

EFFICIENT 13 SEER AIR CONDITIONER ENVIRONMENTALLY BALANCED R-410A REFRIGERANT

1-1/2 THRU 5 TONS SPLIT SYSTEM

208 / 230 Volt, 1-phase, 60 Hz

REFRIGERATION CIRCUIT

- Copeland Scroll™ compressors on all models
- Filter-Drier supplied with every unit for field installation
- External high and low refrigerant service ports
- Copper tube / aluminum fin coil

PERFORMANCE

- 2- speed Fan Motors factory wired on some models
- Compressor Sound Jacket standard

EASY TO INSTALL AND SERVICE

- Comfort Alert™ Diagnostics device on 18, 36- 60 models
- Easy Access service valves on all models
- Innovative control box design
- High and Low pressure switches
- Fan motor in-line disconnect plug on some models
- Only two screws to access control panel
- Factory charged with R- 410A refrigerant

BUILT TO LAST

- High gloss, 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) spacing for extra protection (hail guard)
- Corner Posts for extra strength and style

LIMITED WARRANTY*

- 1 year No Hassle Replacement™ limited warranty
- 5 year compressor 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 owner occupied, 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.ahridirectory.org .



Model Number	Size (tons)	Nominal Btu/hr	Min. Circuit Ampacity	Max. Fuse or Breaker	Operating Dimensions height x width x depth in. (mm)	Ship / Operating Weight lbs. (kg)
H4A318GKF	1- 1/2	18,000	11.8	20	25- 3/16 x 23- 1/8 x 23- 1/8 (640 x 587 x 587)	143 / 117 (65 / 53)
H4A324GKF	2	24,000	17.6	25	28- 11/16 x 31- 3/16 x 31- 3/16 (729 x 793 x 793)	213 / 176 (97 / 80)
H4A330GKF	2- 1/2	30,000	16.8	25	32- 1/8 x 31- 3/16 x 31- 3/16 (816 x 793 x 793)	199 / 165 (90 / 75)
H4A336GKN	3	36,000	21.9	35	25- 3/16 x 31- 3/16 x 31- 3/16 (640 x 793 x 793)	196 / 160 (89 / 73)
H4A342GKN	3- 1/2	42,000	23.5	40	32- 1/8 x 31- 3/16 x 31- 3/16 (816 x 793 x 793)	230 / 195 (104 / 89)
H4A348GKN	4	48,000	26.0	40	35- 1/2 x 31- 3/16 x 31- 3/16 (902 x 793 x 793)	243 / 203 (110 / 92)
H4A360GKN	5	60,000	34.2	50	28- 11/16 x 31- 3/16 x 31- 3/16 (729 x 793 x 793)	250 / 215 (113 / 98)

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:	H	4	A	3	24	G	K	N	1	0	0
H = Arcoaire Mainline											
4 = R- 410A		REFRIGERANT									
A = Air Conditioner											
H = Heat Pump		TYPE									
3 = 13 SEER											
4 = 14 SEER											
5 = 15 SEER											
6 = 16 SEER											
8 = 18 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											
G = Coil Guard Grille											
C = Coastal											
						FEATURES					
K = 208/230- 1- 60						VOLTAGE					
Sales Code											
Engineering Revision											
Extra Digit											
Extra Digit											

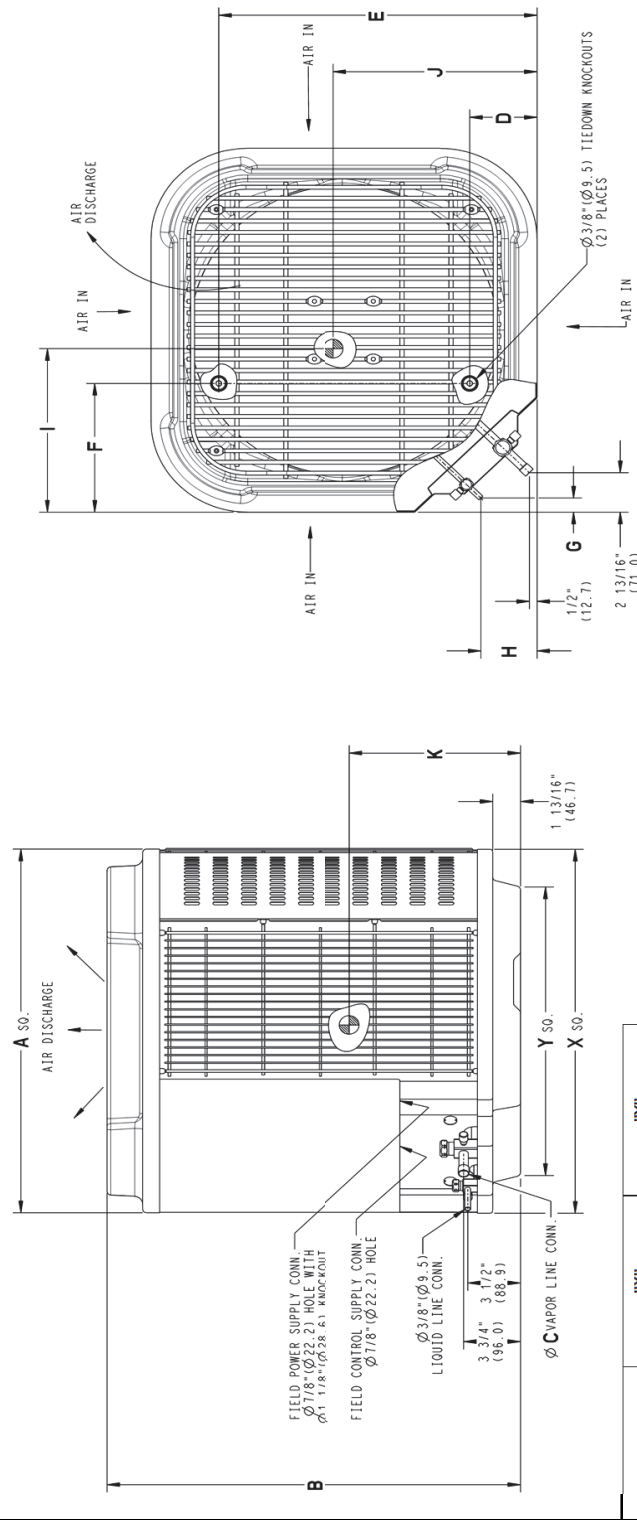
ACCESSORIES PART NUMBER IDENTIFICATION GUIDE											
Digit Position:	1	2	3	4	5	6, 7	8, 9	10, 11			
Example Part Number:	N	A	S	A	0	01	01	CH			
N = Non- Branded		BRANDING									
A = Accessory		PRODUCT GROUP									
S = Split System (AC & HP)			KIT USAGE								
A = Original											
B = 2nd Generation											
						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)											

UNIT SERIES	ELECTRICAL CHARACTERISTICS		A		B		C		D		E		F		G		H		I		J		K		OPERATING WEIGHT		SHIPPING WEIGHT		SHIPPING LENGTH / WIDTH (IN.)		SHIPPING HEIGHT												
	Y	N	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													
H4A36KVF	1	Y	N	N	23	1/8	597.3	25	5/16	642.8	3/4	19.1	4	7/16	113.0	18	11/16	469.0	7	13/16	187.9	107.9	5/16	7.9	3	7/32	11	279.4	11	279.4	12	304.8	117	83.1	143	64.9	25	1/4	641.5	29	3/4	756.8	
H4A36KGF	1	Y	N	N	31	3/16	792.5	28	11/16	729.3	3/4	19.1	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	16	412.8	15	1/4	387.4	14	365.8	178	79.8	213	96.8	33	5/16	846.8	33	3/16	843.1
H4A36KGF	1	Y	N	N	31	3/16	792.5	32	1/8	615.6	3/4	19.1	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	16	408.4	14	365.8	11	279.4	160	72.6	186	88.9	33	5/16	846.8	29	3/4	756.8	
H4A36GHD	2	Y	N	N	31	3/16	792.5	25	5/16	642.8	7/8	22.2	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	16	408.4	14	365.8	11	279.4	160	72.6	186	88.9	33	5/16	846.8	29	3/4	756.8	
H4A36GHD	2	Y	N	N	31	3/16	792.5	25	5/16	642.8	7/8	22.2	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	16	408.4	14	365.8	11	279.4	160	72.6	186	88.9	33	5/16	846.8	29	3/4	756.8	
H4A36GHD	2	Y	N	N	31	3/16	792.5	32	1/8	615.6	7/8	22.2	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	15	381.0	16	408.4	15	381.0	195	89.5	130	59.0	33	5/16	846.8	36	5/8	926.5	
H4A36GHD	2	Y	N	N	31	3/16	792.5	32	1/8	615.6	7/8	22.2	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	15	381.0	16	408.4	15	381.0	195	89.5	130	59.0	33	5/16	846.8	36	5/8	926.5	
H4A36GKN	2	Y	N	N	31	3/16	792.5	35	1/2	802.0	7/8	22.2	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	18	468.4	15	381.0	203	92.1	243	110.2	33	5/16	846.8	40	1015.9				
H4A36GHD	2	Y	N	N	31	3/16	792.5	35	1/2	802.0	7/8	22.2	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	18	468.4	15	381.0	203	92.1	243	110.2	33	5/16	846.8	40	1015.9				
H4A36GKN	3	Y	N	N	31	3/16	792.5	28	11/16	729.3	7/8	22.2	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	15	381.0	14	365.8	12	304.8	215	87.5	280	113.4	33	5/16	846.8	33	3/16	843.1	
H4A36GHD	2	Y	N	N	31	3/16	792.5	28	11/16	729.3	7/8	22.2	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	15	381.0	14	365.8	12	304.8	215	87.5	280	113.4	33	5/16	846.8	33	3/16	843.1	
H4A36GHD	2	Y	N	N	31	3/16	792.5	28	11/16	729.3	7/8	22.2	8	9/16	186.1	24	11/16	626.3	9	1/8	231.3	231.3	5/16	7.9	3	7/32	15	381.0	14	365.8	12	304.8	215	87.5	280	113.4	33	5/16	846.8	33	3/16	843.1	

NOTES:

- 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.

Y=YES	N=NO
573-3-80	480-3-80
208-230-3-60	208-230-1-60



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

U.S. EXPORT CLASSIFICATION: EAR89

NOTE: ALL DIMENSIONS IN INCH (MM)

SP5407-4 REV.C

PHYSICAL DATA							
Model Size	18	24	30	36	42	48	60
Nominal Cooling Capacity (BTU/hr)	18,000	24,000	30,000	36,000	42,000	48,000	60,000
Nominal SEER	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Sound Rating**	70	69	73	73	74	73	74
High Speed Fan (dBA)	68	N/A	N/A	72	74	71	72
Low Speed Fan (dBA)							
PSC Fan Motor HP	1/12	1/10	1/10	1/5	1/5	1/4	1/4
Fan RPM High	1094	1100	1100	840	841	828	816
Fan RPM Low	995	N/A	N/A	803	799	764	735
Fan CFM (High)	1747	1881	2614	3359	3359	3937	3937
Coil Face Area ft ² (m ²)	8.40 (0.78)	15.09 (1.40)	17.25 (1.60)	12.93 (1.20)	17.25 (1.60)	19.40 (1.80)	15.09 (1.40)
Coil Rows- fins per inch	1- 20	1- 25	1- 25	1- 25	1- 25	1- 25	2- 20
Circuits	3	4	4	3	4	5	6
Low Pressure Switch	Open Pressure (psig) = 50 ± 7; Close Pressure (psig) = 95 ± 7						
High Pressure Switch	Open Pressure (psig) = 610 ± 10; Close Pressure (psig) = 420 ± 25						
Liquid Line Connection Size in. (mm)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)
Vapor Line Connection Size in. (mm)	3/4 (19)	3/4 (19)	3/4 (19)	7/8 (22)	7/8 (22)	7/8 (22)	7/8 (22)
Rated Line Set Liquid Tube Diameter in. (mm)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)
Rated Line Set Vapor Tube Diameter in. (mm)*	3/4 (19)*	3/4 (19)*	3/4 (19)*	7/8 (22)*	7/8 (22)*	7/8 (22)*	1- 1/8 (29)*
Factory Charge R- 410A lbs. (kg)	3.15 (1.43)	6.0 (2.72)	5.67 (2.57)	5.34 (2.42)	5.84 (2.65)	7.00 (3.18)	8.00 (3.63)
Required Charge R- 410A lbs. (kg)	4.20 (1.91)	6.0 (2.72)	5.67 (2.57)	5.34 (2.42)	5.84 (2.65)	7.00 (3.18)	8.00 (3.63)
Required Subcooling ° F (° C)	14 (7.8)	10 (5.6)	12 (6.7)	12 (6.7)	10 (5.6)	15 (8.3)	10 (5.6)

* 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 (208/230- 1- 60, voltage range 197V - 253V)							
Model Size	18	24	30	36	42	48	60
Minimum Circuit Ampacity - MCA (amps)	11.8	17.6	16.8	21.9	23.5	26.0	34.2
Maximum OverCurrent Protective device - MOCP (amps)	20	25	25	35	40	40	50
Compressor RLA (Rated Load Amps)	9.0	13.5	12.8	16.7	17.9	19.9	26.4
LRA (Locked Rotor Amps)	47.5	58.3	67.8	79	112	109	134
Fan Motor FLA (Full Load Amps)	0.5	0.70	0.75	1.1	1.1	1.2	1.2

**Sound Rating tested in accordance with AHRI Standard 270- 2008 (not listed with AHRI).

A-Weighted Sound Power Level - With Sound Shield									
Model	High Speed Fan	Low Speed Fan	TYPICAL OCTAVE BAND SPECTRUM (without tone adjustment)						
			125	250	500	1000	2000	4000	8000
18- F	70	68	66.0	64.0	64.0	67.0	63.0	60.0	54.0
24- F	69	N/A	43.0	51.0	59.0	60.0	56.0	52.0	43.0
30- F	73	N/A	48.0	56.0	63.0	64.0	60.0	58.0	53.0
36- N	73	72	51.0	62.0	64.5	65.5	62.0	59.5	51.5
42- N	74	74	57.5	65.0	70.5	72.0	70.0	67.0	62.0
48- N	73	71	55.8	62.6	69.7	70.6	68.7	65.4	58.6
60- N	74	72	57.5	68.0	72.5	74.5	72.5	68.0	60.5

Note: Tested in accordance with AHRI Standard 270-2008 (not listed in AHRI).

Check the piston size shipped with the indoor unit to see if it matches the required indoor piston size. If it does not match, replace the indoor piston with the correct size per the table below.

Outdoor Unit Connected to a Factory Approved Indoor Unit (with FEM4P* Fan Coil)						
Outdoor Unit Size - Series	18- F	24- F	30- F	36- N	42- N	48- N
Piston Size by Outdoor	49	-	-	67	73	76

NOTE: Pistons shipped with outdoor units are only qualified and approved with the above listed fan coils. The piston included with the FMA4P* and FM(C,U)4P* fan coils are unique to those products and CANNOT be replaced with the piston shipped with the outdoor unit. Refer to AHRI Directory to check if your combination can use a piston or requires an accessory TXV.

REFRIGERANT CHARGE ADJUSTMENTS

Liquid Line Size	R- 410A Charge oz/ft
3/8	0.60 (Factory charge for lineset = 9 oz)
5/16	0.40
1/4	0.27

Units are factory charged for 15 ft (4.6 m) of 3/8" liquid line. The factory charge for 3/8" lineset 9 oz. When using other length or diameter liquid lines, charge adjustments are required per the chart above.

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 Guideline table for 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 charts below shows when an application requires a TXV and long line accessories due to lineset length.

AC with R-410A Refrigerant Long Line Description ft (m) Beyond these lengths, a TXV is required

Total Length	Outdoor Unit Above or Below Indoor Unit
TXV required beyond 50 ft. (15.2 m)	TXV required beyond 20 ft. (6.1 m)

AC 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
1/4 + TXV	No accessories needed within allowed lengths	No accessories needed within allowed lengths	175 (53.3)
5/16 + TXV	120 (36.6)	50 (15.2) vertical or 120 (36.6) total	120 (36.6)
3/8 + TXV	80 (24.4)	35 (10.7) vertical or 80 (24.4) total	80 (24.4)

Note: See Long Line Guideline for details

R-410A COOLING CAPACITY LOSS FOR VARIOUS LINE LENGTHS & TUBE DIAMETERS													
Model Size	Liquid Line in. (mm)	Acceptable Vapor Line Sizes in. (mm)	Cooling Capacity Loss (%) at Total Equivalent Line Length, feet (m) Refer to Long Line Application Guideline to calculate equivalent length										
			Standard Application			Long Line Application (Requires Accessories)							
			25' (7.6)	50' (15.2)	80' (24.4)	81' (24.7)	100' (30.5)	125' (38.1)	150' (45.7)	175' (53.3)	200' (61)	225' (68.6)	250' (76.2)
18	3/8 (10)	1/2 (13)	1	2	3	3	4	6	7	8	9	10	12
		5/8 (16)	0	0	1	1	1	1	2	2	3	3	3
		3/4 (19)	0	0	0	0	0	1	1	1	1	1	1
24		5/8 (16)	0	1	1	1	2	3	3	4	4	5	6
		3/4 (19)	0	0	0	0	0	1	1	1	1	1	2
		7/8 (22)	0	0	0	0	0	0	0	0	0	0	1
30		5/8 (16)	1	2	3	3	3	4	5	6	7	8	9
		3/4 (19)	0	0	1	1	1	1	2	2	2	3	3
		7/8 (22)	0	0	0	0	0	1	1	1	1	1	1
36		5/8 (16)	1	2	4	4	5	6	7	9	10	11	13
		3/4 (19)	0	0	1	1	1	2	2	3	3	4	4
		7/8 (22)	0	0	0	0	0	1	1	1	1	2	2
42	3/4 (19)	0	1	2	2	2	3	4	4	5	6	6	
	7/8 (22)	0	0	1	1	1	1	2	2	2	3	3	
	1- 1/8 (29)	0	0	0	0	0	0	0	0	0	0	1	
48	3/4 (19)	0	1	2	2	3	4	5	5	6	7	8	
	7/8 (22)	0	0	1	1	1	2	2	2	3	3	4	
	1- 1/8 (29)	0	0	0	0	0	0	0	0	1	1	1	
60	3/4 (19)	1	2	4	4	5	6	7	9	10	11	12	
	7/8 (22)	0	1	2	2	2	3	4	4	5	5	6	
	1- 1/8 (29)	0	0	0	0	1	1	1	1	1	1	2	

Consult the Long Line Application Guideline document before purchasing/installing line sets.

Applications in shaded area may have height restrictions that limit allowable total equivalent length when outdoor unit is below indoor unit.

COOLING PERFORMANCE FOR COMBINATION RATINGS Indoor Models								
For complete ratings information, use the AHRI website directory search: www.AHRIdirectory.org . New ratings may be listed online before Specification Sheets are updated.								
Unit Size	Indoor Model	Furnace Model	AHRI Standard Ratings					
			Cooling 95° F (35° C)					
			Capacity	Factory Enhance	SEER			EER
Standard	W/ Field TDR	W/ Field TXV						
H4A318GKF	EN(A,D)4X24L14**		17800	TXV		13		11.0
H4A324GKF	EN(A,D)4X31L17**		23600	TXV		13		11.5
H4A330GKF	EA*4X37L21A*		29600	TXV		13		12.0
H4A336GKN	EA*4X36L17A*		35200	TXV		13		11.0
H4A342GKN	EA*4X42L21A*		41000	TXV		13		11.0
H4A348GKN	EA*4X48L21A*		46000	TXV		13		11.0
H4A360GKN	EA*4X60L24A*		57500	TXV		13		11.0

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

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

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

Or scan this QR code:



ACCESSORY USAGE GUIDELINES		
Accessory	REQUIRED FOR LOW- AMBIENT APPLICATIONS {Below 55°F (13°C)}	REQUIRED FOR LONG- LINE APPLICATIONS*
Crankcase Heater	Yes	Yes
Evaporator Freeze Thermostat	Yes	No
Winter Start Control	Yes**	No
TXV	Yes	Yes‡
Hard Start Kit (Capacitor & Relay)	Yes	Yes
Low Ambient Kit (Pressure Switch)	Yes	No
Support Feet, 4" (102mm) tall	Recommended	No
Liquid Line Solenoid Valve	No	See Long- Line Application Guideline

* Refer to the Long Line Application Guideline document.

** Can only be installed in conjunction with the Low Pressure Switch

‡ TXV required beyond 20 ft (6.1m) vertical separation or 50 ft (15.2) total length.

ACCESSORIES		
Part Number	Description	Used On Model Size
NASA003CH	Crankcase Heater for Scroll Compressor (208/230 V)	18, 24, 30, 36
NASA001CH	Crankcase Heater for Scroll Compressor (208/230 V)	42, 48, 60
NASA00201FS	Evaporator Freeze Thermostat	ALL
NASA401LS	Liquid Line Solenoid Valve, R- 410A	ALL
NASA001TD	Time Delay Relay, Indoor Blower	ALL
NASA00201WS	Winter Start Control	ALL
NASA001AC	Anti- Cycle Timer (5 minute delay)	ALL
NASA003SC	Hard Start Kit (Capacitor & Relay)	ALL
NASA401LA	Low Ambient Kit (Pressure Switch), R- 410A	ALL
NASA00201SF	Support Feet, 4" (102mm) tall (5 blocks)	18
NASA001SF	Support Feet, 4" (102mm) tall (4 blocks)	24 thru 60
NAEA40501TX	TXV Kit, R- 410A - for use with copper or tin fan coils	18, 24
NAEA40601TX	TXV Kit, R- 410A - for use with copper or tin fan coils	30, 36, 42
NAEA40701TX	TXV Kit, R- 410A - for use with copper or tin fan coils	48, 60
NAEB40501TX	TXV Kit, R- 410A - for use with aluminum fan coils	18, 24
NAEB40601TX	TXV Kit, R- 410A - for use with aluminum fan coils	30, 36, 42
NAEB40701TX	TXV Kit, R- 410A - for use with aluminum fan coils	48, 60
TSTAT0201CW	Observer® Self Configuring Communicating Wall Control	24, 30