

EFFICIENT 13 SEER AIR CONDITIONER

1 -1/2 THRU 5 TONS, 208/230 Volt, 1-Phase, 60 Hz
 3 THRU 5 TONS, 208/230 Volt, 3-Phase, 60 Hz

REFRIGERATION CIRCUIT

- Copeland Scroll™ compressors on all models
- 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-22 refrigerant

BUILT TO LAST

- Pre-painted cabinet finish over galvanized steel
- Coated inlet grille with 2" (51 mm) spacing

WARRANTY

- 1 year parts and compressor limited warranty (restrictions apply, see Warranty certificate for details)

CERTIFICATION

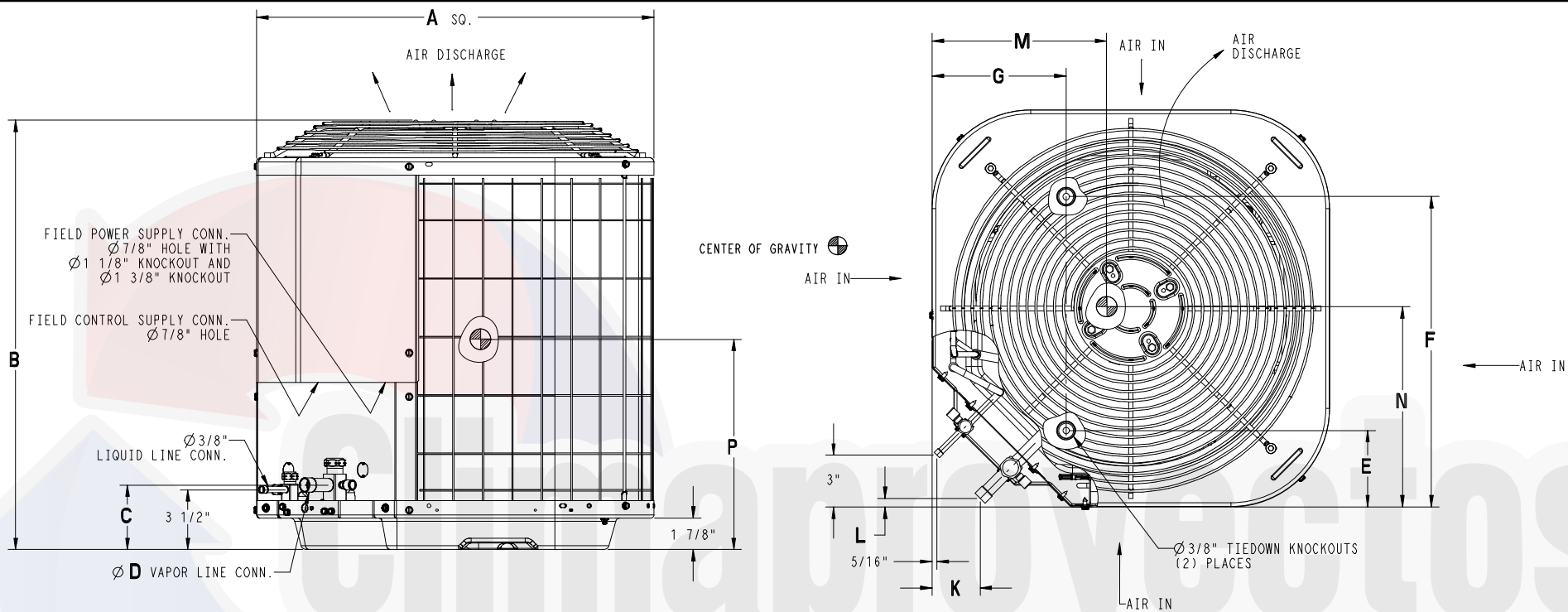
- Listed with NOM and UL



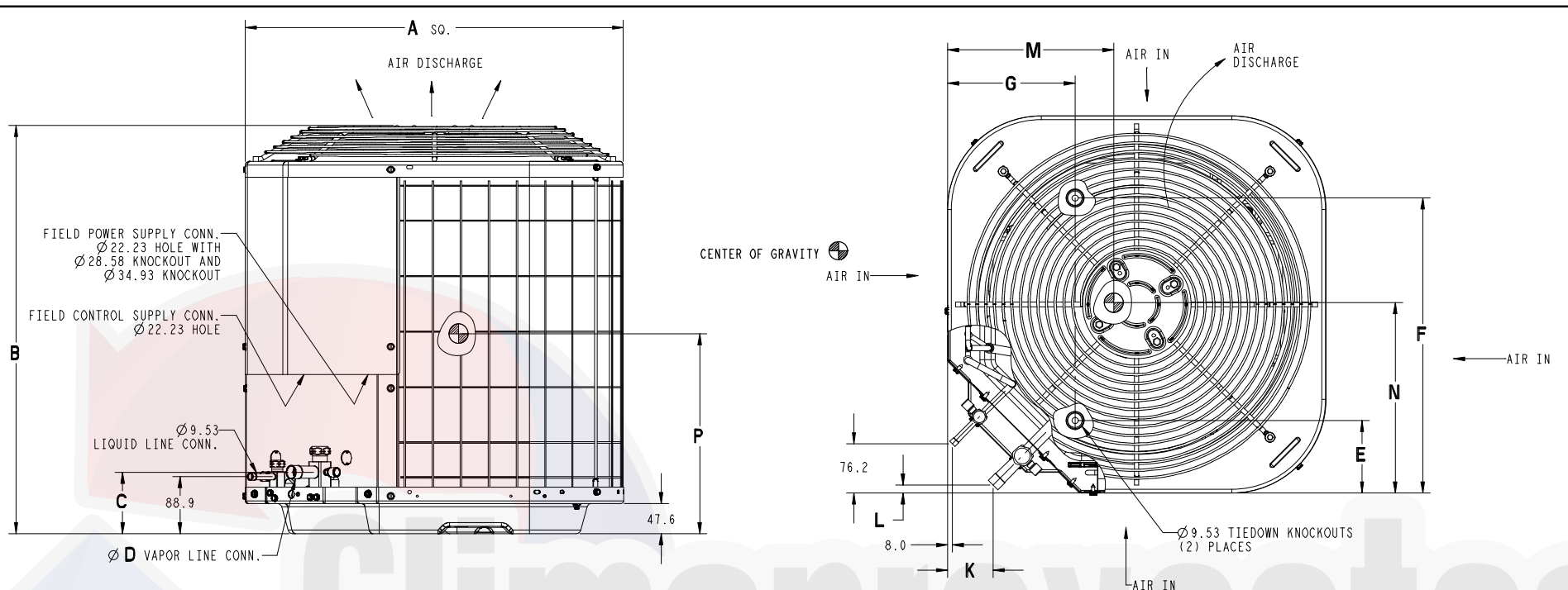
Model Number	Size (tons)	Nominal BTU/hr	Min. Circuit Ampacity	Max. Fuse or Breaker	Operating Dimensions height x width x depth inches (mm)	Ship / Operating Weight lbs. (kg)
R2AM18AKA	1-1/2	18,000	10.9	15	24-13/16 x 23-1/8 x 23-1/8 (630 x 587 x 587)	120 / 105 (54 / 48)
R2AM24AKA	2	24,000	14.0	20	28-7/16 x 23-1/8 x 23-1/8 (722 x 587 x 587)	123 / 109 (59 / 49)
R2AM30AKA	2-1/2	30,000	17.7	30	28-7/16 x 23-1/8 x 23-1/8 (722 x 587 x 587)	127 / 113 (57 / 51)
R2AM36AKA	3	36,000	20.4	30	24-13/16 x 31-3/16 x 31-3/16 (630 x 792 x 792)	157 / 135 (71 / 61)
R2AM42AKA	3-1/2	42,000	25.4	40	31-13/16 x 31-3/16 x 31-3/16 (808 x 792 x 792)	188 / 165 (85 / 75)
R2AM48AKA	4	48,000	26.7	40	42 x 31-3/16 x 31-3/16 (1067 x 792 x 792)	208 / 174 (94 / 79)
R2AM60AKA	5	60,000	33.0	50	35-3/16 x 31-3/16 x 31-3/16 (894 x 792 x 792)	233 / 208 (106 / 94)
3-Phase						
R2AM36AHA	3	36,000	14.6	20	24-13/16 x 31-3/16 x 31-3/16 (630 x 792 x 792)	157 / 135 (71 / 61)
R2AM48AHA	4	48,000	17.4	25	42 x 31-3/16 x 31-3/16 (1067 x 792 x 792)	208 / 174 (94 / 79)
R2AM60AHA	5	60,000	20.7	30	35-3/16 x 31-3/16 x 31-3/16 (894 x 792 x 792)	233 / 208 (106 / 94)

OUTDOOR UNIT MODEL NUMBER IDENTIFICATION GUIDE											
Digit Position:	1	2	3	4	5, 6	7	8	9	10	11	12
Example Part Number:	R	2	A	M	18	A	K	A	1	0	0
Product Family	REFRIGERANT		TYPE								
2 = R-22 4 = R-410A A = Air Conditioner H = Heat Pump M = NOM (13 SEER) 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 A = Standard Grille G = Coil Guard Grille K = 208/230-1-60 H = 208/230-3-60 Sales Code Engineering Revision Extra Digit Extra Digit											
NOMINAL CAPACITY						FEATURES			VOLTAGE		

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)										



Model	Dimensions Inches (English)												Minimum Mounting Pad Size	Crated Dimensions h x w x d
	A	B	C	D	E	F	G	K	L	M	N	P		
R2AM18AKA	23-1/8	24-13/16	3-3/4	3/4	4-7/16	18-1/16	7-13/16	2-13/16	1/2	12	11-3/4	11-7/8	23-1/2 x 23-1/2	27-3/16 x 24-1/8 x 24-1/8
R2AM24AKA	23-1/8	28-7/16	3-3/4	3/4	4-7/16	18-1/16	7-13/16	2-13/16	1/2	12	11-3/4	12-1/2	23-1/2 x 23-1/2	30-5/8 x 24-1/8 x 24-1/8
R2AM30AKA	23-1/8	28-7/16	3-3/4	3/4	4-7/16	18-1/16	7-13/16	2-13/16	1/2	12	11-3/4	12-7/8	23-1/2 x 23-1/2	30-5/8 x 24-1/8 x 24-1/8
R2AM36AKA	31-3/16	24-13/16	3-7/8	7/8	6-9/16	24-11/16	9-1/8	2-15/16	5/8	16	15-1/2	11-5/8	31-1/2 x 31-1/2	27-3/16 x 32-3/16 x 32-3/16
R2AM42AKA	31-3/16	31-13/16	3-7/8	7/8	6-9/16	24-11/16	9-1/8	2-15/16	5/8	16	15-1/2	13-3/4	31-1/2 x 31-1/2	34 x 32-3/16 x 32-3/16
R2AM48AKA	31-3/16	42	3-7/8	7/8	6-9/16	24-11/16	9-1/8	2-15/16	5/8	16	15-1/2	17	31-1/2 x 31-1/2	44-1/4 x 32-3/16 x 32-3/16
R2AM60AKA	31-3/16	35-3/16	3-7/8	7/8	6-9/16	24-11/16	9-1/8	2-15/16	5/8	16	15-1/2	15-1/4	31-1/2 x 31-1/2	37-7/16 x 32-3/16 x 32-3/16
3-Phase														
R2AM36AHA	31-3/16	24-13/16	3-7/8	7/8	6-9/16	24-11/16	9-1/8	2-15/16	5/8	16	15-1/2	11-5/8	31-1/2 x 31-1/2	27-3/16 x 32-3/16 x 32-3/16
R2AM48AHA	31-3/16	42	3-7/8	7/8	6-9/16	24-11/16	9-1/8	2-15/16	5/8	16	15-1/2	17	31-1/2 x 31-1/2	44-1/4 x 32-3/16 x 32-3/16
R2AM60AHA	31-3/16	35-3/16	3-7/8	7/8	6-9/16	24-11/16	9-1/8	2-15/16	5/8	16	15-1/2	15-1/4	31-1/2 x 31-1/2	37-7/16 x 32-3/16 x 32-3/16



Model	Dimensions MM (SI Metric)												Minimum Mounting Pad Size	Crated Dimensions h x w x d
	A	B	C	D	E	F	G	K	L	M	N	P		
R2AM18AKA	587	630	95	19	113	459	198	71	13	305	298	302	597 x 597	691 x 613 x 613
R2AM24AKA	587	722	95	19	113	459	198	71	13	305	298	318	597 x 597	778 x 613 x 613
R2AM30AKA	587	722	95	19	113	459	198	71	13	305	298	327	597 x 597	778 x 613 x 613
R2AM36AKA	792	630	98	22	167	627	232	75	16	406	394	295	800 x 800	691 x 818 x 818
R2AM42AKA	792	808	98	22	167	627	232	75	16	406	394	349	800 x 800	864 x 818 x 818
R2AM48AKA	792	1067	98	22	167	627	232	75	16	406	394	432	800 x 800	1124 x 818 x 818
R2AM60AKA	792	894	98	22	167	627	232	75	16	406	394	387	800 x 800	951 x 818 x 818
3-Phase														
R2AM36AHA	792	630	98	22	167	627	232	75	16	406	394	295	800 x 800	691 x 818 x 818
R2AM48AHA	792	1067	98	22	167	627	232	75	16	406	394	432	800 x 800	1124 x 818 x 818
R2AM60AHA	792	894	98	22	167	627	232	75	16	406	394	387	800 x 800	951 x 818 x 818

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 (dBA)**	76	76	77	76	80	80	80
PSC Fan Motor HP	1/12	1/12	1/10	1/5	1/4	1/4	1/4
Fan RPM (single speed)	1100	1100	1100	1100	1100	1100	1100
Fan CFM	1700	1700	2000	3100	3400	3400	3400
Coil Face Area ft ² (m ²)	8.40 (0.78)	9.80 (0.91)	9.80 (0.91)	12.98 (1.2)	17.30 (1.6)	23.79 (2.2)	19.47 (1.8)
Coil Rows – fins per inch	1 – 25	1 – 25	1 – 25	1 – 25	1 – 25	1 – 25	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)
Recommended 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)
Recommended Line Set Vapor Tube Diameter in. (mm)	3/4 (19)*	3/4 (19)*	3/4 (19)*	7/8 (22)*	7/8 (22)*	1 1/8 (29)*	1 1/8 (29)*
* Recommended Vapor Tube Line size is for standard installations. These recommendations may not apply to “Long Line” installations. When the total equivalent line length exceeds 80 feet (24.4m) or there is more than 20 feet (6.1m) vertical separation between indoor and outdoor units, consult the Long Line Application Guideline document before purchasing/installing line sets.							
Factory Charge R–22 lbs. (kg)	3.56 (1.62)	4.08 (1.85)	4.11 (1.87)	5.35 (2.43)	7.01 (3.19)	8.88 (4.04)	10.52 (4.79)
Required Subcooling °F (°C)	8 (4)	10 (6)	10 (6)	10 (6)	10 (6)	10 (6)	10 (6)
Weight, shipping lbs. (kg)	120 (54)	123 (56)	127 (57)	157 (71)	188 (85)	208 (94)	233 (106)
Weight, operating lbs. (kg)	105 (48)	109 (49)	113 (51)	135 (61)	165 (75)	174 (79)	208 (94)

ELECTRICAL DATA (208/230–1–60, voltage range 187V – 253V)							
Model Size	18	24	30	36	42	48	60
Minimum Circuit Ampacity – MCA (amps)	10.9	14.0	17.7	20.4	25.4	26.7	33.0
Maximum OverCurrent Protective device – MOCP (amps)	15	20	30	30	40	40	50
Compressor RLA (Rated Load Amps) LRA (Locked Rotor Amps)	8.3 40.3	10.8 56.3	13.5 68.3	15.4 87.0	19.2 112.0	20.2 137.0	25.3 146.0
Fan Motor FLA (Full Load Amps)	0.5	0.5	0.77	1.1	1.4	1.4	1.4

(208/230–3–60, voltage range 187V – 253V)			
Model Size	36	48	60
Minimum Circuit Ampacity – MCA (amps)	14.6	17.4	20.7
Maximum OverCurrent Protective device – MOCP (amps)	20	25	30
Compressor RLA (Rated Load Amps) LRA (Locked Rotor Amps)	10.8 73.0	12.8 98.0	15.4 114.0
Fan Motor FLA (Full Load Amps)	1.1	1.4	1.4

**Sound Rating tested in accordance with ARI Standard 270–95 (not listed with ARI).

R-22 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 ft. (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)	5/8 (13)	0.4	1.1	1.7	1.7	2.4	3.1	3.8	4.5	5.1	5.8	6.5		
		3/4 (19)	0.0	0.2	0.5	0.5	0.7	1.0	1.2	1.5	1.7	2.0	2.3		
24		5/8 (13)	0.7	1.9	3.0	3.0	4.2	5.3	6.5	7.6	8.8	9.9	11.1		
		3/4 (19)	0.0	0.5	0.9	0.9	1.3	1.8	2.2	2.6	3.0	3.5	3.9		
30		7/8 (22)	0.0	0.0	0.2	0.2	0.5	0.7	0.9	1.1	1.3	1.5	1.8		
		5/8 (13)	1.1	2.8	4.6	4.6	6.3	8.0	9.7	11.4	13.2	14.9	16.6		
		3/4 (19)	0.0	0.7	1.3	1.3	2.0	2.6	3.3	3.9	4.6	5.2	5.9		
36		7/8 (22)	0.0	0.0	0.4	0.4	0.7	1.0	1.3	1.7	2.0	2.3	2.6		
		3/4 (19)	0.4	1.3	2.2	2.2	3.1	4.0	4.9	5.8	6.7	7.6	8.5		
42		7/8 (22)	0.0	0.4	0.9	0.9	1.3	1.8	2.2	2.7	3.1	3.6	4.0		
		3/4 (19)	0.6	1.8	3.0	3.0	4.2	5.4	6.6	7.7	8.9	10.1	11.3		
		1-1/8 (29)	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.6	0.7	0.9	1.1		
48		3/4 (19)	0.7	2.2	3.8	3.8	5.3	6.8	8.3	9.8	11.4	12.9	14.4		
		7/8 (22)	0.0	0.7	1.5	1.5	2.2	3.0	3.8	4.5	5.3	6.0	6.8		
	1-1/8 (29)	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.7	0.9	1.1	1.3			
60	7/8 (22)	0.8	2.0	3.1	3.1	4.3	5.4	6.6	7.7	8.8	10.0	11.1			
	1-1/8 (29)	0.0	0.3	0.6	0.6	1.0	1.3	1.6	1.9	2.2	2.5	2.9			

* Applications are considered “Long Line” if the total equivalent tubing length exceeds 80 feet (24.4m) or there is more than 20 foot (6.1m) vertical separation between indoor and outdoor units). These applications require additional accessories and system modifications for reliable system operation. Refer to the Long Line Application Guideline document for required piping and system modifications. Refer to Accessory Usage Guidelines below for required accessories.

Applications in this shaded area may have height restrictions that limit allowable total equivalent length when outdoor unit is below indoor unit. Refer to the Long Line Application Guideline document for instructions.

The maximum allowable total equivalent length is 250 feet.

COOLING PERFORMANCE FOR COMBINATION RATINGS							
Indoor Models							
Outdoor Model	Indoor Model ⁺ [^] Tested Combo	Cooling 95° F (35° C)					
		Capacity BTU/hr	Factory Installed	SEER			EER
				Standard	TDR	TXV	
R2AM18AKA	[^] ED*4X24B**	17,000	TXV		13.0		11.0
	FEM4P18**A*	17,500	TDR			14.0	12.7
	FEM4P24**A*	17,500	TDR			14.0	12.7
R2AM24AKA	[^] ED*4X30B**	23,000	TXV		13.0		11.0
	FEM4P24**A*	23,400	TDR			13.7	11.7
	FEM4P30**A*	24,000	TDR			13.7	12.2
R2AM30AKA	[^] ED*4X36F**	28,000	TXV		13.0		11.0
	FEM4P30**A*	28,400	TDR			14.0	11.7
	FEM4P36**A*	28,400	TDR			14.0	11.7
R2AM36A(K,H)A	[^] ED*4X42J**	34,000	TXV		13.0		11.0
	FEM4P36**A*	35,400	TDR			13.2	11.3
	FEM4P42**A*	36,000	TDR			14.0	12.0
R2AM42AKA	[^] ED*4X48J**	40,000	TXV		13.0		11.0
	FEM4P42**A*	42,000	TDR			14.0	12.0
	FEM4P48**A*	42,000	TDR			14.0	12.0
R2AM48A(K,H)A	[^] ED*4X60L**	46,000	TXV		13.0		11.0
	FEM4P48**A*	48,000	TDR			13.5	11.3
	FEM4X60**B*	48,000	TDR+TXV	14.0			11.7
R2AM60A(K,H)A	[^] ED*4X60L**	57,000	TXV		13.0		11.0
	FEM4X60**B*	58,500	TDR+TXV	13.7			11.7

[^]Tested Combo

⁺ All indoor models must be installed with R-22 TXV



ACCESSORY USAGE GUIDELINES		
Accessory	REQUIRED FOR LOW-AMBIENT APPLICATIONS {Below 55°F (13°C)}	REQUIRED FOR LONG-LINE APPLICATIONS* {Over 80 Ft. (24.4m)}
Crankcase Heater	Yes	Yes
Evaporator Freeze Thermostat	Yes	No
Winter Start Control	Yes **	No
Hard Start Kit (Capacitor & Relay)	Yes	Yes
Low Ambient Kit (Pressure Switch)	Yes	No
Support Feet, 4" (1.2m) tall	Recommended	No
Liquid Line Solenoid Valve	No	See Long-Line Application Guideline

* For Line Set lengths between 80 and 200 ft (24.4 and 61m) horizontal, or more than 20 ft (6.1m) indoor-outdoor vertical separation, refer to the Long Line Application Guideline document.

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

ACCESSORIES		
Part Number	Description	Used On Model Size
NASA003CH	Crankcase Heater for Compressor	18, 24, 30, 36
NASA00501CH	Crankcase Heater for Compressor	42, 48, 60
NASA001SC	Start Component – PTC Device	ALL
NASA001FS	Evaporator Freeze Thermostat	ALL
NASA203PS	Low Pressure Switch	ALL
NASA204PS	High Pressure Switch	ALL
NASA201LS	Liquid Line Solenoid Valve	ALL
NASA001TD	Time Delay Relay, Indoor Blower	ALL
NASA001WS	Winter Start Control	ALL
NASA001AC	Anti-Cycle Timer (5 minute delay)	ALL
NASA201LA	Low Ambient Kit (Pressure Switch)	ALL
NASA003SC	Hard Start Kit (Capacitor & Relay)	18, 24, 30, 36, 42, 48
NASA005SC	Hard Start Kit (Capacitor & Relay)	60
NASA001SF	Support Feet, 4" tall	ALL
NASA001SJ	Sound Jacket, Compressor	18, 24, 30, 36, 42, 48
NASA003SJ	Sound Jacket, Compressor	60
AMF153TKB	TXV Kit, R-22 (converts R-22 piston coils to R-22 TXV)	18, 24, 30, 36, 42
AMF355TKB	TXV Kit, R-22 (converts R-22 piston coils to R-22 TXV)	48, 60

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