

HIGH EFFICIENCY 16 SEER AIR CONDITIONER ENVIRONMENTALLY BALANCED R-410A REFRIGERANT

1½ THRU 5 TONS SPLIT SYSTEM
208 / 230 Volt, 1-phase, 60 Hz

REFRIGERATION CIRCUIT

- Scroll compressors on select models
- Filter-Drier supplied with every unit for field installation
- 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) spacing for extra protection

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 for other applications.



This product has been designed and manufactured to meet ENERGY STAR criteria for energy efficiency when matched with appropriate coil components. However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency. Installation of this product should follow the manufacturer's refrigerant charging and air flow instructions. Failure to confirm proper charge and airflow may reduce energy efficiency and shorten equipment life.



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)
NXA618GKA	1½	18,000	11.8	20	28-11/16 x 25-3/4 x 25-3/4 (729 x 654 x 654)	154 / 125 (70 / 57)
NXA624GKA	2	24,000	17.7	30	28-5/16 x 31-3/16 x 31-3/16 (719 x 792 x 792)	147 / 183 (83 / 67)
NXA630GKA	2½	30,000	16.8	25	32-5/16 x 31-3/16 x 31-3/16 (821 x 792 x 792)	188 / 153 (85 / 69)
NXA636GKB	3	36,000	17.5	30	28-5/16 x 35 x 35 (719 x 889 x 889)	204 / 165 (93 / 75)
NXA642GKA	3½	42,000	23.6	40	39-1/8 x 35 x 35 (994 x 889 x 889)	254 / 213 (115 / 96)
NXA648GKA	4	48,000	26.1	40	39-1/8 x 35 x 35 (994 x 889 x 889)	317 / 264 (144 / 120)
NXA660GKB	5	60,000	32.4	50	45-11/16 x 35 x 35 (1161 x 889 x 889)	318 / 280 (144 / 127)

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:	N	X	A	6	18	G	K	A	1	0	0
H = Arcoaire Mainline N = Arcoaire Entry BRANDING X = R-410A REFRIGERANT A = Air Conditioner H = Heat Pump TYPE 4 = 14 SEER 6 = 16 SEER NOMINAL EFFICIENCY 18 = 18,000 BTUH = 1½ tons 24 = 24,000 BTUH = 2 tons 30 = 30,000 BTUH = 2½ tons 36 = 36,000 BTUH = 3 tons 42 = 42,000 BTUH = 3½ 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)									

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	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Sound Rating (dBA)**	76	76	76	76	78	78	74
PSC Fan Motor HP	1/12	1/10	1/10	1/12	1/5	1/4	1/3
Fan RPM (single speed)	1100	1100	1100	830	830	830	817
Fan CFM	1900	2600	2600	3200	3800	4100	4000
Coil Face Area ft ² (m ²)	11.47 (1.1)	15.07 (1.4)	17.22 (1.6)	17.58 (1.6)	25.12 (2.3)	25.12 (2.3)	30.15 (2.8)
Coil Rows – fins per inch	1 – 25	1 – 25	1 – 25	1 – 25	1 – 25	2 – 20	2 – 20
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)	4.61 (2.09)	6.00 (2.72)	6.81 (3.09)	7.00 (3.18)	8.62 (3.91)	13.00 (5.90)	14.00 (6.35)
Required Subcooling ° F (° C)	10 (6)	10 (6)	10 (6)	10 (6)	9 (5)	8 (4)	9 (5)
Weight, shipping lbs. (kg)	154 (70)	183 (83)	188 (85)	204 (93)	254 (115)	317 (144)	318 (144)
Weight, operating lbs. (kg)	125 (57)	147 (67)	153 (69)	165 (75)	213 (96)	264 (120)	280 (127)

* 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	17.7	16.8	17.5	23.6	26.1	32.4
Maximum OverCurrent Protective device – MOCP (amps)	20	30	25	30	40	40	50
Compressor RLA (Rated Load Amps) LRA (Locked Rotor Amps)	9.0 48.0	13.5 58.3	12.8 64.0	13.6 79.0	17.9 112.0	19.9 109.0	23.7 152.5
Fan Motor FLA (Full Load Amps)	.50	.75	.75	.50	1.2	1.2	2.8

**Sound Rating tested in accordance with AHRI Standard 270-08 (not listed with AHRI).

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	1	
24		5/8 (16)	0	1	1	1	2	3	3	4	4	4	5	6	
		3/4 (19)	0	0	0	0	0	1	1	1	1	1	1	2	
		7/8 (22)	0	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	9	
		3/4 (19)	0	0	1	1	1	1	2	2	2	3	3	3	
		7/8 (22)	0	0	0	0	0	1	1	1	1	1	1	1	
36		5/8 (16)	1	2	4	4	5	6	7	9	10	11	13	13	
		3/4 (19)	0	0	1	1	1	2	2	3	3	4	4	4	
		7/8 (22)	0	0	0	0	0	1	1	1	1	2	2	2	
42	3/4 (19)	0	1	2	2	2	3	4	4	5	6	6	6		
	7/8 (22)	0	0	1	1	1	1	2	2	2	3	3	3		
	1-1/8 (29)	0	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	8		
	7/8 (22)	0	0	1	1	1	2	2	2	3	3	4	4		
	1-1/8 (29)	0	0	0	0	0	0	0	0	1	1	1	1		
60	3/4 (19)	1	2	4	4	5	6	7	9	10	11	12	12		
	7/8 (22)	0	1	2	2	2	3	4	4	5	5	6	6		
	1-1/8(29)	0	0	0	0	1	1	1	1	1	1	2	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.

TESTED AHRI COMBINATION RATINGS

NOTE: 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	AHRI STANDARD RATINGS						FURNACE MODEL
		COOLING						
		CAPACITY	FACTORY ENHANCE	SEER			EER	
STANDARD	TDR			TXV				
18	EN(A,D)4X19*17**	18,000	TXV		14.50		12.00	
24	EN(A,D)4X31*17**	23,600	TXV		14.50		12.00	
30	EN(A,D)4X31*17**	28,600	TXV		14.50		12.00	
36	EN(A,D)4X37*17**	34,400	TXV		14.50		12.00	
42	EN(A,D)4X43*24**	41,000	TXV		14.50		12.00	
48	*ED*4X60L**	46,000	TXV		14.50		12.00	
60	EN(A,D)4X61*24**	57,500	TXV		15.00		12.50	

AHRI — Air Conditioning, Heating & Refrigeration Institute

EER — Energy Efficiency Ratio — 80°F (26.6°C) indoor db/67°F (19.4°C) indoor wb & 95°F (35°C) outdoor db.

SEER — Seasonal Energy Efficiency Ratio

TDR — Time-Delay Relay. In most cases, only one method should be used to achieve TDR function. Using more than one method in a system may cause degradation in performance.

Use either the accessory Time-Delay Relay or a furnace equipped with TDR. Most ICP furnaces are equipped with TDR.

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.

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

* 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 *
NASA001SC	Start Component – PTC Device	ALL
NASA00201FS	Evaporator Freeze Thermostat	ALL
NASA403PS	Low Pressure Switch, AC, R-410A	ALL
NASA404PS	High Pressure Switch, AC or HP, R-410A	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
NASA005SC	Hard Start Kit (Capacitor & Relay)	18 – 48
NASA012SC	Hard Start Kit (Capacitor & Relay)	60
NASA401LA	Low Ambient Kit (Pressure Switch), R-410A	ALL
NASA001SF	Support Feet, 4" (102mm) tall, 5 included	ALL
NASA001SJ	Sound Jacket, Compressor	18, 24, 30, 36, 42, 48
NASA00101SJ	Sound Jacket, Compressor	60
NAEA40501TX	TXV Kit, R-410A – for use with copper or tin fan coils	18, 24, 30
NAEA40601TX	TXV Kit, R-410A – for use with copper or tin fan coils	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, 30
NAEB40601TX	TXV Kit, R-410A – for use with aluminum fan coils	36, 42
NAEB40701TX	TXV Kit, R-410A – for use with aluminum fan coils	48, 60

* Some models may be factory installed.

