                      | 0   | 1         | 2         | 2  | 3           | 4           | 5           | 5           | 6           | 7           | 8           |  |
|                           | 7/8                                      | 0   | 0         | 1         | 1  | 1           | 2           | 2           | 2           | 3           | 3           | 4           |  |
| 60000 1- Stage R- 410A HP | 3/4                                      | 1   | 2         | 4         | 4  | 5           | 6           | 7           | 9           | 10          | 11          | 12          |  |
|                           | 7/8                                      | 0   | 1         | 2         | 2  | 2           | 3           | 4           | 4           | 5           | 5           | 6           |  |
|                           | 1 1/8                                    | 0   | 0         | 0         | 0  | 1           | 1           | 1           | 1           | 1           | 1           | 2           |  |

Standard Length = 80 ft. (24.4 m) or less total equivalent length

Applications in this area are long line. Accessories are required as shown recommended on Long Line Application Guidelines  
 Applications in this area may have height restrictions that limit allowable total equivalent length, when outdoor unit is below indoor unit See Long Line Application Guidelines

**REFRIGERANT PIPING LENGTH LIMITATIONS**

**Maximum Line Lengths:**

The maximum allowable total equivalent length for heat pumps varies depending on the vertical separation. See the tables below for allowable lengths depending on whether the outdoor unit is on the same level, above or below the outdoor unit.

**Maximum Line Lengths for Heat Pump Applications**

|                                | MAXIMUM ACTUAL LENGTH ft (m)  | MAXIMUM EQUIVALENT LENGTH† ft (m) | MAXIMUM VERTICAL SEPARATION ft (m) |
|--------------------------------|---|-----------------------------------|------------------------------------|
| Units on equal level           | 200 (61)  | 250 (76.2)                        | N/A                                |
| Outdoor unit ABOVE indoor unit | 200 (61)  | 250 (76.2)                        | 200 (61)                           |
| Outdoor unit BELOW indoor unit | See Table 'Maximum Total Equivalent Length: Outdoor Unit BELOW Indoor Unit' |                                   |                                    |

† Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.

Maximum Total Equivalent Length† - Outdoor Unit BELOW Indoor Unit

| Size                  | Liquid Line Diameter w/ TXV | HP with R- 410A Refrigerant - Maximum Total Equivalent Length†<br>Vertical Separation ft (m) Outdoor unit BELOW indoor unit; |                       |                        |                         |                         |                         |                         |
|-----------------------|-----------------------------|--|-----------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|                       |                             | 0- 20<br>(0 - 6.1)   | 21- 30<br>(6.4 - 9.1) | 31- 40<br>(9.4 - 12.2) | 41- 50<br>(12.5 - 15.2) | 51- 60<br>(15.5 - 18.3) | 61- 70<br>(18.6 - 21.3) | 71- 80<br>(21.6 - 24.4) |
| 18000 HP with R- 410A | 3/8                         | 250*   | 250*                  | 250*                   | 250*                    | 250*                    | 250*                    | 250*                    |
| 24000 HP with R- 410A | 3/8                         | 250*   | 250*                  | 250*                   | 250*                    | 250*                    | 250*                    | 250*                    |
| 30000 HP with R- 410A | 3/8                         | 250*   | 250*                  | 250*                   | 250*                    | 250*                    | 250*                    | 250*                    |
| 36000 HP with R- 410A | 3/8                         | 250*   | 250*                  | 250*                   | 250*                    | 250*                    | 250*                    | 250*                    |
| 42000 HP with R- 410A | 3/8                         | 250*   | 250*                  | 250*                   | 250*                    | 250*                    | 250*                    | 150                     |
| 48000 HP with R- 410A | 3/8                         | 250*   | 250*                  | 250*                   | 250*                    | 230                     | 160                     | --                      |
| 60000 HP with R- 410A | 3/8                         | 250*   | 225*                  | 190                    | 150                     | 110                     | --                      | --                      |

\* Maximum actual length not to exceed 200 ft (61 m)

† Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.

-- = outside acceptable range

LONG LINE APPLICATIONS

An application is considered Long Line when the refrigerant level in the system requires the use of accessories to maintain acceptable refrigerant management for systems reliability. Defining a system as long line depends on the liquid line diameter, actual length of the tubing, and vertical separation between the indoor and outdoor units.

For Heat Pump systems, the chart below shows when an application is considered Long Line. Beyond these lengths, long line accessories are required:

HP WITH R- 410A REFRIGERANT LONG LINE DESCRIPTION ft (m)  
Beyond these lengths, long line accessories are required

| Liquid Line Size | Units On Same Level | Outdoor Below Indoor                 | Outdoor Above Indoor |
|------------------|---------------------|--------------------------------------|----------------------|
| 3/8              | 80 (24.4)           | 20 (6.1) vertical or 80 (24.4) total | 80 (24.4)            |

Note: See Long Line Guideline for details

| Model Number  | Indoor Coil Model Number | Cooling Capacity | EER  | SEER | High Temp  |       | HSPF | Low Temp   |       |
|---------------|--------------------------|------------------|------|------|------------|-------|------|------------|-------|
|               |                          |                  |      |      | E Capacity | E COP |      | H Capacity | H COP |
| N4H418GKG     | FEM4X18**BL              | 17,800           | 11.7 | 14   | 17,600     | 3.72  | 8.2  | 10,400     | 2.40  |
| N4H424GKG     | FEM4X24**CL              | 22,200           | 11.5 | 14   | 22,200     | 3.84  | 8.2  | 13,200     | 2.54  |
| N4H430GKG     | FEM4X30**BL              | 28,600           | 11.7 | 14   | 28,600     | 3.62  | 8.2  | 17,100     | 2.44  |
| N4H436GKG     | FEM4X36**BL              | 33,000           | 11.7 | 14   | 33,800     | 3.62  | 8.2  | 21,000     | 2.40  |
| N4H436G(H/L)G | FEM4X36**BL              | 33,000           | 11.0 | 14   | 33,000     | 3.64  | 8.2  | 20,800     | 2.46  |
| N4H442GKG     | FEM4X42**BL              | 40,000           | 11.5 | 14   | 41,000     | 3.62  | 8.2  | 25,200     | 2.50  |
| N4H448GKG     | FEM4X48**BL              | 46,000           | 11.7 | 14   | 45,500     | 3.64  | 8.2  | 27,800     | 2.56  |
| N4H448G(H/L)G | FEM4X48**BL              | 46,000           | 11.7 | 14   | 45,500     | 3.64  | 8.2  | 27,800     | 2.56  |
| N4H460GKG     | FXM4X60**AL              | 57,000           | 11.7 | 14   | 54,500     | 3.70  | 8.2  | 33,000     | 2.56  |
| N4H460G(H/L)G | FXM4X60**AL              | 57,000           | 11.7 | 14   | 54,500     | 3.70  | 8.2  | 33,000     | 2.56  |

\* AHRI = Air Conditioning, Heating & Refrigeration Institute

\* Ratings are net values reflecting the effects of circulating fan heat. Supplemental electric heat is not included. Ratings are based on:

Cooling Standard: 80°F (27°C) db 67°F (19°C) wb indoor entering air temperature and 95°F (35°C) db air entering outdoor unit.

High-Temp Heating Standard: 70°F (21°C) db indoor entering air temperature and 47°F (8°C) db 43°F (6°C) wb air entering outdoor unit.

Low-Temp Heating Standard: 70°F (21°C) db indoor entering air temperature and 17°F (-8°C) db 15°F (-9°C) wb air entering outdoor unit.

COP — Coefficient of Performance

EER — Energy Efficiency Ratio

HSPF — Heating Seasonal Performance Factor

SEER — Seasonal Energy Efficiency Ratio

TESTED AHRI COMBINATION RATINGS\*

NOTE: Ratings contained in this document are subject to change at any time.

For AHRI ratings certificates, please refer to the AHRI directory. [www.ahridirectory.org](http://www.ahridirectory.org)

Additional ratings and system combinations can be accessed via the Comfortmaker database:

<http://www.icpeqp.com/AHRIratings/ratings.aspx?Brand=Comfortmaker>

Or scan this QR code:



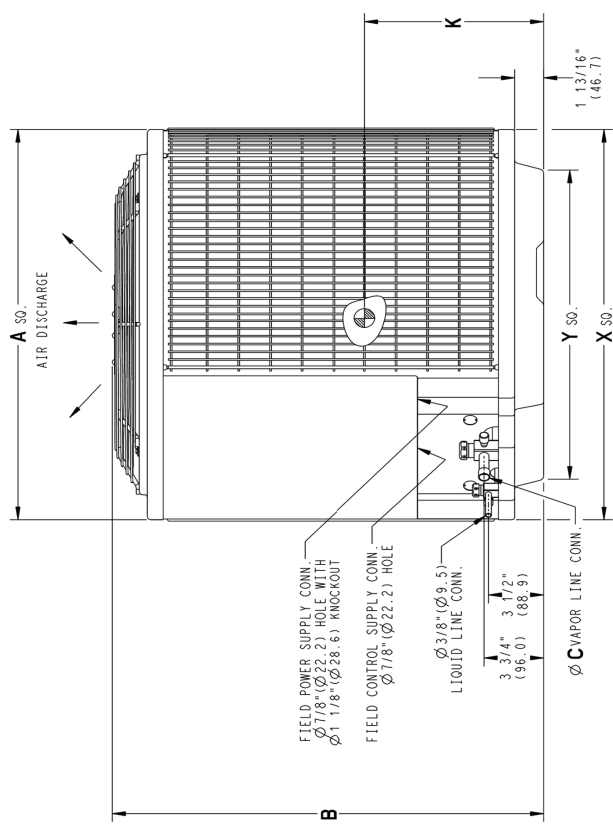
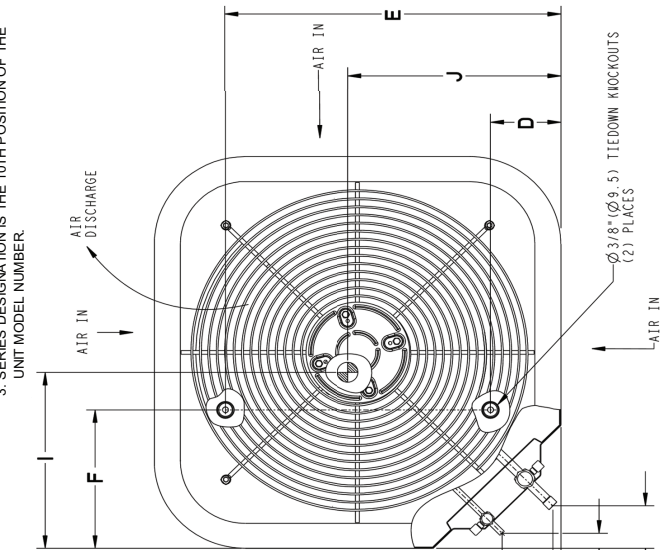
DIMENSIONS

| UNIT        | SERIES | ELECTRICAL CHARACTERISTICS |    | A    |         | B     |          | C     |     | D    |        | E     |          | F     |         | G     |       | H    |         | I    |        | J     |        | K     |        | OPERATING WEIGHT |     | SHIPPING WEIGHT |     | SHIPPING LENGTH / WIDTH (Sq.) |         | SHIPPING HEIGHT |        |        |
|-------------|--------|----------------------------|----|------|---------|-------|----------|-------|-----|------|--------|-------|----------|-------|---------|-------|-------|------|---------|------|--------|-------|--------|-------|--------|------------------|-----|-----------------|-----|-------------------------------|---------|-----------------|--------|--------|
|             |        | INCH                       | MM | INCH | MM      | INCH  | MM       | INCH  | MM  | INCH | MM     | INCH  | MM       | INCH  | MM      | INCH  | MM    | INCH | MM      | INCH | MM     | INCH  | MM     | INCH  | MM     | INCH             | MM  | INCH            | MM  | INCH                          | MM      |                 |        |        |
| NH418GKG101 | 1      | Y                          | N  | N    | 23 1/8  | 587.3 | 35 1/2   | 902.0 | 5/8 | 15.9 | 4 7/16 | 113.0 | 18 1/16  | 459.0 | 7 13/16 | 197.9 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 11     | 279.4 | 15 3/4 | 400.1 | 12     | 304.8            | 136 | 61.7            | 166 | 75.3                          | 25 1/4  | 641.5           | 40     | 1015.8 |
| NH424GKG101 | 1      | Y                          | N  | N    | 25 3/4  | 654.0 | 35 1/2   | 901.4 | 5/8 | 15.9 | 4 7/16 | 113.0 | 21 1/4   | 539.9 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 12     | 304.8 | 13 1/4 | 338.6 | 13 1/2 | 342.9            | 144 | 65.3            | 175 | 79.4                          | 27 7/8  | 708.2           | 40     | 1015.8 |
| NH430GKG101 | 1      | Y                          | N  | N    | 31 3/16 | 792.5 | 32 1/16  | 815.1 | 3/4 | 19.1 | 6 9/16 | 166.1 | 24 11/16 | 626.3 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 15     | 381.0 | 11     | 279.4 | 16     | 406.4            | 158 | 71.7            | 180 | 81.6                          | 33 9/16 | 846.6           | 36 5/8 | 929.5  |
| NH436GKG101 | 1      | Y                          | N  | N    | 31 3/16 | 792.5 | 38 7/8   | 987.8 | 3/4 | 19.1 | 6 9/16 | 166.1 | 24 11/16 | 626.3 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 15 3/4 | 400.1 | 14     | 355.6 | 10 3/4 | 273.1            | 170 | 77.1            | 201 | 91.2                          | 33 9/16 | 846.6           | 43 3/8 | 1102.2 |
| NH442GKG101 | 2      | Y                          | N  | N    | 31 3/16 | 792.5 | 28 11/16 | 728.7 | 3/4 | 19.1 | 6 9/16 | 166.1 | 24 11/16 | 626.3 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 15 3/4 | 400.1 | 14     | 355.6 | 10 3/4 | 273.1            | 170 | 77.1            | 201 | 91.2                          | 33 9/16 | 846.6           | 43 3/8 | 1102.2 |
| NH448GKG101 | 1      | Y                          | N  | N    | 31 3/16 | 792.5 | 28 11/16 | 728.7 | 7/8 | 22.2 | 6 9/16 | 166.1 | 24 11/16 | 626.3 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 16 1/2 | 419.1 | 11 1/2 | 292.1 | 15     | 381.0            | 197 | 89.4            | 232 | 105.2                         | 33 9/16 | 846.6           | 43 3/8 | 1102.2 |
| NH460GKG101 | 1      | Y                          | N  | N    | 31 3/16 | 792.5 | 32 1/16  | 815.1 | 7/8 | 22.2 | 6 9/16 | 166.1 | 24 11/16 | 626.3 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 14 3/4 | 374.7 | 15 3/4 | 400.1 | 16 1/4 | 412.8            | 212 | 96.2            | 248 | 112.5                         | 33 9/16 | 846.6           | 36 5/8 | 929.5  |
| NH460GKG101 | 2      | N                          | Y  | N    | 31 3/16 | 792.5 | 28 11/16 | 728.7 | 3/4 | 19.1 | 6 9/16 | 166.1 | 24 11/16 | 626.3 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 15 3/4 | 400.1 | 14     | 355.6 | 10 3/4 | 273.1            | 170 | 77.1            | 201 | 91.2                          | 33 9/16 | 846.6           | 36 5/8 | 929.5  |
| NH436GLG101 | 1      | N                          | Y  | N    | 31 3/16 | 792.5 | 28 11/16 | 728.7 | 3/4 | 19.1 | 6 9/16 | 166.1 | 24 11/16 | 626.3 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 15 3/4 | 400.1 | 14     | 355.6 | 10 3/4 | 273.1            | 170 | 77.1            | 201 | 91.2                          | 33 9/16 | 846.6           | 36 5/8 | 929.5  |
| NH448GLG101 | 1      | N                          | Y  | N    | 31 3/16 | 792.5 | 28 11/16 | 728.7 | 7/8 | 22.2 | 6 9/16 | 166.1 | 24 11/16 | 626.3 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 16 1/2 | 419.1 | 11 1/2 | 292.1 | 15     | 381.0            | 197 | 89.4            | 232 | 105.2                         | 33 9/16 | 846.6           | 43 3/8 | 1102.2 |
| NH460GLG101 | 1      | N                          | Y  | N    | 31 3/16 | 792.5 | 32 1/16  | 815.1 | 7/8 | 22.2 | 6 9/16 | 166.1 | 24 11/16 | 626.3 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 14 3/4 | 374.7 | 15 3/4 | 400.1 | 16 1/4 | 412.8            | 212 | 96.2            | 248 | 112.5                         | 33 9/16 | 846.6           | 36 5/8 | 929.5  |
| NH460GLG101 | 1      | N                          | Y  | N    | 31 3/16 | 792.5 | 32 1/16  | 815.1 | 7/8 | 22.2 | 6 9/16 | 166.1 | 24 11/16 | 626.3 | 9 1/8   | 231.3 | 1 1/8 | 28.2 | 3 13/16 | 97.4 | 14 3/4 | 374.7 | 15 3/4 | 400.1 | 16 1/4 | 412.8            | 212 | 96.2            | 248 | 112.5                         | 33 9/16 | 846.6           | 36 5/8 | 929.5  |

|              |               |
|--------------|---------------|
| 208-230-1-60 | Y=YES<br>N=NO |
| 460-2-60     |               |
| 575-3-60     |               |

NOTES:

1. ALLOW 24" (609.6) CLEARANCE TO SERVICE SIDE OF UNIT, 48" (1219.2) ABOVE UNIT, 6" (152.4) ON ONE SIDE, 12" (304.8) ON REMAINING SIDE, AND 24" (609.6) BETWEEN UNITS FOR PROPER AIRFLOW.
2. CENTER OF GRAVITY
3. SERIES DESIGNATION IS THE 10TH POSITION OF THE UNIT MODEL NUMBER.



| UNIT SIZE      | "X"  |  | "Y"  |  |
|----------------|--|--|--|--|
|                | MINIMUM GROUND MOUNTING PAD APPLICATION DIMENSIONS | MINIMUM ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS | MINIMUM GROUND MOUNTING PAD APPLICATION DIMENSIONS | MINIMUM ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS |
| 18             | 23 1/8   | 587.3  | 17 7/8   | 454.6  |
| 24             | 25 3/4   | 654.0  | 20 7/16  | 518.5  |
| 30,36,42,48,60 | 31 3/16  | 792.5  | 22 15/16   | 583.2  |
| 35             | 35   | 889.0  | 26 3/4   | 679.7  |

NOTE: ALL DIMENSIONS IN INCH (MM)

U.S. ECCN: Not Subject to Regulation (N.S.R.)

SDS925-4 REV.6

DETAILED COOLING CAPACITIES#

Table with columns: EVAPORATOR AIR (CFM, EWB °F (°C)), CONDENSER ENTERING AIR TEMPERATURES °F (°C) (75, 85, 95, 105, 115, 125), Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*. Includes sub-sections for N4H419GKG Outdoor Section and N4H424\*\*CL Indoor Section.

Table with columns: EVAPORATOR AIR (CFM, EWB °F (°C)), CONDENSER ENTERING AIR TEMPERATURES °F (°C) (75, 85, 95, 105, 115, 125), Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*. Includes sub-sections for N4H424GKG Outdoor Section and N4H430\*\*BL Indoor Section.

Table with columns: EVAPORATOR AIR (CFM, EWB °F (°C)), CONDENSER ENTERING AIR TEMPERATURES °F (°C) (75, 85, 95, 105, 115, 125), Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*. Includes sub-sections for N4H430GKG Outdoor Section and N4H430\*\*BL Indoor Section.





DETAILED COOLING CAPACITIES# CONTINUED

Table with columns: EVAPORATOR AIR (CFM, EWB °F (°C)), CONDENSER ENTERING AIR TEMPERATURES °F (°C) (75, 85, 95, 105, 115, 125), Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*. Rows include 1400, 1600, and 1800 CFM units.

See notes on page 4

Table with columns: EVAPORATOR AIR (CFM, EWB °F (°C)), CONDENSER ENTERING AIR TEMPERATURES °F (°C) (75, 85, 95, 105, 115, 125), Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*, Capacity MBtuh, Total System KW\*\*. Rows include 1750, 2000, and 2250 CFM units.

† Total and sensible capacities are net capacities. Blower motor heat has been subtracted. ‡ Sensible capacities shown are based on 80°F (27°C) entering air at the indoor coil. For sensible capacities at other than 80°F (27°C), deduct 835 Btu/h (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree below 80°F (27°C), or add 835 Btu/h (245 kW) per 1000 CFM (480 L/S) of indoor coil air per degree above 80°F (27°C). # Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per AHRI standard 210/240 - 2008. If additional tubing length and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur. \*\* Sys. kw is total of indoor and outdoor unit kilowatts. †† At TVA rating indoor condition (75°F edb/63°F ewb). All other indoor air temperatures are at 80°F edb. NOTE: When the required data falls between the published data, interpolation may be performed. Extrapolation is not an acceptable practice. EWB — Entering Wet Bulb



HEAT PUMP HEATING PERFORMANCE CONTINUED

| INDOOR AIR     |      | OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C) |                  |       |                |                  |       |                |                  |       |                |                  |       |                |                  |       |                |                  |       |                |                  |       |                |                  |       |
|----------------|------|--|------------------|-------|----------------|------------------|-------|----------------|------------------|-------|----------------|------------------|-------|----------------|------------------|-------|----------------|------------------|-------|----------------|------------------|-------|----------------|------------------|-------|
| EDB<br>°F (°C) | CFM  | -3 (19.4)                                      |                  |       | 7 (-13.9)      |                  |       | 17 (-8.3)      |                  |       | 27 (-2.8)      |                  |       | 37 (2.8)       |                  |       | 47 (8.3)       |                  |       | 57 (13.9)      |                  |       | 67 (19.4)      |                  |       |
|                |      | Capacity MBtuh                                 | Total Sys-tem kW | Integ | Capacity MBtuh | Total Sys-tem kW | Integ | Capacity MBtuh | Total Sys-tem kW | Integ | Capacity MBtuh | Total Sys-tem kW | Integ | Capacity MBtuh | Total Sys-tem kW | Integ | Capacity MBtuh | Total Sys-tem kW | Integ | Capacity MBtuh | Total Sys-tem kW | Integ | Capacity MBtuh | Total Sys-tem kW | Integ |
| 65             | 1225 | 15.89  | 14.35            | 2.48  | 19.93          | 18.31            | 2.59  | 24.83          | 22.84            | 2.71  | 30.26          | 28.88            | 3.01  | 35.66          | 32.45            | 3.18  | 41.58          | 38.18            | 3.34  | 48.02          | 44.02            | 3.59  | 53.69          | 49.69            | 3.79  |
|                | 1400 | 15.91  | 14.64            | 2.50  | 20.28          | 18.64            | 2.59  | 25.75          | 23.48            | 2.72  | 30.80          | 27.17            | 2.84  | 36.05          | 32.81            | 2.98  | 42.10          | 38.21            | 3.14  | 48.21          | 44.21            | 3.26  | 53.51          | 49.51            | 3.37  |
|                | 1575 | 16.19  | 14.89            | 2.51  | 20.58          | 18.91            | 2.60  | 26.05          | 23.75            | 2.72  | 30.91          | 27.46            | 2.84  | 36.39          | 33.12            | 2.96  | 42.45          | 38.18            | 3.10  | 48.18          | 44.18            | 3.20  | 53.24          | 49.24            | 3.31  |
| 70             | 1225 | 14.78  | 13.60            | 2.58  | 19.20          | 17.64            | 2.69  | 24.06          | 21.93            | 2.82  | 29.80          | 26.47            | 2.98  | 35.19          | 32.02            | 3.14  | 41.00          | 37.02            | 3.32  | 47.42          | 43.42            | 3.48  | 53.09          | 49.09            | 3.62  |
|                | 1400 | 15.07  | 13.87            | 2.59  | 19.52          | 17.94            | 2.69  | 24.44          | 22.28            | 2.81  | 30.13          | 26.76            | 2.96  | 35.55          | 32.35            | 3.10  | 41.49          | 37.49            | 3.27  | 47.70          | 43.70            | 3.40  | 52.99          | 48.99            | 3.52  |
|                | 1575 | 15.33  | 14.10            | 2.61  | 19.82          | 18.21            | 2.71  | 24.79          | 22.60            | 2.82  | 30.42          | 27.02            | 2.95  | 35.89          | 32.66            | 3.09  | 41.91          | 37.91            | 3.24  | 47.75          | 43.75            | 3.35  | 52.74          | 48.74            | 3.45  |
| 75             | 1225 | 14.00  | 12.88            | 2.68  | 18.50          | 17.00            | 2.79  | 23.38          | 21.32            | 2.93  | 29.35          | 26.07            | 3.11  | 34.70          | 31.57            | 3.28  | 40.41          | 36.41            | 3.47  | 46.83          | 42.83            | 3.64  | 52.47          | 48.47            | 3.79  |
|                | 1400 | 14.27  | 13.13            | 2.69  | 18.80          | 17.28            | 2.80  | 23.74          | 21.65            | 2.92  | 29.68          | 26.36            | 3.09  | 35.07          | 31.92            | 3.24  | 40.89          | 36.89            | 3.41  | 47.13          | 43.13            | 3.55  | 52.43          | 48.43            | 3.68  |
|                | 1575 | 14.51  | 13.34            | 2.71  | 19.07          | 17.53            | 2.81  | 24.05          | 21.93            | 2.93  | 29.95          | 26.60            | 3.07  | 35.39          | 32.20            | 3.21  | 41.30          | 37.30            | 3.38  | 47.26          | 43.26            | 3.50  | 52.23          | 48.23            | 3.60  |
| 65             | 1400 | 16.35  | 15.04            | 2.75  | 21.40          | 19.66            | 2.87  | 26.82          | 24.46            | 3.00  | 33.50          | 29.76            | 3.17  | 39.20          | 35.67            | 3.31  | 45.68          | 41.68            | 3.48  | 53.36          | 49.36            | 3.61  | 61.87          | 57.87            | 3.84  |
|                | 1600 | 16.89  | 15.36            | 2.78  | 21.78          | 20.01            | 2.89  | 27.25          | 24.85            | 3.00  | 33.88          | 30.09            | 3.16  | 39.67          | 36.10            | 3.29  | 46.26          | 42.26            | 3.44  | 54.19          | 50.19            | 3.61  | 62.42          | 58.42            | 3.76  |
|                | 1800 | 17.00  | 15.64            | 2.81  | 22.12          | 20.33            | 2.91  | 27.64          | 25.20            | 3.02  | 34.22          | 30.40            | 3.17  | 40.06          | 36.45            | 3.28  | 46.75          | 42.75            | 3.42  | 54.77          | 50.77            | 3.57  | 62.78          | 58.78            | 3.72  |
| 70             | 1400 | 15.48  | 14.25            | 2.85  | 20.60          | 18.93            | 2.97  | 26.05          | 23.75            | 3.11  | 32.86          | 29.19            | 3.29  | 38.68          | 35.20            | 3.45  | 45.00          | 41.00            | 3.62  | 52.51          | 48.51            | 3.82  | 61.02          | 57.02            | 4.00  |
|                | 1600 | 15.80  | 14.54            | 2.87  | 20.97          | 19.27            | 2.99  | 26.47          | 24.14            | 3.12  | 33.35          | 29.62            | 3.28  | 39.10          | 35.58            | 3.42  | 45.56          | 41.56            | 3.58  | 53.28          | 49.28            | 3.75  | 61.59          | 57.59            | 3.92  |
|                | 1800 | 16.05  | 14.76            | 2.91  | 21.28          | 19.55            | 3.02  | 26.84          | 24.47            | 3.13  | 33.71          | 29.94            | 3.29  | 39.47          | 35.92            | 3.42  | 46.04          | 42.04            | 3.56  | 53.98          | 49.98            | 3.72  | 61.98          | 57.98            | 3.87  |
| 85             | 1400 | 13.11  | 12.07            | 3.19  | 18.31          | 16.83            | 3.34  | 23.83          | 21.72            | 3.50  | 29.75          | 26.42            | 3.67  | 37.16          | 33.82            | 3.93  | 43.00          | 39.00            | 4.12  | 49.89          | 45.89            | 4.32  | 58.18          | 54.18            | 4.52  |
|                | 1600 | 13.37  | 12.30            | 3.22  | 18.63          | 17.12            | 3.35  | 24.21          | 22.07            | 3.50  | 30.22          | 26.84            | 3.66  | 37.55          | 34.17            | 3.89  | 43.52          | 39.52            | 4.07  | 50.66          | 46.66            | 4.25  | 58.86          | 54.86            | 4.43  |
|                | 1800 | 13.58  | 12.49            | 3.25  | 18.88          | 17.35            | 3.38  | 24.50          | 22.34            | 3.51  | 30.57          | 27.15            | 3.66  | 37.88          | 34.48            | 3.87  | 43.96          | 39.96            | 4.04  | 51.35          | 47.35            | 4.20  | 59.33          | 55.33            | 4.37  |
| 65             | 1750 | 21.14  | 19.45            | 3.33  | 26.85          | 24.67            | 3.46  | 33.16          | 30.23            | 3.60  | 40.66          | 36.11            | 3.79  | 47.51          | 43.23            | 3.95  | 55.22          | 51.22            | 4.13  | 64.29          | 60.29            | 4.32  | 73.31          | 69.31            | 4.50  |
|                | 2000 | 21.51  | 19.79            | 3.38  | 27.26          | 25.05            | 3.48  | 33.65          | 30.88            | 3.61  | 41.05          | 36.45            | 3.77  | 48.03          | 43.70            | 3.92  | 55.88          | 51.88            | 4.08  | 64.95          | 60.95            | 4.23  | 73.54          | 69.54            | 4.40  |
|                | 2250 | 21.84  | 20.10            | 3.40  | 27.62          | 25.39            | 3.51  | 34.07          | 31.07            | 3.63  | 41.40          | 36.77            | 3.78  | 48.48          | 44.12            | 3.91  | 56.46          | 52.46            | 4.07  | 65.31          | 61.31            | 4.19  | 73.39          | 69.39            | 4.34  |
| 70             | 1750 | 20.38  | 18.75            | 3.48  | 26.13          | 24.01            | 3.62  | 32.40          | 29.54            | 3.76  | 40.19          | 35.69            | 3.87  | 46.94          | 42.71            | 4.14  | 54.50          | 50.50            | 4.32  | 63.44          | 59.44            | 4.51  | 72.41          | 68.41            | 4.70  |
|                | 2000 | 20.74  | 19.08            | 3.51  | 26.54          | 24.39            | 3.64  | 32.87          | 29.97            | 3.77  | 40.59          | 36.05            | 3.96  | 47.44          | 43.17            | 4.11  | 55.15          | 51.15            | 4.27  | 64.14          | 60.14            | 4.42  | 72.69          | 68.69            | 4.60  |
|                | 2250 | 21.08  | 19.40            | 3.55  | 26.91          | 24.73            | 3.67  | 33.30          | 30.36            | 3.79  | 40.95          | 36.37            | 3.96  | 47.88          | 43.57            | 4.09  | 55.71          | 51.71            | 4.25  | 64.55          | 60.55            | 4.38  | 72.63          | 68.63            | 4.53  |
| 75             | 1750 | 19.58  | 18.01            | 3.63  | 25.30          | 23.30            | 3.78  | 31.62          | 28.83            | 3.94  | 39.87          | 35.23            | 4.16  | 46.37          | 42.20            | 4.33  | 53.80          | 49.80            | 4.52  | 62.59          | 58.59            | 4.72  | 71.50          | 67.50            | 4.92  |
|                | 2000 | 19.94  | 18.35            | 3.67  | 25.78          | 23.69            | 3.80  | 32.10          | 29.27            | 3.94  | 40.12          | 35.64            | 4.14  | 46.85          | 42.63            | 4.29  | 54.42          | 50.42            | 4.46  | 63.33          | 59.33            | 4.63  | 71.81          | 67.81            | 4.80  |
|                | 2250 | 20.28  | 18.65            | 3.71  | 26.15          | 24.03            | 3.83  | 32.52          | 29.65            | 3.96  | 40.49          | 35.96            | 4.14  | 47.28          | 43.02            | 4.28  | 54.97          | 50.97            | 4.43  | 63.78          | 59.78            | 4.57  | 71.82          | 67.82            | 4.73  |

NOTE: When the required data falls between the published data, interpolation may be performed. Extrapolation is not an acceptable practice.

\* The Btuh heating capacity values shown are net integrated values from which the defrost effect has been subtracted. The Btuh heating from supplement heaters should be added to those values to obtain total Sys. capacity.

† The kW values include the compressor, outdoor fan motor, and indoor blower motor. The kW from supplement heaters should be added to these values to obtain total Sys. kilowatts.

EDB — Entering Dry Bulb

## Accessory Description and Usage (Listed Alphabetically)

### 1. Ball-Bearing Fan Motor

A fan motor with ball bearings which permits speed reduction while maintaining bearing lubrication.

### 2. Compressor Start Assist - Capacitor and Relay

Start capacitor and relay gives a hard boost to compressor motor at each start up.

#### Usage Guideline:

Required for reciprocating compressors in the following applications:

- Long line
- Low ambient cooling
- Hard shut off expansion valve on indoor coil
- Liquid line solenoid on indoor coil

Required for single-phase scroll compressors in the following applications:

- Long line
- Low ambient cooling

Suggested for all single-phase compressors in areas with a history of low voltage problems.

### 3. Compressor Start Assist — PTC Type

Solid state electrical device which gives a soft boost to the compressor at each start-up.

#### Usage Guideline:

Suggested in installations for single-phase units with marginal power supply.

### 4. Crankcase Heater

An electric resistance heater which mounts to the base of the compressor to keep the lubricant warm during off cycles. Improves compressor lubrication on restart and minimizes the chance of liquid slugging.

#### Usage Guideline:

- Required in low ambient cooling applications.
- Required in long line applications.
- Suggested in all commercial applications.

### 5. Evaporator Freeze Thermostat

An SPST temperature-actuated switch that stops unit operation when evaporator reaches freeze-up conditions.

#### Usage Guideline:

Required when low ambient kit has been added.

### 6. Isolation Relay

An SPDT relay which switches the low-ambient controller out of the outdoor fan motor circuit when the heat pump switches to heating mode.

#### Usage Guideline:

Required in all heat pumps where low ambient kit has been added.

### 7. Liquid-Line Solenoid Valve (LLS)

An electrically operated shutoff valve which stops and starts refrigerant liquid flow in response to compressor operation. It is to be installed at the outdoor unit to control refrigerant off cycle migration in the heating mode.

#### Usage Guideline:

An LLS is required in all long line heat pump applications to control refrigerant off cycle migration in the heating mode. See Long Line Guideline.

### 8. Low-Ambient Pressure Switch Kit

A long life pressure switch which is mounted to outdoor unit service valve. It is designed to cycle the outdoor fan motor in order to maintain head pressure within normal operating limits. The control will maintain working head pressure at low-ambient temperatures down to 0°F (-17.8°C) when properly installed.

#### Usage Guideline:

A Low-Ambient Pressure Switch Low-Ambient Controller must be used when cooling operation is used at outdoor temperatures below 55°F (12.8°C).

### 9. Sound Jacket

Wraparound sound reducing cover for the compressor. Reduces the sound level by about 2 dBA.

#### Usage Guideline:

Suggested when unit is installed closer than 15 ft. (4.577 m) to quiet areas, bedrooms, etc. Suggested when unit is installed between two houses less than 10 ft. (3.05 m) apart.

### 10. Thermostatic Expansion Valve (TXV) Bi-Flow

A modulating flow-control valve which meters refrigerant liquid flow rate into the evaporator in response to the superheat of the refrigerant gas leaving the evaporator.

#### Usage Guideline:

Accessory required to meet AHRI rating and system reliability, where indoor not equipped. Required in all heat pump applications designed with R-410A refrigerant.

### 11. Time-Delay Relay

An SPST delay relay which briefly continues operation of indoor blower motor to provide additional cooling after the compressor cycles off.

**Note:** Most indoor unit controls include this feature. For those that do not, use the guideline below.

#### Usage Guideline:

Accessory required to meet AHRI rating, where indoor not equipped.

**ACCESSORY USAGE GUIDELINE**

| ACCESSORY                                   | REQUIRED FOR LOW-AMBIENT COOLING APPLICATIONS (Below 55°F / 12.8°C) | REQUIRED FOR LONG LINE APPLICATIONS* | REQUIRED FOR SEA COAST APPLICATIONS (Within 2 miles/3.22 km) |
|---|---|--------------------------------------|--|
| Accumulator                                 | Standard  | Standard                             | Standard   |
| Compressor Start Assist Capacitor and Relay | Yes**   | Yes**                                | No**   |
| Crankcase Heater                            | Yes ♦   | Yes ♦                                | No ♦   |
| Evaporator Freeze Thermostat                | Yes   | No                                   | No   |
| Hard Shutoff TXV                            | Yes   | Yes                                  | No   |
| Isolation Relay                             | Yes   | No                                   | No   |
| Liquid Line Solenoid Valve                  | No  | See Long- Line Application Guideline | No   |
| Low Ambient Switch                          | Yes   | No                                   | No   |
| Support Feet                                | Recommended   | No                                   | Recommended  |

\* For tubing line sets between 80 and 200 ft. (24.38 and 60.96 m) and/or 20 ft. (6.09 m) vertical differential, refer to Residential Split- System Longline Application Guideline.

\*\* Not required for Three- Phase units

♦ Standard for Three- Phase units only

**ACCESSORIES**

| Part Number | Description  | Used On Model Size |
|-------------|--|--------------------|
| NASA001SC   | Start Component - PTC Device                       | ALL*               |
| NASA00201FS | Evaporator Freeze Thermostat                       | ALL                |
| NASA001LS   | Liquid Line Solenoid Valve                         | ALL                |
| NASA001TD   | Time Delay Relay, Indoor Blower                    | ALL                |
| NASA001AC   | Anti- Cycle Timer (5 minute delay)                 | ALL                |
| NASA401LA   | Low Ambient Kit (Pressure Switch)                  | ALL                |
| NASA00101IK | Low Ambient Isolation Relay Kit                    | ALL                |
| NASA00201SF | Support Feet, 4" (102mm) tall                      | 18, 24             |
| NASA001SF   | Support Feet, 4" (102mm) tall                      | 30, 36, 42, 48, 60 |
| NASA003SC   | Hard Start Kit (Capacitor & Relay)                 | ALL*               |
| NASA003CH   | Crankcase Heater for Compressor *                  | 18, 24, 30, 36     |
| NASA001CH   | Crankcase Heater for Compressor *                  | 42, 48, 60         |
| NASA002SJ   | Sound Jacket, Compressor                           | 18, 24, 30         |
| NASA001SJ   | Sound Jacket, Compressor                           | 36, 42, 48         |
| NASA003SJ   | Sound Jacket, Compressor                           | 60                 |
| NAEA40501TX | TXV Kit, R- 410A - use on copper and tin fan coils | 18, 24, 30         |
| NAEA40601TX | TXV Kit, R- 410A - use on copper and tin fan coils | 36, 42             |
| NAEA40701TX | TXV Kit, R- 410A - use on copper and tin fan coils | 48, 60             |
| NAEB40501TX | TXV Kit, R- 410A - use on aluminum fan coils       | 18, 24, 30         |
| NAEB40601TX | TXV Kit, R- 410A - use on aluminum fan coils       | 36, 42             |
| NAEB40701TX | TXV Kit, R- 410A - use on aluminum fan coils       | 48, 60             |

\* Single- Phase units