Comfortmaker® Air Conditioning & Heating

NH4A4

Product Specifications

14 SEER HORIZONTAL DISCHARGE AIR CONDITIONER FOR USE WITH DUCTED INDOOR UNIT

ENVIRONMENTALLY SOUND R-410A REFRIGERANT

1-1/2 THRU 5 TONS, 208/230 Volt, 1-Phase

3 THRU 5 TONS, 208/230 Volt, 3-Phase

3 THRU 5 TONS, 460 Volt, 3-Phase

REFRIGERATION CIRCUIT

- 14 SEER/11.7 - 12.2 EER
- Scroll compressor
- Factory-supplied filter-drier
- High pressure switch
- Line lengths up to 250 feet (76.2m)

EASY TO INSTALL AND SERVICE

- Small footprint
- Easy access service valves on all models
- Factory charged with R-410A refrigerant

BUILT TO LAST

- Low ambient operation (down to -20ºF/-17.8ºC)
- Ball-Bearing Fan Motor

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 the warranty certificate for complete details and restrictions, including warranty coverage for other applications.

AHRI CERTIFIED™ www.ahridirectory.org

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.ahridirectory.org .

c UL US LISTED

Fig. 1 — NH4H4 Unit

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MODEL NUMBERS

Model Number	Size (Tons)	Nominal Btu/hr	Min Circuit Ampacity	Max Fuse or Breaker	Operating Dimensions height x width x depth inches (mm)	Operating/Ship Weight lbs. (kg)
208/230−1−60						
NH4A418AKA	1½	18,000	11.8	20	31−1/8 x 36−15/16 x 14−9/16 (790 x 938 x 370)	146/166(66/75)
NH4A424AKA	2	24,000	14.1	25	31−1/8 x 36−15/16 x 14−9/16 (790 x 938 x 370)	148/168(67/76)
NH4A430AKA	2½	30,000	18.3	30	37−1/8 x 44−1/2 x 17−1/16 (943 x 1130 x 433)	183/213(83/97)
NH4A436AKA	3	36,000	18.8	30	37−1/8 x 44−1/2 x 17−1/16 (943 x 1130 x 433)	184/214(84/97)
NH4A448AKA	4	48,000	24.3	40	37−1/8 x 44−1/2 x 17−1/16 (943 x 1130 x 433)	213/243(97/110)
NH4A460AKA	5	60,000	31.1	50	43−1/8 x 44−1/2 x 17−1/16 (1095 x 1130 x 433)	245/275(111/125)
208/230−3−60						
NH4A436AHA	3	36,000	12.5	20	37−1/8 x 44−1/2 x 17−1/16 (943 x 1130 x 433)	184/214(84/97)
NH4A448AHA	4	48,000	18.3	30	37−1/8 x 44−1/2 x 17−1/16 (943 x 1130 x 433)	213/243(97/110)
NH4A460AHA	5	60,000	21.4	35	43−1/8 x 44−1/2 x 17−1/16 (1095 x 1130 x 433)	245/275(111/125)
460−3−60						
NH4A436ALA	3	36,000	7.6	15	37−1/8 x 44−1/2 x 17−1/16 (943 x 1130 x 433)	184/214(84/97)
NH4A448ALA	4	48,000	8.7	15	37−1/8 x 44−1/2 x 17−1/16 (943 x 1130 x 433)	213/243(97/110)
NH4A460ALA	5	60,000	9.7	15	43−1/8 x 44−1/2 x 17−1/16 (1095 x 1130 x 433)	245/275(111/125)

OUTDOOR UNIT MODEL NUMBER IDENTIFICATION GUIDE

Digit Position:	1,2	3	4	5	6,7	8	9	10	11	12	13
Example Part Number:	**NH**	**4**	**A**	**4**	**18**	**A**	**K**	**A**	**1**	**0**	**0**

Horizontal Condenser **UNIT**

4 = R−410A **REFRIGERANT**

A = Air Conditioner
H = Heat Pump **TYPE**

4 = 14 SEER **NOMINAL EFFICIENCY**

18 = 18,000 BTUH = 1−1/2 tons
24 = 24,000 BTUH = 2 tons
30 = 30,000 BTUH = 2−1/2 tons
36 = 36,000 BTUH = 3 tons
42 = 42,000 BTUH = 3−1/2 tons
48 = 48,000 BTUH = 4 tons
60 = 60,000 BTUH = 5 tons **NOMINAL CAPACITY**

A = Standard Grille **FEATURES**

K = 208/230−1−60
H = 208/230−3−60
L = 460−3−60 **VOLTAGE**

Sales Code

Engineering Revision

Extra Digit

Extra Digit

Specifications subject to change without notice.

ACCESSORIES PART NUMBER INDENTIFICATION GUIDE

ACCESSORIES PART NUMBER IDENTIFICATION GUIDE								
Digit Position:	1	2	3	4	5	6, 7	8, 9	10, 11
Example Part Number:	**N**	**A**	**S**	**A**	**0**	**0 1**	**01**	**C H**
N = Non–Branded **BRANDING**								
A = Accessory **PRODUCT GROUP**								
S = Split System (AC & HP) **KIT USAGE**								
A = Original B = 2nd Generation **MAJOR SERIES**								
0 = Generic or Not Applicable 2 = R–22 4 = R–410A **REFRIGERANT**								
Product Identifier Number								
Package Quantity								
Type of Kit (Example: CH = Crankcase Heater)								

PHYSICAL DATA

UNIT SIZE-SERIES	18AKA	24AKA	30AKA	36AKA, AHA, ALA	48AKA, AHA, ALA	60AKA, AHA, ALA
Compressor Type	Scroll					
REFRIGERANT	(R-410A)					
Charge lb (kg)	6.40 (2.90)	6.50 (2.95)	8.60 (3.90)	8.90 (4.04)	9.00 (4.08)	10.60 (4.81)
Cond Fan	Propeller Type, Direct Drive					
Air Discharge	Horizontal					
Air Qty (CFM)	1285	1285	1900	2615	2615	2785
Motor HP	1/12	1/12	1/10	1/4	1/4	1/4
Motor RPM	800	800	800	800	800	800
Cond Coil						
Face Area (Sq ft)	7.3	7.3	12.1	12.1	12.1	14.1
Fins per In.	20	20	20	20	20	20
Rows	2	2	2	2	2	2
Circuits	3	3	3	3	3	4
Valve Connect. (In. ID)						
Vapor	5/8	3/4	3/4	7/8	7/8	7/8
Liquid	3/8					
Refrigerant Tubes* (In. OD)						
Rated Vapor*	5/8	3/4	3/4	7/8	7/8	1 1/8
Max Liquid Line†	3/8					

* Units are rated with 25 ft. (7.6 m) of lineset length. Review the VAPOR LINE SIZING AND COOLING CAPACITY LOSS section when using other lineset sizes and lengths of lineset.
Note: Review the unit's Installation Instructions for proper installation guidance.

†Liquid Line Sizing For Cooling Only Systems with R-410A refrigerant.

REFRIGERANT PIPING LENGTH LIMITATIONS

Liquid Line Sizing and Maximum Total Equivalent Lengths† for Cooling Only Systems with Refrigerant:

The maximum allowable length of a residential split system depends on the liquid line diameter and vertical separation between the indoor and outdoor units. Review "Maximum Total Equivalent Length Outdoor Unit BELOW Indoor Unit," for the liquid line sizing and maximum lengths.

Maximum Total Equivalent Length Outdoor Unit BELOW Indoor Unit

SIZE	LIQUID LINE CONNECTION (IN. OD)	LIQUID LINE DIAM. W/ TXV (IN. OD)	AC WITH R-410A REFRIGERANT MAXIMUM TOTAL EQUIVALENT LENGTH: OUTDOOR UNIT BELOW INDOOR VERTICAL SEPARATION FT (M)								
			0-5 (0-1.5)	6-10 (1.8-3.0)	11-20 (3.4-6.1)	21-30 (6.4-9.1)	31-40 (9.4-12.2)	41-50 (12.5-15.2)	51-60 (15.5-18.3)	61-70 (18.6-21.3)	71-80 (21.6-24.4)
018 AC with R-410A	3/8	1/4	150	150	125	100	100	75	--	--	--
		5/16	250*	250*	250*	250*	250*	250*	250*	225*	150
		3/8	250*	250*	250*	250*	250*	250*	250*	250*	250*
024 AC with R-410A	3/8	1/4	75	75	75	50	50	--	--	--	--
		5/16	250*	250*	250*	250*	250*	225*	175	125	100
		3/8	250*	250*	250*	250*	250*	250*	250*	250*	250*
030 AC with R-410A	3/8	1/4	30	--	--	--	--	--	--	--	--
		5/16	175	225*	200	175	125	100	75	--	--
		3/8	250*	250*	250*	250*	250*	250*	250*	250*	250*
036 AC with R-410A	3/8	5/16	175	150	150	100	100	100	75	--	--
		3//8	250*	250*	250*	250*	250*	250*	250*	250*	250*
048 AC with R-410A	3/8	3/8	250*	250*	250*	250*	250*	250*	230	160	--
060 AC with R-410A	3/8	3/8	250*	250*	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

Maximum Total Equivalent Length Outdoor Unit ABOVE Indoor Unit

SIZE	LIQUID LINE CONNECTION (IN. OD)	LIQUID LINE DIAM. W/ TXV (IN. OD)	AC WITH R-410A REFRIGERANT MAXIMUM TOTAL EQUIVALENT LENGTH: OUTDOOR UNIT ABOVE INDOOR VERTICAL SEPARATION FT (M)							
			25 (7.6)	26-50 (7.9-15.2)	51-75 (15.5-22.9)	76-100 (23.2-30.5)	101-125 (30.8-38.1)	126-150 (38.4-45.7)	151-175 (46.0-53.3)	176-200 (53.6-61.0)
018 AC with R-410A	3/8	1/4	175	250*	250*	250*	250*	250*	250*	250*
		5/16	250*	250*	250*	250*	250*	250*	250*	250*
		3/8	250*	250*	250*	250*	250*	250*	250*	250*
024 AC with R-410A	3/8	1/4	100	125	175	200	225*	250*	250*	250*
		5/16	250*	250*	250*	250*	250*	250*	250*	250*
		3/8	250*	250*	250*	250*	250*	250*	250*	250*
030 AC with R-410A	3/8	1/4	30	--	--	--	--	--	--	--
		5/16	250*	250*	250*	250*	250*	250*	250*	250*
		3/8	250*	250*	250*	250*	250*	250*	250*	250*
036 AC with R-410A	3/8	5/16	225*	250*	250*	250*	250*	250*	250*	250*
		3/8	250*	250*	250*	250*	250*	250*	250*	250*
048 AC with R-410A	3/8	3/8	250*	250*	250*	250*	250*	250*	250*	250*
060 AC with R-410A	3/8	3/8	250*	250*	250*	250*	250*	250*	250*	250*

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

† Total equivalent length accounts for losses due to elbows or fitting. See "LONG-LINE APPLICATIONS," for details.

-- = outside acceptable range

REFRIGERANT CHARGE ADJUSTMENTS

LIQUID LINE SIZE (IN. OD)	R-410A CHARGE OZ/FT (G/M)
3/8	0.60 (17.74) (Factory charge for lineset = 9 oz / 266.16 g)
5/16	0.40 (11.83)
1/4	0.27 (7.98)

Units are factory charged for 15 ft (4.6 m) of 3/8” liquid line. The factory charge for 3/8” lineset 9 oz (266.16 g). When using other length or diameter liquid lines, charge adjustments are required per the REFRIGERANT CHARGE ADJUSTMENTS table.

Charging Formula:

[(Lineset oz/ft x total length) – (factory charge for lineset)] = charge adjustment

Example 1: System has 15 ft of line set using existing 1/4 “liquid line. What charge adjustment is required?

Formula:

(.27 oz/ft x 15ft) – (9 oz) = (4.95) oz.

Net result is to remove 4.95 oz of refrigerant from the system

Example 2: System has 45 ft of existing 5/16” liquid line. What is the charge adjustment?

Formula:

(.40 oz/ft. x 45ft) – (9 oz.) = 9 oz.

Net result is to add 9 oz of refrigerant to the system

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. See ACCESSORY USAGE GUIDELINES on page 17 for the required accessories. 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 air conditioner systems, the “AC WITH R-410A REFRIGERANT LONG-LINE DESCRIPTION ft (m)” table shows when an application is considered long-line.

AC WITH R-410A REFRIGERANT LONG-LINE DESCRIPTION ft (m)

Beyond these lengths, long line accessories are required

LIQUID LINE SIZE (IN. OD)	UNITS ON SAME LEVEL - FT (M)	OUTDOOR BELOW INDOOR - FT (M)	OUTDOOR ABOVE INDOOR - FT (M)
1/4	No accessories needed within allowed lengths	No accessories needed within allowed lengths	175 (53.3)
5/16	120 (36.6)	50 (15.2) vertical or 120 (36.6) total	120 (36.6)
3/8	80 (24.4)	35 (10.7) vertical or 80 24.4) total	80 (24.4)

VAPOR LINE SIZING AND COOLING CAPACITY LOSS

LONG LINE APPLICATION: An application is considered **"long-line"** when the total equivalent tubing length exceeds 80 ft. (24.4 m) or when there is more than 20 ft. (6.09 m) vertical separation between the indoor and outdoor units. These applications require additional accessories and system modifications for reliable system operation. The maximum allowable total equivalent length is up to 250 ft. (76.2 m).

The maximum vertical separation is 200 ft. (60.96 m) when the outdoor unit is above the indoor unit, and up to 80 ft. (24.4 m) when the outdoor unit is below the indoor unit. Refer to the ACCESSORY USAGE GUIDELINES on page 17 for required accessories. See the Long-line Application Guideline for required piping and system modifications. Also, refer to the "Vapor Line Sizing and Cooling Capacity Losses — R-410A Refrigerant 1-Stage Air Conditioner Applications" table for the vapor tube diameters based on the total length to minimize the cooling capacity loss.

Vapor Line Sizing and Cooling Capacity Losses — R-410A Refrigerant 1-Stage Air Conditioner Applications

Unit Nominal Size (Btuh)	Maximum Liquid Line Diameters (In. OD)	Vapor Line Diameters (In. OD)	Cooling Capacity Loss (%) Total Equivalent Line Length ft. (m)								
			26-50 (7.9-15.2)	51-80 (15.5-24.4)	81-100 (24.7-30.5)	101-125 (30.8-38.1)	126-150 (38.4-45.7)	151-175 (46.0-53.3)	176-200 (53.6-61.0)	201-225 (61.3-68.6)	226-250 (68.9-76.2)
018 1 Stage AC with R-410A	3/8	1/2	1	2	3	5	6	7	8	9	11
		5/8	0	1	1	1	2	2	2	3	3
		3/4	0	0	0	0	1	1	1	1	1
024 1 Stage AC with R-410A	3/8	5/8	0	1	2	2	3	3	4	5	5
		3/4	0	0	1	1	1	1	1	2	2
		7/8	0	0	0	0	0	1	1	1	1
030 1 Stage AC with R-410A	3/8	5/8	1	2	3	3	4	5	6	7	8
		3/4	0	0	1	1	1	2	2	2	3
		7/8	0	0	0	0	1	1	1	1	1
036 1 Stage AC with R-410A	3/8	5/8	1	2	4	5	6	8	9	10	12
		3/4	0	1	1	2	2	3	3	4	4
		7/8	0	0	0	1	1	1	1	2	2
048 1 Stage AC with R-410A	3/8	3/4	0	1	2	3	4	5	5	6	7
		7/8	0	0	1	1	2	2	2	3	3
		1 1/8	0	0	0	0	0	0	0	1	1
060 1 Stage AC with R-410A	3/8	3/4	1	2	4	5	6	7	9	10	11
		7/8	0	1	2	2	3	4	4	5	5
		1 1/8	0	0	0	1	1	1	1	1	1

*Applications in this area may be long- line and may have height restrictions. See LONG-LINE APPLICATIONS on page 5.

ELECTRICAL DATA

UNIT SIZE - voltage, series	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MAX FUSE** or CKT BRK AMPS
		MAX	MIN	LRA	RLA	FLA		
18AKA	208/230/1	253	197	56.3	9.0	0.50	11.8	20
24AKA				62.9	10.9	0.50	14.1	25
30AKA				73.0	14.1	0.70	18.3	30
36AKA				77.0	14.1	1.20	18.8	30
48AKA				124.0	18.5	1.20	24.3	40
60AKA				152.5	23.7	1.45	31.1	50
36AHA	208/230/3	253	197	71.0	9.0	1.20	12.5	20
48AHA				83.1	13.7	1.20	18.3	30
60AHA				110.0	15.9	1.45	21.4	35
36ALA	460/3	506	414	38.0	5.6	0.60	7.6	15
48ALA				41.0	6.2	0.60	8.4	15
60ALA				52.0	7.1	0.80	9.7	15

LEGEND:
FLA - Full Load Amps
HACR - Heating, Air Conditioning, Refrigeration
LRA - Locked Rotor Amps
NEC - National Electrical Code
RLA - Rated Load Amps (compressor)
* Permissible limits of the voltage range at which the unit operates satisfactorily
** Time-Delay fuse.
Complies with 2007 requirements of ASHRAE Standards 90.1

A-WEIGHTED SOUND POWER (dba)

UNIT SIZE	STANDARD RATING (DBA)	TYPICAL OCTAVE BAND SPECTRUM (DBA, WITHOUT TONE ADJUSTMENT)						
		125	250	500	1000	2000	4000	8000
18	69	50.5	57.0	59.5	64.5	60.5	53.5	43.0
24	66	50.5	58.5	60.5	59.5	56.5	51.0	41.5
30	68	55.5	59.5	61.5	63.5	60.0	58.0	49.5
36	71	59.5	59.5	62.0	65.5	63.5	62.0	55.0
48	70	57.5	59.5	64.0	66.0	63.0	60.5	54.5
60	73	60.0	61.5	64.5	67.0	66.0	65.5	58.0

A−WEIGHTED SOUND POWER (dBA) WITH ACCESSORY SOUND SHIELD

UNIT SIZE	STANDARD RATING (DBA)	TYPICAL OCTAVE BAND SPECTRUM (DBA, WITHOUT TONE ADJUSTMENT)						
		125	250	500	1000	2000	4000	8000
18	68	52.5	58.0	58.5	64.5	59.5	52.5	42.5
24	65	54.5	57.5	59.5	59.0	56.0	50.5	40.5
30	68	55.0	60.0	61.5	62.5	60.0	58.0	49.5
36	71	59.5	59.5	62.5	65.0	63.0	61.5	55.0
48	70	57.5	59.5	63.0	65.0	62.5	60.0	54.0
60	73	61.0	62.0	64.0	67.0	65.5	65.5	57.5

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

SOUND PRESSURE LEVELS, (dBA)

UNIT SIZE	AT DISTANCE 10' FROM UNIT	AT DISTANCE 15' FROM UNIT	AT DISTANCE 20' FROM UNIT
18	51.5	48.0	45.5
24	48.5	45.0	42.5
30	50.5	47.0	44.5
36	53.5	50.0	47.5
48	52.5	49.0	46.5
60	55.5	52.0	49.5

NOTE: Sound pressure data vs distance converted using AHRI 275 Standard under certain environmental and layout assumptions.

CHARGING SUB−COOLING (TXV−TYPE EXPANSION DEVICE)

UNIT SIZE-SERIES	REQUIRED SUBCOOLING °F (°C)
18	12 (6.7)
24	12 (6.7)
30	12 (6.7)
36	8 (4.4)
48	12 (6.7)
60	10 (5.6)

NOTE: The conversion is accurate **only** when all the assumptions are correct.

TESTED AHRI COMBINATION RATINGS*

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

For AHRI ratings certificates, refer to the AHRI directory

www.ahridirectory.org

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

http://www.icpeqp.comAHRIratingsratings.aspx?Brand=Comfortmaker

Or scan this QR code:

Outdoor Model Number	Indoor Coil Model Number	Furnace Model Number	Capacity	EER	SEER
NH4A418AKA	EN(A,D)4X30L14**+TDR		18,000	12.2	14
NH4A424AKA	EN(A,D)4X31L17**+TDR		24,000	12.2	14
NH4A430AKA	EN(A,D)4X31L17**+TDR		29,600	12.2	14
NH4A436AKA	EN(A,D)4X37L17**+TDR		35,400	12.2	14
NH4A436AHA	EN(A,D)4X37L17**+TDR		35,400	12.2	14
NH4A436ALA	EN(A,D)4X37L17**+TDR		35,400	12.2	14
NH4A448AKA	EN(A,D,W)4X60L24**+TDR		45,000	11.7	14
NH4A448AHA	EN(A,D,W)4X60L24**+TDR		45,000	11.7	14
NH4A448ALA	EN(A,D,W)4X60L24**+TDR		45,000	11.7	14
NH4A460AKA	EN(A,D)4X61L24**+TDR		57,000	11.7	14
NH4A460AHA	EN(A,D)4X61L24**+TDR		57,000	11.7	14
NH4A460ALA	EN(A,D)4X61L24**+TDR		57,000	11.7	14

EER — Energy Efficiency Ratio
SEER— Seasonal Energy Efficiency Ratio
TXV — Thermostatic Expansion Valve

NOTES:

1. Ratings are net values reflecting the effects of circulating fan motor heat. Supplemental electric heat is not included.
2. Tested outdoor/indoor combinations have been tested in accordance with DOE test procedures for central air conditioners. Ratings for other combinations are determined under DOE computer simulation procedures.
3. Determine actual CFM values obtainable for your system by referring to fan performance data in fan coil or furnace coil literature.
4. Do not apply with capillary tube coils as performance and reliability are significantly affected.

DIMENSIONS-ENGLISH

UNIT	Series	Electrical Characteristics				A	B	C	D	E	F	G	H	J	K	L	M	N	P	Operating Weight (lbs)	Shipping Weight (lbs)	Shipping Dimensions (L x W x H)
NH4A418	1	X	0	0	0	31 1/8"	36 15/16"	14 9/16"	16"	23 7/16"	17 3/16"	23 1/8"	28 1/16"	13"	6 5/8"	11 1/4"	5/8"	2 7/8"	5 13/16"	146	166	42 15/16" x 18" x 34 1/8"
NH4A424	1	X	0	0	0	31 1/8"	36 15/16"	14 9/16"	16"	23 7/16"	17 3/16"	23 1/8"	28 1/16"	14"	6 3/4"	11 5/8"	3/4"	2 7/8"	5 13/16"	148	168	42 15/16" x 18" x 3 4 1/8"
NH4A430	1	X	0	0	0	37 1/8"	44 1/2"	17 1/16"	18 7/16"	30 1/2"	19 5/8"	29 1/8"	34 1/16"	13 11/16"	8 1/8"	15 7/8"	3/4"	3 3/8"	6 3/8"	183	213	50 1/2" x 20 1/2" x 40 1/8"
NH4A436	1	X	0	X	X	37 1/8"	44 1/2"	17 1/16"	18 7/16"	30 1/2"	19 5/8"	29 1/8"	34 1/16	13 11/16"	8 1/8"	15 7/8"	7/8"	3 3/8"	6 3/8"	184	214	50 1/2" x 20 1/2" x 40 1/8"
NH4A448	1	X	0	X	X	37 1/8"	44 1/2"	17 1/16"	18 7/16"	30 1/2"	19 5/8"	29 1/8"	34 1/16	14 1/2"	8 1/2"	18 7/8"	7/8"	3 3/8"	6 3/8"	213	243	50 1/2" x 20 1/2" x 40 1/8"
NH4A460	1	X	0	X	X	43 1/8"	44 1/2"	17 1/16"	18 7/16"	30 1/2"	19 5/8"	35 1/8"	40 1/16"	14 1/2"	8 1/2"	18 7/8"	7/8"	3 3/8"	6 3/8"	245	275	50 1/2" x 20 1/2" x 46 1/8"
		208-230-1-60	203-1-60	208/230-3-60	460-3-60																	

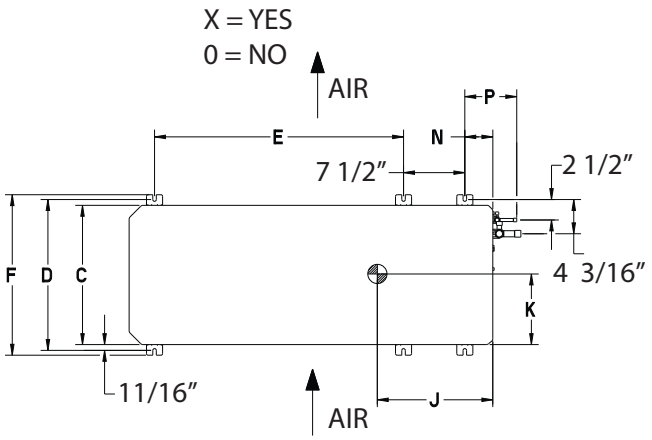

Fig. 2 — Dimensions

1. Clearance Requirements:
   a. Single Unit Applications:
   With the coil facing the wall, allow 6in (152mm) minimum clearance on the coil side, the coil end, and allow 20in (508mm) minimum clearance on the fan side.

   With the fan facing the wall, allow 8in (203mm) minimum clearance on the fan side, 6in (152mm) on the coil end and 20in (508mm) minimum clearance on the coil side.

   b. Multi Unit Applications:
   Allow 24in (610mm) minimum clearance between the fan and the coil sides of the multiple units. Arrange the units so the discharge of one unit does not enter the inlet of the other unit. When two units are installed end to end with the coil ends facing each other allow 12in (305mm) in minimum clearance between the units.

   c. Compressor End Service Clearance:
   Allow 24in (610mm) minimum clearance on the compressor end when the units are stacked or there is less than 40 in. (1016mm) of clearance above the top of the unit. If there is 40 in. (1016mm) of clearance above the unit and top panel is accessible for removal, allow 8in (203mm) minimum clearance minimum clearance on the compressor end for service.

IMPORTANT: When installing single or multiple units in an alcove, roof well, or partially enclosed area, ensure there is adequate ventilation to prevent recirculation of discharged air.

2. Minimum outdoor operating ambient in the **COOLING** mode is 55°F (13°C) and a maximum of 125°F (52°C).
3. Series designation is the 13th position of the unit model number
4. Center of gravity
5. All dimensions are in inches unless noted.

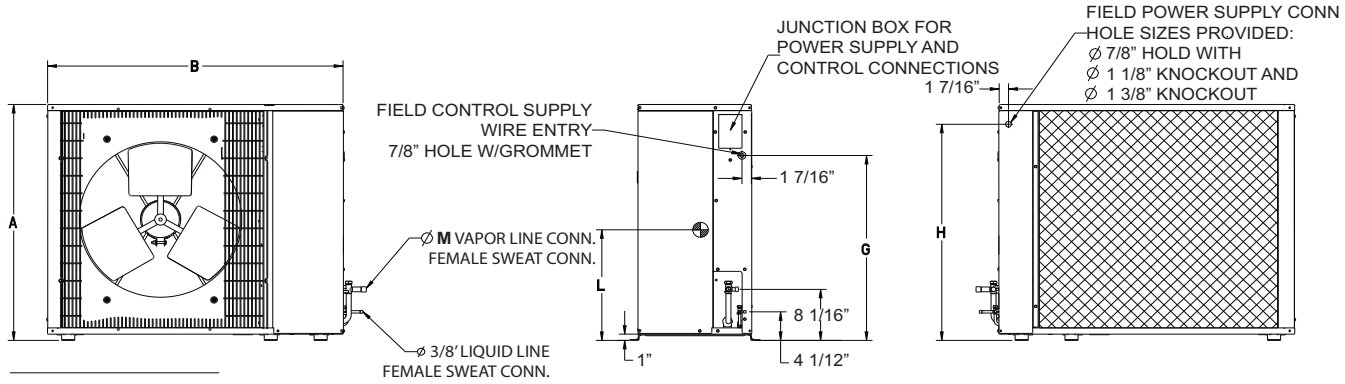

Fig. 3 — Dimensions

UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
18,24	23" x 42"
30,36,48,60	24" x 50"

DIMENSIONS-SI

UNIT	Series	Electrical Characteristics				A	B	C	D	E	F	G	H	J	K	L	M	N	P	Operating Weight (KG)	Shipping Weight (KG)	Shipping Dimensions (L x W x H)
NH4A418	1	X	0	0	0	790.4	938.0	370.0	406.0	595.5	436.0	587.6	712.2	330.2	168.3	285.8	15.9	73.0	148.2	66.2	75.3	1090.2 x 45.7 x 866.7
NH4A424	1	X	0	0	0	790.4	938.0	370.0	406.0	595.5	436.0	587.6	712.2	355.5	171.5	295.3	19.1	73.0	148.2	67.1	76.2	1090.2 x 45.7 x 866.7
NH4A430	1	X	0	0	0	942.8	1130.0	433.0	469.0	774.5	499.0	740.0	864.6	347.7	206.4	403.2	19.1	86.0	161.2	83.0	96.6	1282.7 x 520.7 x 1019.1
NH4A436	1	X	0	X	X	942.8	1130.0	433.0	469.0	774.5	499.0	740.0	864.6	347.7	206.4	403.2	22.2	86.0	161.2	83.5	97.1	1282.7 x 520.7 x 1019.1
NH4A448	1	X	0	X	X	942.8	1130.0	433.0	469.0	774.5	499.0	740.0	864.6	368.3	215.9	479.4	22.2	86.0	161.2	96.6	110.2	1282.7 x 520.7 x 1019.1
NH4A460	1	X	0	X	X	1095.2	1130.0	433.0	469.0	774.5	499.0	892.4	1,017.0	368.3	215.9	479.4	22.2	86.0	161.2	245	124.7	1282.7 x 520.7 x 1717.5
		208-230-1-60	203-1-60	208/230-3-60	460-3-60																	

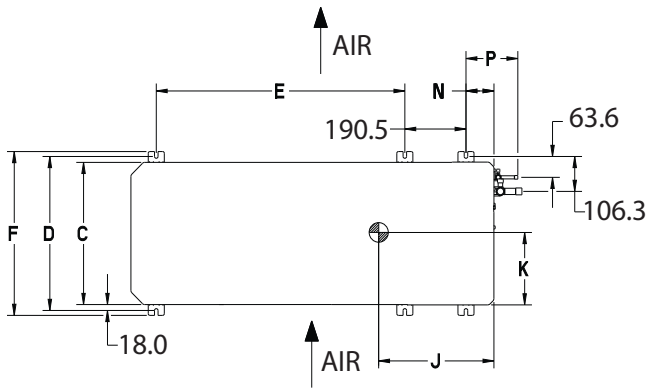

Fig. 4 — Dimensions

1. Clearance Requirements:
   a. Single Unit Applications:
   With the coil facing the wall, allow 6in (152.4mm) minimum clearance on the coil side, the coil end and allow 20in (508mm) minimum clearance on the fan side. With the fan facing the wall allow 8in (203.2mm) minimum clearance on the fan side and 6in (152.4mm) on the coil end plus 20in (504.0mm) minimum clearance on the coil side.
   b. Multi Unit Applications:
   Allow 24in (609.6mm) minimum clearance between the fan and coil sides of the multiple units. Arrange the units so the discharge of one does not enter the inlet of another. When two units are installed end to end with the coil ends facing each other, allow 12in (304.8 mm) minimum clearance between the units.
   c. Compressor End Service Clearance:
   Allow 24in (609.6mm) minimum clearance on the compressor end when the units are stacked or there is less than 40in (1016mm) of clearance above the top of the unit. If there is 40in (1016mm) clearance above the unit and the top panel is accessible for removal, allow 8in (203.2mm) minimum clearance on the compressor end for service.

IMPORTANT: When installing single or multiple units in an alcove, roof well, or partially enclosed area, ensure there is adequate ventilation to prevent recirculation of discharged air.

2. Minimum outdoor operating ambient in the **COOLING** mode is 12.8°F (12.8°C) and a maximum of 125°F (51.7°C)
3. Series designation is the 14th position of the unit model number
4. Center of gravity
5. All dimensions are in millimeters unless noted.

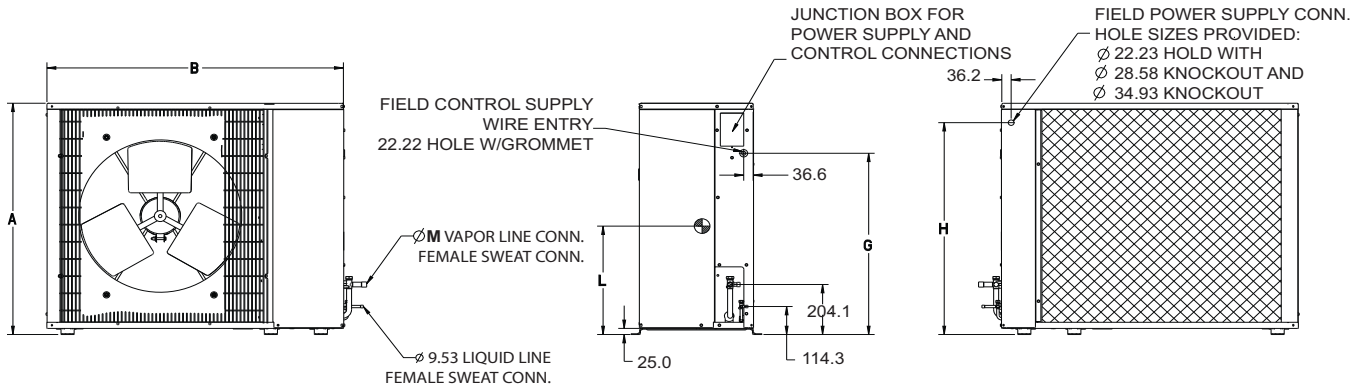

Fig. 5 — Dimensions

UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
18,24	584.2 x 1066.8
30,36,48,60	609.6 x 1270.0

DETAILED COOLING CAPACITIES

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
CFM	EWB °F (°C)	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
NH4A418AKA Outdoor Section With EN(A,D)4X30L14 Indoor Section**																			
525	72 (22.2)	21.49	10.92	1.18	20.55	10.57	1.31	19.56	10.21	1.45	18.50	9.83	1.61	17.36	9.43	1.79	16.12	9.00	2.00
	67 (19.4)	19.43	13.31	1.18	18.58	12.96	1.31	17.67	12.60	1.45	16.71	12.22	1.61	15.68	11.82	1.79	14.57	11.39	2.00
	63 (17.2)	17.96	12.78	1.18	17.15	12.43	1.31	16.31	12.06	1.45	15.43	11.69	1.61	14.48	11.29	1.79	13.46	10.86	2.00
	62 (16.7)	17.68	15.68	1.18	16.91	15.33	1.31	16.11	14.96	1.45	15.28	14.56	1.61	14.48	14.48	1.79	13.65	13.65	2.00
	57 (13.9)	17.17	17.17	1.18	16.55	16.55	1.31	15.91	15.91	1.45	15.21	15.21	1.61	14.46	14.46	1.79	13.63	13.63	2.00
600	72 (22.2)	21.93	11.50	1.21	20.94	11.14	1.34	19.90	10.77	1.48	18.79	10.38	1.64	17.61	9.97	1.82	16.32	9.53	2.03
	67 (19.4)	19.84	14.22	1.21	18.94	13.87	1.34	18.00	13.50	1.48	17.00	13.11	1.63	15.93	12.70	1.82	14.78	12.26	2.03
	63 (17.2)	18.34	13.63	1.21	17.51	13.27	1.33	16.63	12.90	1.47	15.70	12.51	1.63	14.72	12.10	1.82	13.65	11.66	2.03
	62 (16.7)	18.14	16.91	1.21	17.36	16.53	1.33	16.61	16.61	1.47	15.86	15.86	1.63	15.05	15.05	1.82	14.15	14.15	2.03
	57 (13.9)	17.95	17.95	1.21	17.29	17.29	1.33	16.59	16.59	1.47	15.84	15.84	1.63	15.02	15.02	1.82	14.13	14.13	2.03
675	72 (22.2)	22.25	12.05	1.24	21.22	11.69	1.36	20.15	11.31	1.50	19.00	10.91	1.66	17.78	10.50	1.85	16.46	10.05	2.06
	67 (19.4)	20.15	15.11	1.24	19.22	14.74	1.36	18.25	14.37	1.50	17.22	13.97	1.66	16.12	13.55	1.85	14.94	13.09	2.06
	63 (17.2)	18.64	14.45	1.24	17.77	14.08	1.36	16.86	13.70	1.50	15.91	13.30	1.66	14.90	12.88	1.84	13.81	12.42	2.05
	62 (16.7)	18.63	18.63	1.24	17.92	17.92	1.36	17.18	17.18	1.50	16.38	16.38	1.66	15.51	15.51	1.84	14.56	14.56	2.06
	57 (13.9)	18.60	18.60	1.24	17.89	17.89	1.36	17.15	17.15	1.50	16.36	16.36	1.66	15.49	15.49	1.84	14.55	14.55	2.06

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 °F (23.9°C)			85 °F (29.4°C)			95 °F (35°C)			105 °F (40.6°C)			115 °F (46.1°C)			125 °F (51.7°C)		
CFM	EWB °F (°C)	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
NH4A424AKA Outdoor Section With EN(A,D)4X31L17 Indoor Section**																			
700	72 (22.2)	28.62	14.23	1.58	27.33	13.77	1.75	25.95	13.30	1.94	24.48	12.80	2.15	22.90	12.26	2.40	21.21	11.70	2.67
	67 (19.4)	26.06	17.53	1.57	24.88	17.08	1.74	23.63	16.60	1.93	22.30	16.09	2.14	20.87	15.56	2.39	19.33	14.99	2.67
	63 (17.2)	24.20	16.87	1.57	23.11	16.41	1.74	21.96	15.94	1.92	20.73	15.44	2.14	19.41	14.91	2.38	17.99	14.34	2.66
	62 (16.7)	23.80	20.79	1.57	22.74	20.32	1.73	21.65	19.83	1.92	20.58	20.58	2.14	19.51	19.51	2.38	18.33	18.33	2.66
	57 (13.9)	23.29	23.29	1.57	22.44	22.44	1.73	21.53	21.53	1.92	20.55	20.55	2.14	19.48	19.48	2.38	18.31	18.31	2.66
800	72 (22.2)	29.11	14.99	1.62	27.76	14.53	1.79	26.33	14.04	1.98	24.80	13.53	2.19	23.16	12.99	2.43	21.41	12.42	2.71
	67 (19.4)	26.53	18.75	1.61	25.30	18.29	1.78	24.00	17.80	1.97	22.61	17.28	2.18	21.13	16.74	2.43	19.54	16.16	2.70
	63 (17.2)	24.68	18.01	1.61	23.53	17.54	1.77	22.33	17.06	1.96	21.05	16.55	2.18	19.67	16.00	2.42	18.21	15.42	2.70
	62 (16.7)	24.39	22.42	1.61	23.40	23.40	1.77	22.42	22.42	1.96	21.36	21.36	2.18	20.20	20.20	2.42	18.94	18.94	2.70
	57 (13.9)	24.28	24.28	1.61	23.36	23.36	1.77	22.39	22.39	1.96	21.32	21.32	2.18	20.17	20.17	2.42	18.91	18.91	2.70
900	72 (22.2)	29.46	15.72	1.66	28.07	15.25	1.83	26.59	14.76	2.01	25.01	14.24	2.23	23.33	13.69	2.47	21.53	13.11	2.75
	67 (19.4)	26.88	19.93	1.65	25.61	19.46	1.82	24.27	18.96	2.01	22.84	18.43	2.22	21.32	17.87	2.46	19.70	17.27	2.74
	63 (17.2)	25.04	19.11	1.65	23.85	18.63	1.81	22.60	18.14	2.00	21.28	17.61	2.21	19.87	17.05	2.46	18.38	16.43	2.74
	62 (16.7)	25.15	25.15	1.65	24.16	24.16	1.81	23.11	23.11	2.00	21.98	21.98	2.22	20.75	20.75	2.46	19.42	19.42	2.74
	57 (13.9)	25.11	25.11	1.65	24.13	24.13	1.81	23.08	23.08	2.00	21.95	21.95	2.22	20.73	20.73	2.46	19.29	19.39	2.74

See the notes on page 12.

DETAILED COOLING CAPACITIES (CONT.)

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75°F (23.9°C)			85°F (29.4°C)			95°F (35°C)			105°F (40.6°C)			115°F (46.1°C)			125°F (51.7°C)		
CFM	EWB °F (°C)	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**	Capacity MBtuh†		Total System KW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
NH4A430AKA Outdoor Section With EN(A,D)4X31L17** Indoor Section																			
875	72 (22.2)	35.20	16.84	1.95	33.62	16.29	2.18	31.97	15.73	2.43	30.18	15.13	2.70	28.24	14.48	3.02	26.13	13.79	3.38
	67 (19.4)	31.99	20.62	1.92	30.56	20.08	2.15	29.06	19.51	2.40	27.44	18.91	2.68	25.67	18.26	3.00	23.75	17.57	3.36
	63 (17.2)	29.66	19.84	1.90	28.34	19.30	2.13	26.95	18.74	2.37	25.45	18.13	2.66	23.80	17.48	2.98	22.02	16.78	3.35
	62 (16.7)	29.18	24.36	1.90	27.92	23.82	2.12	26.58	23.24	2.37	25.18	24.97	2.65	23.81	23.81	2.98	22.34	22.34	3.35
	57 (13.9)	28.38	28.38	1.89	27.37	27.37	2.12	26.28	26.28	2.37	25.09	25.09	2.65	23.77	23.77	2.98	22.31	22.31	3.35
1000	72 (22.2)	35.90	17.73	1.98	34.26	17.17	2.21	32.52	16.59	2.46	30.66	15.98	2.74	28.65	15.32	3.05	26.46	14.62	3.41
	67 (19.4)	32.65	22.03	1.95	31.17	21.48	2.18	29.60	20.90	2.43	27.91	20.28	2.71	26.08	19.62	3.03	24.10	18.91	3.39
	63 (17.2)	30.30	21.15	1.93	28.93	20.60	2.16	27.48	20.02	2.40	25.91	19.41	2.69	24.21	18.74	3.01	22.36	18.02	3.37
	62 (16.7)	29.94	26.26	1.93	28.66	25.66	2.15	27.43	27.43	2.41	26.15	26.15	2.69	24.73	24.73	3.01	23.17	23.17	3.38
	57 (13.9)	29.65	29.65	1.93	28.56	28.56	2.15	27.39	27.39	2.40	26.11	26.11	2.69	24.70	24.70	3.01	23.14	23.14	3.38
1125	72 (22.2)	36.44	18.57	2.01	34.73	18.00	2.24	32.94	17.41	2.49	31.02	16.79	2.77	28.94	16.12	3.08	26.71	15.41	3.43
	67 (19.4)	33.18	23.38	1.98	31.64	22.82	2.21	30.01	22.23	2.46	28.28	21.60	2.74	26.40	20.92	3.05	24.38	20.18	3.41
	63 (17.2)	30.81	22.41	1.96	29.38	21.85	2.19	27.89	21.26	2.43	26.28	20.63	2.72	24.53	19.94	3.04	22.65	19.20	3.40
	62 (16.7)	30.76	30.76	1.96	29.59	29.59	2.19	28.34	28.34	2.44	26.99	26.99	2.72	25.49	25.49	3.05	23.84	23.84	3.41
	57 (13.9)	30.72	30.72	1.96	29.55	29.55	2.19	28.31	28.31	2.44	26.95	26.95	2.72	25.45	25.45	3.04	23.81	23.81	3.41

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75°F (23.9°C)			85°F (29.4°C)			95°F (35°C)			105°F (40.6°C)			115°F (46.1°C)			125°F (51.7°C)		
CFM	EWB °F (°C)	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
NH4A436AKA Outdoor Section With EN(A,D)4X37L17** Indoor Section																			
1050	72 (22.2)	42.58	22.26	2.36	40.51	21.51	2.60	38.30	20.71	2.87	35.94	19.87	3.16	33.37	18.97	3.50	30.62	18.01	3.88
	67 (19.4)	38.73	27.46	2.34	36.87	26.71	2.58	34.88	25.92	2.84	32.74	25.08	3.14	30.43	24.18	3.48	27.97	23.23	3.86
	63 (17.2)	35.96	26.41	2.32	34.24	25.67	2.56	32.40	24.88	2.82	30.43	24.04	3.12	28.31	23.15	3.46	26.03	22.20	3.85
	62 (16.7)	35.38	32.60	2.32	33.73	31.84	2.56	32.01	31.81	2.82	30.38	30.38	3.12	28.63	28.63	3.46	26.73	26.73	3.85
	57 (13.9)	34.71	34.71	2.31	33.37	33.37	2.55	31.92	31.92	2.82	30.34	30.34	3.12	28.59	28.59	3.46	26.70	26.70	3.85
1200	72 (22.2)	43.29	23.46	2.42	41.13	22.69	2.66	38.84	21.88	2.93	36.37	21.02	3.22	33.71	20.10	3.56	30.85	19.13	3.94
	67 (19.4)	39.43	29.38	2.40	37.47	28.61	2.64	35.40	27.80	2.90	33.18	26.94	3.20	30.79	26.02	3.53	28.26	25.05	3.92
	63 (17.2)	36.64	28.20	2.38	34.83	27.43	2.62	32.92	26.62	2.88	30.87	25.77	3.18	28.67	24.85	3.52	26.33	23.88	3.91
	62 (16.7)	36.27	36.05	2.38	34.77	34.77	2.62	33.20	33.20	2.89	31.50	31.50	3.19	29.61	29.61	3.53	27.57	27.57	3.92
	57 (13.9)	36.17	36.17	2.38	34.71	34.71	2.62	33.15	33.15	2.89	31.45	31.45	3.19	29.57	29.57	3.53	27.54	27.54	3.91
1350	72 (22.2)	43.81	24.60	2.48	41.58	23.82	2.72	39.20	23.00	2.99	36.66	22.13	3.28	33.92	21.20	3.62	31.04	20.23	4.00
	67 (19.4)	39.93	31.22	2.46	37.92	30.44	2.70	35.78	29.61	2.96	33.50	28.73	3.26	31.06	27.78	3.59	28.49	26.76	3.98
	63 (17.2)	37.14	29.91	2.44	35.28	29.13	2.68	33.30	28.30	2.94	31.20	27.42	3.24	28.94	26.47	3.58	26.58	25.43	3.97
	62 (16.7)	37.43	37.43	2.44	35.87	35.87	2.68	34.21	34.21	2.95	32.39	32.39	3.25	30.39	30.39	3.59	28.23	28.23	3.98
	57 (13.9)	37.38	37.38	2.44	35.83	35.83	2.68	34.16	34.16	2.95	32.35	32.35	3.25	30.36	30.36	3.59	28.20	28.20	3.98

DETAILED COOLING CAPACITIES (CONT.)

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75°F (23.9°C)			85°F (29.4°C)			95°F (35°C)			105°F (40.6°C)			115°F (46.1°C)			125°F (51.7°C)		
CFM	EWB °F (°C)	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
NH4A448AKA Outdoor Section With EN(A,D,W)4X60L24 Indoor Section**																			
1400	72 (22.2)	54.32	28.47	3.22	51.89	27.57	3.53	49.29	26.62	3.88	46.43	25.59	4.29	43.30	24.47	4.76	39.89	23.27	5.30
	67 (19.4)	49.54	35.14	3.19	47.35	34.25	3.49	45.00	33.30	3.85	42.43	32.28	4.25	39.60	31.16	4.72	36.51	29.95	5.26
	63 (17.2)	46.06	33.82	3.16	44.05	32.94	3.47	41.89	32.00	3.82	39.52	30.98	4.22	36.90	29.87	4.69	34.04	28.66	5.23
	62 (16.7)	45.44	41.73	3.15	43.53	40.82	3.46	41.48	39.82	3.81	39.37	39.37	4.22	37.22	37.22	4.70	34.80	34.80	5.24
	57 (13.9)	44.54	44.54	3.15	42.97	42.97	3.46	41.24	41.24	3.81	39.32	39.32	4.22	37.17	37.17	4.70	34.76	34.76	5.24
1600	72 (22.2)	55.17	29.90	3.30	52.64	28.99	3.61	49.92	28.01	3.96	46.96	26.96	4.37	43.72	25.83	4.84	40.19	24.61	5.38
	67 (19.4)	50.36	37.46	3.27	48.09	36.55	3.57	45.64	35.59	3.93	42.97	34.53	4.34	40.05	33.39	4.81	36.86	32.13	5.34
	63 (17.2)	46.86	35.98	3.24	44.77	35.09	3.55	42.51	34.12	3.90	40.05	33.08	4.31	37.35	31.93	4.77	34.40	30.67	5.31
	62 (16.7)	46.51	44.79	3.24	44.64	44.64	3.55	42.79	42.79	3.90	40.73	40.73	4.31	38.42	38.42	4.79	35.83	35.83	5.33
	57 (13.9)	46.30	46.30	3.24	44.60	44.60	3.55	42.73	42.73	3.90	40.67	40.67	4.31	38.37	38.37	4.79	35.79	35.79	5.33
1800	72 (22.2)	55.79	31.25	3.38	53.16	30.32	3.69	50.36	29.34	4.04	47.31	28.27	4.45	43.97	27.12	4.92	40.37	25.89	5.46
	67 (19.4)	50.98	39.68	3.35	48.62	38.75	3.65	46.10	37.76	4.01	43.37	36.69	4.42	40.37	35.50	4.89	37.14	34.18	5.42
	63 (17.2)	47.47	38.04	3.32	45.30	37.12	3.63	42.98	36.13	3.98	40.45	35.06	4.39	37.69	33.87	4.86	34.70	32.54	5.39
	62 (16.7)	47.80	47.80	3.32	45.99	45.99	3.63	44.00	44.00	3.99	41.81	41.81	4.40	39.36	39.36	4.88	36.64	36.64	5.42
	57 (13.9)	47.74	47.74	3.32	45.93	45.93	3.63	43.95	43.95	3.99	41.76	41.76	4.40	39.32	39.32	4.87	36.60	36.60	5.41

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75°F (23.9°C)			85°F (29.4°C)			95°F (35°C)			105°F (40.6°C)			115°F (46.1°C)			125°F (51.7°C)		
CFM	EWB °F (°C)	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**	Capacity MBtuh		Total Sys KW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
NH4A460AKA Outdoor Section With EN(A,D)4X61L24 Indoor Section**																			
1750	72 (22.2)	68.86	34.68	4.09	65.73	33.57	4.48	62.37	32.40	4.93	58.68	31.12	5.45	54.65	29.75	6.04	50.21	28.26	6.71
	67 (19.4)	62.81	42.85	4.03	60.01	41.76	4.42	57.00	40.60	4.87	53.69	39.34	5.39	50.05	37.96	5.98	46.03	36.46	6.65
	63 (17.2)	58.41	41.24	3.99	55.85	40.17	4.38	53.11	39.03	4.82	50.06	37.78	5.34	46.70	36.41	5.93	42.98	34.90	6.59
	62 (16.7)	57.61	50.93	3.98	55.17	49.82	4.37	52.58	48.59	4.82	49.93	49.93	5.34	47.15	47.15	5.94	44.00	44.00	6.61
	57 (13.9)	56.53	56.53	3.97	54.53	54.53	4.37	52.32	52.32	4.82	49.86	49.86	5.34	47.09	47.09	5.94	43.94	43.94	6.61
2000	72 (22.2)	69.94	36.44	4.19	66.66	35.31	4.58	63.14	34.10	5.04	59.32	32.81	5.56	55.14	31.41	6.15	50.56	29.90	6.81
	67 (19.4)	63.84	45.70	4.14	60.93	44.59	4.53	57.78	43.40	4.98	54.34	42.10	5.49	50.59	40.69	6.08	46.45	39.14	6.75
	63 (17.2)	59.43	43.90	4.09	56.76	42.80	4.48	53.87	41.62	4.93	50.72	40.34	5.44	47.25	38.93	6.03	43.42	37.37	6.70
	62 (16.7)	58.98	54.67	4.09	56.66	56.66	4.48	54.28	54.28	4.94	51.61	51.61	5.46	48.63	48.63	6.06	45.27	45.27	6.73
	57 (13.9)	58.76	58.76	4.09	56.58	56.58	4.48	54.20	54.20	4.93	51.55	51.55	5.46	48.57	48.57	6.05	45.22	45.22	6.73
2250	72 (22.2)	70.70	38.10	4.29	67.30	36.94	4.68	63.68	35.72	5.14	59.73	34.41	5.66	55.44	32.99	6.25	50.77	31.46	6.91
	67 (19.4)	64.61	48.42	4.24	61.59	47.28	4.63	58.35	46.06	5.08	54.82	44.74	5.59	50.98	43.27	6.18	46.79	41.64	6.85
	63 (17.2)	60.18	46.42	4.19	57.41	45.29	4.58	54.45	44.09	5.03	51.21	42.77	5.55	47.66	41.31	6.13	43.79	39.65	6.80
	62 (16.7)	60.66	60.66	4.20	58.34	58.34	4.59	55.79	55.79	5.05	52.96	52.96	5.57	49.81	49.81	6.17	46.25	46.25	6.84
	57 (13.9)	60.58	60.58	4.20	58.27	58.27	4.59	55.72	55.72	5.05	52.90	52.90	5.57	49.75	49.75	6.17	46.20	46.20	6.84

†Total and sensible capacities are net capacities. Blower mower hear has been subtracted.

‡Sensible capacities shown are based on 80F (27C) entering air at the indoor coil. For sensible capacities at other than 80F (27C), deduct 835 Btuh (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree below 80F (27C), or add 835 Btuh (245 kW) per 1000 CFM (480 L/S) of indoor coil air per degree above 80F (27C).

** System kw is total of indoor and outdoor unit kilowatts.

EWB — Entering Wet Bulb

NOTES:

1. 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.
2. When the required data falls between the published data, interpolation may be performed. Extrapolation is not an acceptable practice.

CONDENSER ONLY RATINGS

SST °F (°C)		CONDENSER ENTERING AIR TEMPERATURES °F (°C)							
		55 °F (12.78°C)	65 °F (18.33°C)	75 °F (23.89°C)	85 °F (29.44°C)	95 °F (35.0°C)	105 °F (40.56°C)	115 °F (46.11°C)	125 °F (51.67°C)
NH4A418AKA									
30°F (-1.11°C)	TCG	16.60	15.60	14.70	13.80	12.90	12.00	11.10	10.10
	SDT	68.50	78.00	87.50	97.00	106.50	116.00	125.40	134.70
	KW	0.76	0.87	0.99	1.11	1.25	1.40	1.59	1.80
35°F (1.67°C)	TCG	18.30	17.20	16.30	15.30	14.30	13.30	12.30	11.20
	SDT	69.70	79.20	88.70	98.20	107.60	117.00	126.30	135.50
	KW	0.76	0.87	0.99	1.11	1.25	1.41	1.59	1.80
40°F (4.44°C)	TCG	20.00	19.00	17.90	16.90	15.80	14.70	13.60	12.40
	SDT	71.10	80.50	89.90	99.40	108.70	118.00	127.20	136.30
	KW	0.77	0.88	0.99	1.11	1.25	1.41	1.59	1.80
45°F (7.22°C)	TCG	22.00	20.80	19.70	18.50	17.40	16.20	14.90	13.60
	SDT	72.50	81.90	91.30	100.60	109.80	119.00	128.20	137.20
	KW	0.77	0.88	0.99	1.12	1.26	1.41	1.59	1.80
50°F (10.0°C)	TCG	24.00	22.80	21.60	20.40	19.10	17.80	16.40	15.00
	SDT	74.00	83.40	92.60	101.90	111.00	120.10	129.20	138.20
	KW	0.77	0.88	0.99	1.12	1.26	1.41	1.59	1.80
55°F (12.78°C)	TCG	26.30	25.00	23.60	22.30	20.90	19.50	18.00	16.40
	SDT	75.60	84.80	94.10	103.20	112.30	121.30	130.30	139.20
	KW	0.78	0.88	1.00	1.12	1.26	1.42	1.60	1.80
NH4A424AKA									
30°F (-1.11°C)	TCG	21.40	20.20	19.00	17.80	16.60	15.40	14.20	12.90
	SDT	71.90	81.30	90.70	100.00	109.30	118.50	127.70	136.80
	KW	1.01	1.15	1.30	1.46	1.64	1.85	2.09	2.36
35°F (1.67°C)	TCG	23.50	22.20	20.90	19.60	18.30	17.00	15.60	14.20
	SDT	73.50	82.80	92.10	101.30	110.50	119.60	128.70	137.70
	KW	1.02	1.16	1.30	1.47	1.65	1.86	2.09	2.37
40°F (4.44°C)	TCG	25.70	24.40	23.00	21.60	20.20	18.70	17.20	15.60
	SDT	75.10	84.30	93.50	102.60	111.80	120.80	129.80	138.80
	KW	1.02	1.16	1.31	1.47	1.66	1.86	2.10	2.38
45°F (7.22°C)	TCG	28.20	26.70	25.20	23.70	22.10	20.50	18.90	17.10
	SDT	76.70	85.90	95.00	104.10	113.10	122.10	131.00	139.80
	KW	1.03	1.17	1.32	1.48	1.66	1.87	2.11	2.39
50°F (10.0°C)	TCG	30.80	29.20	27.50	25.90	24.20	22.40	20.60	18.70
	SDT	78.50	87.50	96.60	105.60	114.60	123.40	132.20	140.90
	KW	1.04	1.18	1.32	1.49	1.67	1.88	2.12	2.39
55°F (12.78°C)	TCG	33.60	31.80	30.10	28.30	26.40	24.50	22.40	20.30
	SDT	80.30	89.30	98.30	107.20	116.10	124.90	133.50	142.00
	KW	1.05	1.18	1.33	1.50	1.68	1.89	2.13	2.40
NH4A430AKA									
30°F (-1.11°C)	TCG	27.20	25.80	24.40	22.90	21.40	19.70	17.90	16.00
	SDT	69.90	79.20	88.60	98.00	107.30	116.60	125.80	134.80
	KW	1.22	1.39	1.57	1.77	2.00	2.27	2.58	2.94
35°F (1.67°C)	TCG	30.10	28.50	27.00	25.40	23.70	21.90	20.00	17.90
	SDT	71.20	80.60	89.90	99.20	108.50	117.70	126.80	135.80
	KW	1.22	1.40	1.58	1.78	2.01	2.28	2.58	2.94
40°F (4.44°C)	TCG	33.10	31.40	29.70	28.00	26.20	24.30	22.20	20.00
	SDT	72.70	82.00	91.20	100.50	109.70	118.90	127.90	136.90
	KW	1.23	1.41	1.59	1.80	2.03	2.29	2.59	2.94
45°F (7.22°C)	TCG	36.50	34.50	32.70	30.80	28.80	26.80	24.50	22.10
	SDT	74.30	83.50	92.70	101.90	111.00	120.10	129.10	137.90
	KW	1.25	1.43	1.61	1.82	2.05	2.31	2.60	2.95
50°F (10.0°C)	TCG	40.00	37.90	35.80	33.80	31.60	29.40	27.00	24.40
	SDT	76.00	85.10	94.20	103.40	112.40	121.40	130.30	139.00
	KW	1.27	1.45	1.64	1.84	2.07	2.33	2.62	2.95
55°F (12.78°C)	TCG	43.80	41.40	39.20	36.90	34.60	32.10	29.50	26.70
	SDT	77.90	86.90	95.90	104.90	113.90	122.80	131.50	140.20
	KW	1.29	1.47	1.66	1.87	2.09	2.35	2.64	2.97

See notes on page 14.

CONDENSER ONLY RATINGS (CONT.)

SST °F (°C)		CONDENSER ENTERING AIR TEMPERATURES °F (°C)							
		55°F (12.78°C)	65°F (18.33°C)	75°F (23.89°C)	85°F (29.44°C)	95°F (35.0°C)	105°F (40.56°C)	115°F (46.11°C)	125°F (51.67°C)
NH4A436AKA									
30°F (-1.11°C)	TCG	31.40	29.80	28.20	26.40	24.60	22.70	20.60	18.50
	SDT	68.70	78.10	87.50	96.80	106.20	115.50	124.70	134.00
	KW	1.48	1.69	1.91	2.14	2.40	2.69	3.04	3.44
35°F (1.67°C)	TCG	34.70	32.90	31.10	29.20	27.20	25.10	22.80	20.50
	SDT	70.00	79.30	88.60	97.90	107.20	116.40	125.60	134.80
	KW	1.48	1.70	1.91	2.15	2.41	2.70	3.05	3.45
40°F (4.44°C)	TCG	38.20	36.20	34.20	32.10	29.90	27.60	25.20	22.60
	SDT	71.30	80.50	89.80	99.10	108.30	117.40	126.50	135.60
	KW	1.49	1.70	1.92	2.16	2.42	2.72	3.06	3.45
45°F (7.22°C)	TCG	42.00	39.80	37.60	35.30	32.90	30.30	27.70	24.80
	SDT	72.80	81.90	91.10	100.30	109.40	118.50	127.50	136.40
	KW	1.50	1.72	1.94	2.18	2.44	2.73	3.07	3.46
50°F (10.0°C)	TCG	46.00	43.60	41.10	38.60	36.00	33.20	30.20	27.20
	SDT	74.40	83.40	92.50	101.60	110.60	119.60	128.50	137.30
	KW	1.52	1.74	1.96	2.20	2.46	2.75	3.08	3.47
55°F (12.78°C)	TCG	50.20	47.60	44.90	42.10	39.20	36.20	32.90	29.60
	SDT	76.10	85.00	94.00	103.00	111.90	120.80	129.50	138.20
	KW	1.54	1.76	1.98	2.22	2.48	2.77	3.10	3.48
NH4A448AKA									
30°F (-1.11°C)	TCG	41.50	39.50	37.40	35.40	33.20	30.80	28.20	25.40
	SDT	73.40	82.60	91.90	101.20	110.40	119.50	128.60	137.50
	KW	2.05	2.30	2.57	2.87	3.21	3.60	4.05	4.56
35°F (1.67°C)	TCG	45.70	43.40	41.20	38.90	36.50	33.90	31.10	28.10
	SDT	75.10	84.30	93.40	102.60	111.70	120.80	129.70	138.60
	KW	2.08	2.33	2.60	2.90	3.24	3.63	4.08	4.60
40°F (4.44°C)	TCG	50.10	47.70	45.20	42.70	40.10	37.20	34.20	30.90
	SDT	77.00	86.00	95.10	104.10	113.20	122.10	131.00	139.70
	KW	2.12	2.36	2.63	2.93	3.27	3.67	4.12	4.64
45°F (7.22°C)	TCG	54.80	52.20	49.50	46.70	43.80	40.70	37.40	33.80
	SDT	78.90	87.80	96.80	105.80	114.70	123.50	132.20	140.80
	KW	2.15	2.39	2.66	2.96	3.31	3.71	4.16	4.69
50°F (10.0°C)	TCG	59.90	56.90	54.00	51.00	47.80	44.40	40.70	36.80
	SDT	80.90	89.80	98.60	107.50	116.30	125.00	133.60	142.00
	KW	2.19	2.43	2.70	3.00	3.34	3.74	4.20	4.72
55°F (12.78°C)	TCG	65.20	62.00	58.80	55.40	51.90	48.20	44.20	39.90
	SDT	83.10	91.80	100.50	109.30	117.90	126.50	134.90	143.20
	KW	2.24	2.47	2.73	3.03	3.38	3.78	4.24	4.76
NH4A460AKA									
30°F (-1.11°C)	TCG	53.00	50.30	47.70	45.10	42.40	39.40	36.00	32.40
	SDT	76.00	85.10	94.30	103.50	112.70	121.70	130.60	139.40
	KW	2.59	2.90	3.23	3.61	4.03	4.52	5.08	5.71
35°F (1.67°C)	TCG	58.30	55.30	52.50	49.70	46.60	43.30	39.70	35.70
	SDT	78.00	87.00	96.10	105.20	114.20	123.10	131.90	140.60
	KW	2.64	2.94	3.28	3.65	4.08	4.58	5.14	5.78
40°F (4.44°C)	TCG	63.90	60.70	57.60	54.50	51.10	47.50	43.60	39.30
	SDT	80.00	88.90	97.90	106.90	115.80	124.70	133.30	141.90
	KW	2.69	2.99	3.32	3.70	4.14	4.63	5.20	5.84
45°F (7.22 °C)	TCG	70.00	66.50	63.10	59.60	55.90	51.90	47.60	42.90
	SDT	82.20	91.00	99.90	108.80	117.60	126.30	134.80	143.20
	KW	2.74	3.04	3.38	3.76	4.19	4.69	5.27	5.91
50°F (10.0°C)	TCG	76.40	72.60	68.80	65.00	60.90	56.50	51.80	46.70
	SDT	84.60	93.30	102.00	110.70	119.40	127.90	136.30	144.50
	KW	2.80	3.10	3.43	3.81	4.25	4.76	5.33	5.97
55°F (12.78°C)	TCG	83.30	79.10	74.90	70.60	66.10	61.30	56.10	50.60
	SDT	87.00	95.60	104.20	112.80	121.20	129.60	137.80	145.80
	KW	2.86	3.15	3.49	3.87	4.31	4.82	5.39	6.04

* AHRI listing applies only to systems shown in Combination Ratings table.

- **KW** - Outdoor Unit Kilowatts Only.
- **SDT** - Saturated Temperature Leaving Compressor (°F)
- **SST** - Saturated Temperature Entering Compressor (°F/°C)
- **TCG** - Gross Cooling Capacity (1000 Btuh)

GENERAL

SYSTEM DESCRIPTION

Outdoor-mounted, air-cooled, split-system air conditioning unit suitable for ground or rooftop installation. Unit consists of a scroll-type hermetic compressor, an air-cooled coil, propeller-type condenser fan, and a control box. Unit discharges supply air horizontally as shown on contract drawings.

Unit should be used in a refrigeration circuit to match up to a packaged fan coil or furnace.

Quality Assurance

— Unit is rated in accordance with the latest edition of AHRI Standard 210.
— Unit is certified for capacity and efficiency, and listed in the latest AHRI directory.
— Unit construction complies with latest edition of ANSI/ASHRAE and with NEC.
— Unit is constructed in accordance with UL standards and carries the UL label of approval. Unit has c-UL approval.
— Unit cabinet is capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 500-hr salt spray test.
— Air-cooled condenser coils are leak tested and pressure tested
— Unit is constructed in a ISO9001 approved facility.

Delivery, Storage, and Handling

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

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

PRODUCTS

Equipment

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

Unit Cabinet

— Unit cabinet is constructed of galvanized steel and bonderized.

Fans

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

Compressor

— Compressor is a scroll-type, hermetically sealed.
— Compressor is mounted on rubber vibration isolators.

Condenser Coil

— Condenser coil is air cooled.
— Coil is constructed of aluminum fins mechanically bonded to copper tubes which are then cleaned, dehydrated, and sealed.

Refrigeration Components

— Refrigeration circuit components include liquid-line front-seating shutoff valve with sweat connections, vapor-line front-seating shutoff valve with sweat connections, system charge of R-410A refrigerant, and compressor oil.
— Unit is equipped with high-pressure switch and filter drier for refrigerant.

Operating Characteristics

— The capacity of the unit meets or exceeds _____ Btuh at a suction temperature of _____ °F/°C. The power consumption at full load does not exceed _____ kW.
— Combination of the unit and the evaporator or fan coil unit has a total net cooling capacity of _____ Btuh or greater at conditions of _____ CFM entering air temperature at the evaporator at _____ °F/°C wet bulb and _____ F/C dry bulb, and air entering the unit at _____ F/C.
— The system has a SEER of _____ Btuh/watt or greater at DOE conditions.

Electrical Requirements

— Nominal unit electrical characteristics is _____ v, single phase, 60 hz. The unit is capable of satisfactory operation within voltage limits of _____ v to _____ v.
— Nominal unit electrical characteristics is _____ v, three phase, 60 hz. The unit is capable of satisfactory operation within voltage limits of _____ v to _____ v.
— Unit electrical power is a single point connection.
— Control circuit is 24V.

Special Features

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

ACCESSORY DESCRIPTION AND USAGE (LISTED ALPHABETICALLY)

1. **Ball−Bearing Fan Motor**
   A fan motor with ball bearings that permits speed reduction while maintaining bearing lubrication.
   Usage Guideline:
   Required on all units when using MotorMaster®
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 compressors in areas with a history of low voltage problems.
3. **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.
4. **Evaporator Freeze Thermostat**
   An SPST temperature−actuated switch that stops unit operation when the evaporator reaches freeze−up conditions.
   Usage Guideline:
   Required when a low ambient kit has been added.
5. **Low Pressure Switch Kit**
   Optional added compressor protection against loss of refrigerant. The compressor cuts out the system at 50 PSI and allows operation again at 95 PSI. Used for commercial or “harsh” environment applications for extra protection. Not required for a Low−Ambient Cooling application.
6. **MotorMaster Low−Ambient Controller**
   A fan−speed control device activated by a temperature sensor, designed to control condenser fan motor speed in response to saturated condensing temperatures down to −20°F (−28.9°C), it maintains condensing temperature at 100°F +/− 10°F (37.8°C +/− 6°C).
   Usage Guideline:
   A MotorMaster Low−Ambient Controller must be used when the cooling operation is used at outdoor temperatures below 55°F (12.8°C). Suggested for all commercial applications.
7. **Winter Start Kit**
   The device is designed to alleviate nuisance opening of the low−pressure switch by bypassing it for the first 3 minutes of operation. A Winter Start control must be used where low evaporator temperatures, or nuisance tripping of low−pressure switch may be encountered. It is not required for low ambient cooling applications unless a low−pressure switch NASA404PS is added.
8. **Time Delay Relay**
   Optional accessory for systems that do not have an integral blower time delay.

ACCESSORY USAGE GUIDELINES

ACCESSORY	REQUIRED FOR LOW-AMBIENT COOLING APPLICATIONS (BELOW 55°F / 12.8°C)	REQUIRED FOR LONG LINE APPLICATIONS* (OVER 80 FT. / 24.38 M)	REQUIRED FOR SEA COAST APPLICATIONS (WITHIN 2 MILES / 3.22 KM)
Ball Bearing Fan Motor	Standard	Standard	Standard
Compressor Start Assist Capacitor and Relay	Yes	Yes	No
Crankcase Heater	Yes	Yes	No
Evaporator Freeze Thermostat	Yes	No	No
Liquid Line Solenoid Valve	No	See Long-Line Application Guideline	No
Motor Master® Controller	Yes	No	No

* 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 Long line Application Guideline.

ACCESSORIES

KIT NUMBER	KIT NAME	Unit Size (Voltage/Series)											
		018 AKA	024 AKA	030 AKA	036 AKA	036 AHA	036 ALA	048 AKA	048 AHA	048 ALA	060 AKA	060 AHA	060 ALA
NASA003CH	Crankcase Heater	X	X	X	X	X							
NASA001CH	Crankcase Heater							X	X		X	X	
NASA004CH	Crankcase Heater						X						
NASA00301CH	Crankcase Heater									X			X
NASA00201FS	Evaporator Freeze Stat	X	X	X	X	X	X	X	X	X	X	X	X
NASA001TD	Time Delay Relay	X	X	X	X	X	X	X	X	X	X	X	X
NASA00201WS	Winter Start Control	X	X	X	X	X	X	X	X	X	X	X	X
NASA401LA	Low Ambient Kit	X	X	X	X	X	X	X	X	X	X	X	X
NASA00201WB	Wind Baffle	X	X										
NASA00301WB	Wind Baffle			X	X	X	X	X	X	X			
NASA00401WB	Wind Baffle										X	X	X
NASA00101SG	Stacking Kit	X	X										
NASA00201SG	Stacking Kit			X	X	X	X	X	X	X	X	X	X
NASA00101WM	Wall Mounting Kit	X	X										
NASA00201WM	Wall Mounting Kit			X	X	X	X	X	X	X	X	X	X
NASA404PS	Low Pressure Switch Kit	X	X	X	X	X	X	X	X	X	X	X	X
NASA00201SJ	Sound Blanket Kit	X	X	X	X	X	X						
NASA00101SJ	Sound Blanket Kit							X	X	X	X	X	X
NASA401LS	Solenoid Valve Kit	X	X	X	X	X	X	X	X	X	X	X	X
NASA003SC	Capacitor Relay Start Assist	X	X	X	X			X			X		

X = Accessory

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