

**MODEL 223R
LEGACY™ LINE HEAT PUMP
WITH R-22 REFRIGERANT
1-1/2 TO 5 NOMINAL TONS (SIZES 018 TO 060)**



Product Data

INDUSTRY LEADING FEATURES / BENEFITS

Efficiency

- 13 SEER/ 10.8 - 11.0 EER / 8.0 - 8.4 HSPF (nominal)
- Microtube Technology™ refrigeration system
- Indoor air quality accessories available

Sound

- Sound level as low as 70 dBA
- Compressor sound blanket standard

Comfort

- System supports Thermidistat™ or standard thermostat controls

Reliability

- Front-seating service valves
- Scroll compressor
- Internal pressure relief valve
- Internal thermal overload
- High pressure switch
- Loss of charge pressure switch
- Filter drier
- Balanced refrigeration system for maximum reliability

Durability

DuraGuard™ protection package:

- Solid, Durable sheet metal construction
- Steel louver coil guard
- Baked-on, complete outer coverage, powder paint

Applications

- Long-line - up to 250 feet (76.20 m) total equivalent length, up to 200 feet (60.96 m) condenser above evaporator, or up to 60 ft. (18.29 m) evaporator above condenser (See Longline Guide for more information.)
- Low ambient (down to -20°F/-28.9°C) with accessory kit

Warranty

- 10 year limited compressor warranty
- 5 year limited parts warranty



**LEGACY™
LINE**

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up-to-date ratings information.

MODEL NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12	14
N	N	N	A	A/N	N	N	N	N	A/N	A/N	N	A
2	2	3	R	N	A	0	3	6	0	0	0	A
Product Family	Tier	SEER	Major Series	Voltage	Variations	Cooling Capacity			Open	Open	Open	Series
2=HP	2= Legacy Series	3=13 SEER	R= R-22	N= 208-230-1	A = Standard				0=Not Defined	0=Not Defined	0=Not Defined	A = Original Series



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 all manufacturing refrigerant charging and air flow instructions. **Failure to confirm proper charge and air flow may reduce energy efficiency and shorten equipment life.**

STANDARD FEATURES

Feature	18	24	30	36	42	48	60
13 SEER	X	X	X	X	X	X	X
Scroll Compressor	X	X	X	X	X	X	X
Louvered Coil Guard	X	X	X	X	X	X	X
Field Installed Filter Drier	X	X	X	X	X	X	X
Front Seating Service Valves	X	X	X	X	X	X	X
Internal Pressure Relief Valve	X	X	X	X	X	X	X
Internal Thermal Overload	X	X	X	X	X	X	X
Long Line capability	X	X	X	X	X	X	X
Low Ambient capability with Kit	X	X	X	X	X	X	X
High Pressure Switch	X	X	X	X	X	X	X
Loss of Charge Pressure Switch	X	X	X	X	X	X	X

X = Standard

PHYSICAL DATA

UNIT SIZE - VOLTAGE, SERIES	018-B	024-B	030-C	036-B	042-B	048-C	060-B
Operating Weight lb (kg)	174 (78.9)	174 (78.9)	212 (96.2)	232 (105.2)	250 (113.4)	263 (119.3)	313 (142.0)
Shipping Weight lb (kg)	199 (90.3)	199 (90.3)	261 (118.4)	263 (119.3)	279 (126.6)	299 (135.6)	345 (156.5)
Compressor Type	Scroll						
REFRIGERANT	Freon® (R-22)						
Control	TXV (R-22 Hard Shutoff)						
Charge lb (kg)	5.4 (2.5)	6.0 (2.7)	7.8 (3.6)	7.6 (3.4)	9.9 (4.5)	13.3 (6.0)	15.0 (6.8)
Outdoor Heating Piston #	40	49	57	61	70	70	78
COND FAN	Propeller Type, Direct Drive						
Air Discharge	Vertical						
Air Qty (CFM)	2233	2614	2989	3334	3334	4046	4046
Motor HP	1/12	1/10	1/12	1/5	1/5	1/4	1/4
Motor RPM	800	800	800	800	800	800	800
COND COIL							
Face Area (Sq. ft.)	15.09	15.09	22.63	22.63	17.6	20.1	25.15
Fins per In.	20	20	20	20	20	20	20
Rows	1	1	1	1	2	2	2
Circuits	5	6	6	6	7	8	9
VALVE CONNECT. (In. ID)							
Vapor	5/8	5/8	3/4	3/4	7/8	7/8	7/8
Liquid	3/8						
REFRIGERANT TUBES (In. OD)							
Rated Vapor*	5/8	5/8	3/4	3/4	7/8	7/8	1-1/8
Liquid	3/8						

*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.

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. (24.38 m) or when there is more than 20 ft. (6.09 m) vertical separation between 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 outdoor unit is above indoor unit, and up to 60 ft. (18.28 m) when the outdoor unit is below the indoor unit. Refer to Accessory Usage Guideline below for required accessories. See Longline Application Guideline for required piping and system modifications. Also, refer to the table below for vapor tube diameters based on the total length to minimize the cooling capacity loss.

Unit Nominal Size (Btuh)	Maximum Liquid Line Diameters (In. OD)	Vapor Line Diameters (In.) OD	Cooling Capacity Loss (%) Total Equivalent Line Length ft. (m)								
			Standard Application		Long Line Application Requires Accessories						
			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)
18,000 R-22 HP	3/8	5/8	0	1	1	2	3	3	4	5	5
		3/4	0	0	0	0	1	1	1	1	2
24,000 R-22 HP		5/8	0	1	3	3	5	6	7	8	9
		3/4	0	0	0	1	1	1	2	2	3
30,000 R-22 HP		7/8	0	0	0	0	0	0	0	1	1
		5/8	1	3	5	6	8	10	11	13	15
36,000 R-22 HP		3/4	0	1	1	2	3	3	4	5	5
		7/8	0	0	0	1	1	1	2	2	2
42,000 R-22 HP		3/4	0	1	2	3	4	5	6	7	8
		7/8	0	0	1	1	2	2	3	3	4
48,000 R-22 HP		3/4	1	2	3	4	5	7	8	9	10
		7/8	0	1	1	2	2	3	4	4	5
60,000 R-22 HP	3/4	1	2	4	5	7	8	10	11	13	
	7/8	0	1	2	2	3	4	5	5	6	
	1-1/8	0	0	0	0	0	1	1	1	1	
	7/8	1	2	3	4	5	7	8	9	10	
	1-1/8	0	0	1	1	1	2	2	2	3	

Applications in this area are long line. Accessories are required as shown recommended on Long Line Application Guidelines

Applications in this area may have height restrictions that limit allowable total equivalent length, when outdoor unit is below indoor unit. See Long Line Application Guidelines

223R

ACCESSORY THERMOSTATS

223R

THERMOSTAT / SUBBASE PKG.	DESCRIPTION
T6-PRH-01	Programmable Thermidistat
T6-NRH-01	Non-programmable Thermidistat
T6-PHP-01	Preferred Series Programmable HP Stat
T6-NHP-01	Preferred Series Non-programmable HP Stat
T2-PHP-01	Legacy Series Programmable HP Stat
T2-NHP-01	Legacy Series Non-programmable HP Stat
T1-PHP-01	Legacy RNC Series Programmable HP Stat
T1-NHP-01	Legacy RNC Series Non-programmable HP Stat
TSTATBBPRH01-B*	Thermidistat™ Control — Non-Programmable/Programmable Thermostat with Humidity Control (For use in Dual Fuel, AC, HP, and 2S applications. Includes Outdoor Air Temperature Sensor.)
TSTATBBPHH01-B*	HybridHeat™ (Dual Fuel) Thermostat — Auto Changeover, 7-Day Programmable, °F/°C, Includes Outdoor Sensor (TSTATXXSEN01-B)
TSTATBBPHP01-B	Thermostat — Auto Changeover, 7-Day Programmable, °F/°C, 2-Stage Heat, 1-Stage Cool
TSTATBBNHP01-C	Thermostat — Auto Changeover, Non-Programmable, °F/°C, 2-Stage Heat, 1-Stage Cool
TSTATBBSHP01	Standard Programmable Thermostat—Manual Changeover, 5-2 Day Programmable, °F/°C, 1-Stage Heat/1-Stage Cool
TSTATBBBHP01*-B	Builder's Thermostat — Heat Pump, Non-Programmable, °F/°C, 2-Stage Heat, 1-Stage Cool, Manual Changeover
TSTATXXSEN01-B**	Outdoor Air Temperature Sensor
TSTATXXNBP01	Backplate for Non-Programmable Thermostat
TSTATXXBP01	Backplate for Programmable Thermostat and Thermidistat™ Control
TSTATXXSBP01	Backplate for Standard Programmable Thermostat
TSTATXXBBP01	Backplate for Builder's Thermostat
TSTATXXCNV10†	Thermostat Conversion Kit (4 to 5 Wire) — 10 Pack

* Do not use in zoning heat pump applications.

** Outdoor temperature sensor is an accessory for all Bryant electronic thermostats, except the non-programmable air conditioner version and builder's thermostats. It allows the temperature at a remote location (outdoors) to be displayed on the thermostat. The outdoor air temperature sensor must be used with the HybridHeat™ (dual fuel) thermostat.

† Thermostat conversion kit is a 24-vac accessory that can turn a 4-wire thermostat application into a 5-wire application. This kit can also be used to replace a broken thermostat wire, or add an extra wire when needed.

The outdoor air temperature sensor is included with the Thermidistat Control and HybridHeat™ (dual fuel) thermostat.

ACCESSORIES

ORDER NUMBER	DESCRIPTION	018-B	024-B	030-C	036-B	042-B	048-C	060-B
HC32GE229	BALL BEARING MOTOR	X		X				
HC34GE242	BALL BEARING MOTOR		X					
HC36GE232	BALL BEARING MOTOR				X	X		
HC40GE228	BALL BEARING MOTOR						X	X
KAACH1601AAA	CRANKCASE HTR			X	X	X		
KAACH1701AAA	CRANKCASE HTR	X	X					
STANDARD	CRANKCASE HTR						S	S
KAFT0101AAA	FREEZE THERMOSTAT	X	X	X	X	X	X	X
KSAHS1501AAA	HARD START	X	X	X	X	X	X	
KSAHS1601AAA	HARD START							X
KHAIR0101AAA	ISOLATION RELAY	X	X	X	X	X	X	X
KSALA0201R22	LOW AMBIENT	X	X	X	X	X	X	X
KSALA0601AAA	MOTORMASTER 230V	X	X	X	X	X	X	X
KHAOT0201SEC	OUTDOOR THERMOSTAT	X	X	X	X	X	X	X
KHAOT0301FST	OUTDOOR THERMOSTAT	X	X	X	X	X	X	X
KHALS0401LLS	SOLENOID VALVE	X	X	X	X	X	X	X
KAACS0201PTC	START ASSIST PTC	X	X	X	X	X	X	X
KSASF0101AAA	SUPPORT FEET	X	X	X	X	X	X	X
KAATD0101TDR	TIME DELAY	X	X	X	X	X	X	X
KSATX0601HSO	TXV	X	X	X	X	X		
KSATX0701HSO	TXV						X	
KSATX1001HSO	TXV							X
KHASS0606MPK*	SNOW STAND	X	X	X	X	X	X	X

*Available through RCD

X = Accessory

S = Standard

ACCESSORY USAGE GUIDELINE

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)
Accumulator	Standard	Standard	Standard
Ball Bearing Fan Motor	Yes†	No	No
Compressor Start Assist Capacitor and Relay	Yes	Yes	No
Crankcase Heater	Yes	Yes	No
Evaporator Freeze Thermostat	Yes	No	No
Hard Shutoff TXV	Yes	Yes	Yes
Isolation Relay	Yes	No	No
Liquid Line Solenoid Valve	No	See Long-Line Application Guideline	No
Motor Master® Control or Low Ambient Pressure Switch	Yes	No	No
Support Feet	Recommended	No	Recommended

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

† Additional requirement for Low-Ambient Controller (full modulation feature) MotorMaster® Control.

Accessory Description and Usage (Listed Alphabetically)

1. Ball-Bearing Fan Motor

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

Usage Guideline:

Required on all units when MotorMaster® is used.

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. Compressor Start Assist — PTC Type

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

Usage Guideline:

Suggested in installations with marginal power supply.

4. Crankcase Heater

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

Usage Guideline:

Required in low ambient cooling applications.

Required in long line applications.

Suggested in all commercial applications.

5. Cycle Protector

The cycle protector is designed to prevent compressor short cycling. This control provides an approximate 5-minute delay after power to the compressor has been interrupted for any reason, including power outage, protector control trip, thermostat jiggling, or normal cycling.

6. Evaporator Freeze Thermostat

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

Usage Guideline:

Required when low ambient kit has been added.

7. High Pressure Switch

A high pressure switch that protects unit against excessive pressure.

Usage Guideline:

Required in all heat pumps operated in dual fuel applications.

8. Isolation Relay

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

Usage Guideline:

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

9. Liquid-Line Solenoid Valve (LLS)

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

Usage Guideline:

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

10. Low-Ambient Pressure Switch Kit

A long life pressure switch which is mounted to outdoor unit service valve. It is designed to cycle the outdoor fan motor in order to maintain head pressure within normal operating limits (approximately 100 psig to 225 psig). The control will maintain working head pressure at low-ambient temperatures down to 0°F (-18°C) when properly installed.

Usage Guideline:

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

Accessory Description and Usage (Listed Alphabetically) - CONTINUED

11. MotorMaster® Low-Ambient Controller

A fan-speed control device activated by a temperature sensor, designed to control condenser fan motor speed in response to the saturated, condensing temperature during operation in cooling mode only. For outdoor temperatures down to -20°F (-28.9°C), it maintains condensing temperature at 100°F ±10°F (37.8°C ± 5.5°C).

Usage Guideline:

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

Suggested for all commercial applications.

12. Outdoor Air Temperature Sensor

Designed for use with Bryant Thermostats listed in this publication. This device enables the thermostat to display the outdoor temperature. This device also is required to enable special thermostat features such as auxiliary heat lock out.

Usage Guideline:

Suggested for all Bryant thermostats listed in this publication.

13. Outdoor Thermostat

An SPDT temperature-actuated switch which turns on supplemental electric heaters when outdoor air temperature drops below a user-selected set point.

Usage Guideline:

Electric supplemental heat applications in non-variable speed indoor units when electric heat staging is desired.

Usage Guideline:

Some local codes may require limiting the heating head pressure in the vapor line in some applications.

14. Secondary Outdoor Thermostat

An SPDT temperature-actuated switch which turns on third-stage of supplemental electric heaters when outdoor air temperature drops below the second-stage set point.

Usage Guideline:

Outdoor thermostat applications where electric heater is capable of 3-stage operation.

15. Snow Stand

Coated wire rack which supports unit 18 in. (457.2 mm) above mounting pad to allow for drainage from unit base.

Usage Guideline:

Suggested in the following applications:

Heat pump installations in heavy snowfall areas.

Heat pump installations in snow drift locations.

Heat pump installations in areas of prolonged subfreezing temperatures.

All commercial installations.

16. Sound Hood

Wraparound sound reducing cover for the compressor. Reduces the sound level up to 2 dBA.

Usage Guideline:

Suggested when unit is installed closer than 15 ft (4.57 m) to quiet areas, bedrooms, etc.

Suggested when unit is installed between two houses less than 10 ft (3.05 m) apart.

Usage Guideline:

Suggested in the following applications:

Heat pump installations in heavy snowfall areas.

Heat pump installations in snowdrift locations.

Heat pump installations in areas of prolonged subfreezing temperatures.

All commercial installations.

17. Thermostatic Expansion Valve (TXV) Bi-Flow

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

Usage Guideline:

Required in all heat pump applications

18. Time-Delay Relay

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

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

Usage Guideline:

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

ELECTRICAL DATA

UNIT SIZE - VOLTAGE, SERIES	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MIN WIRE SIZE†	MIN WIRE SIZE†	MAX LENGTH ft (m)‡	MAX LENGTH ft (m)‡	MAX FUSE** or CKT BRK AMPS
		MAX	MIN	LRA	RLA	FLA		60° C	75° C	60° C	75° C	
		018-B	208/230/1	253	197	41.0		8.97	0.5	11.7	14	
024-B	54.0	11.28				0.7	14.8	14	14	56 (17.1)	51 (15.5)	25
030-C	72.5	13.70				0.5	17.6	12	12	65 (19.8)	62 (18.9)	30
036-B	88.0	16.96				0.9	22.1	12	12	57 (17.4)	54 (16.5)	35
042-B	104.0	21.18				0.9	27.4	10	10	73 (22.3)	69 (21.0)	40
048-C	137.0	24.10				1.2	31.3	10	10	72 (21.9)	69 (21.0)	45
060-B	148.0	28.85				1.2	37.3	8	8	83 (25.3)	79 (24.1)	60

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

† If wire is applied at ambient greater than 30° C, consult table 310-16 of the NEC (ANSI/NFPA 70). The ampacity of non-metallic-sheathed cable (NM), trade name ROMEX, shall be that of 60° C conditions, per the NEC (ANSI/NFPA 70) Article 336-26. If other than uncoated (no-plated), 60 or 75° C insulation, copper wire (solid wire for 10 AWG or smaller, stranded wire for larger than 10 AWG) is used, consult applicable tables of the NEC (ANSI/NFPA 70).

‡ Length shown is as measured 1 way along wire path between unit and service panel for voltage drop not to exceed 2%.

** Time-Delay fuse.

FLA - Full Load Amps

LRA - Locked Rotor Amps

MCA - Minimum Circuit Amps

RLA - Rated Load Amps

NOTE: Control circuit is 24-V on all units and requires external power source. Copper wire must be used from service disconnect to unit. All motors/compressors contain internal overload protection.

Complies with 2001 requirements of ASHRAE Standards 90.1

223R

A-WEIGHTED SOUND POWER (dBA)

UNIT SIZE - VOLTAGE, SERIES	STANDARD RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA, without tone adjustment)						
		125	250	500	1000	2000	4000	8000
018-B	73	52.5	61.5	65.0	67.0	65.0	61.5	54.0
024-B	73	54.0	60.5	65.5	68.5	64.0	60.5	53.5
030-C	70	55.0	55.5	61.5	64.5	59.5	57.5	52.0
036-B	75	54.0	62.0	64.5	71.0	66.0	64.0	56.0
042-B	76	57.0	64.0	66.5	72.0	65.5	59.5	54.0
048-C	75	57.5	64.5	67.5	70.5	66.0	61.0	55.0
060-B	74	54.5	61.5	66.5	68.5	68.0	62.5	58.0

NOTE: Tested in accordance with ARI Standard 270-95 (not listed in ARI).

CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)


UNIT SIZE - VOLTAGE, SERIES	REQUIRED SUBCOOLING °F (°C)
018-B	9 (5.0)
024-B	11 (6.1)
030-C	10 (5.6)
036-B	12 (6.7)
042-B	12 (6.7)
048-C	13 (7.2)
060-B	11 (6.1)

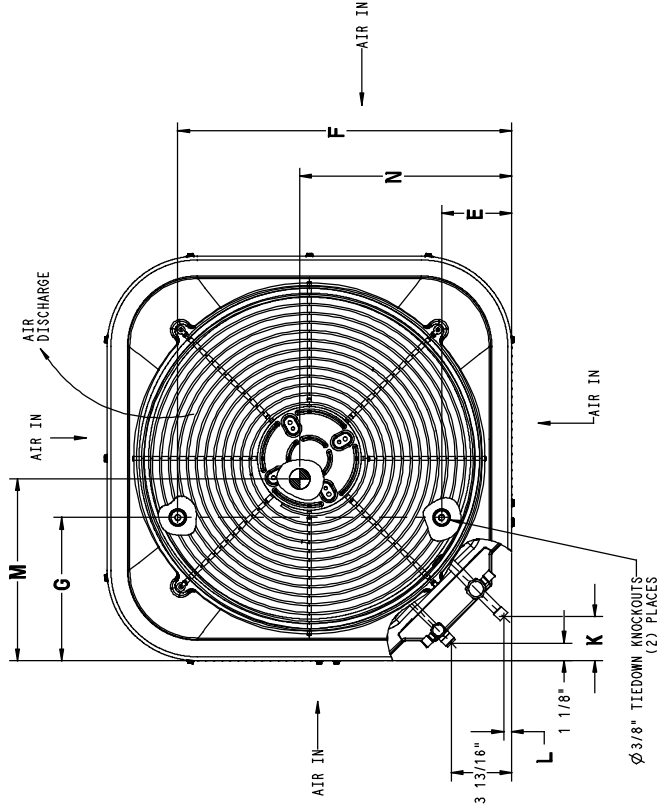
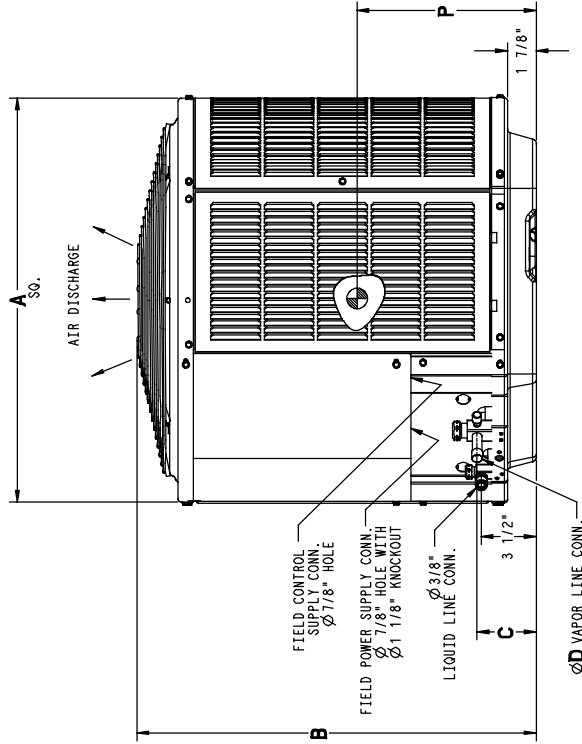
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DIMENSIONS - ENGLISH

UNIT	SERIES	ELECTRICAL CHARACTERISTICS	A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT (lbs)	SHIPPING WEIGHT (lbs)	SHIPPING DIMENSIONS (L x W x H)
223R018	B	X 0 0	31 3/16"	28 15/16"	3 3/4"	5/8"	6 9/16"	24 11/16"	9 1/8"	2 13/16"	1/2"	16 5/8"	14 3/8"	11 1/2"	174	199	32 3/8" X 35 1/2" X 32 9/16"
223R024	B	X 0 0	31 3/16"	28 15/16"	3 3/4"	5/8"	6 9/16"	24 11/16"	9 1/8"	2 13/16"	1/2"	16 1/2"	15 1/8"	13 5/8"	174	199	32 3/8" X 35 1/2" X 32 9/16"
223R030	C	X 0 0	35"	35 3/4"	3 3/4"	3/4"	6 9/16"	28 7/16"	9 1/8"	2 13/16"	1/2"	15 3/4"	16 1/2"	17 1/4"	212	261	36 1/8" X 39 5/16" X 39 3/8"
223R036	B	X 0 0	35"	35 3/4"	3 3/4"	3/4"	6 9/16"	28 7/16"	9 1/8"	2 13/16"	1/2"	19 3/4"	18 1/2"	18"	232	263	36 1/8" X 39 5/16" X 39 3/8"
223R042	B	X 0 0	35"	28 15/16"	3 7/8"	7/8"	6 9/16"	28 7/16"	9 1/8"	2 15/16"	5/8"	19"	18"	12"	250	279	36 1/8" X 39 5/16" X 32 9/16"
223R048	C	X 0 0	35"	32 5/16"	3 7/8"	7/8"	6 9/16"	28 7/16"	9 1/8"	2 15/16"	5/8"	16 1/4"	19 1/2"	17"	263	299	36 1/8" X 39 5/16" X 35 15/16"
223R060	B	X 0 0	35"	39 1/8"	3 7/8"	7/8"	6 9/16"	28 7/16"	9 1/8"	2 15/16"	5/8"	18 3/4"	20"	17"	313	345	36 1/8" X 39 5/16" X 42 3/4"

X = YES
O = NO

- NOTES:
1. ALLOW 30" CLEARANCE TO SERVICE SIDE OF UNIT, 48" ABOVE UNIT, 6" ON ONE SIDE, 12" ON REMAINING SIDE, AND 24" BETWEEN UNITS FOR PROPER AIRFLOW.
 2. MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING MODE IS 55°F, MAX. 125°F.
 3. SERIES DESIGNATION IS THE 10TH POSITION OF THE UNIT MODEL NUMBER.
 4. CENTER OF GRAVITY .
 5. ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.




UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
-	26" X 26"
18,24	31 1/2" X 31 1/2"
30, 36, 42, 48, 60	35" X 35"

DIMENSIONS - SI

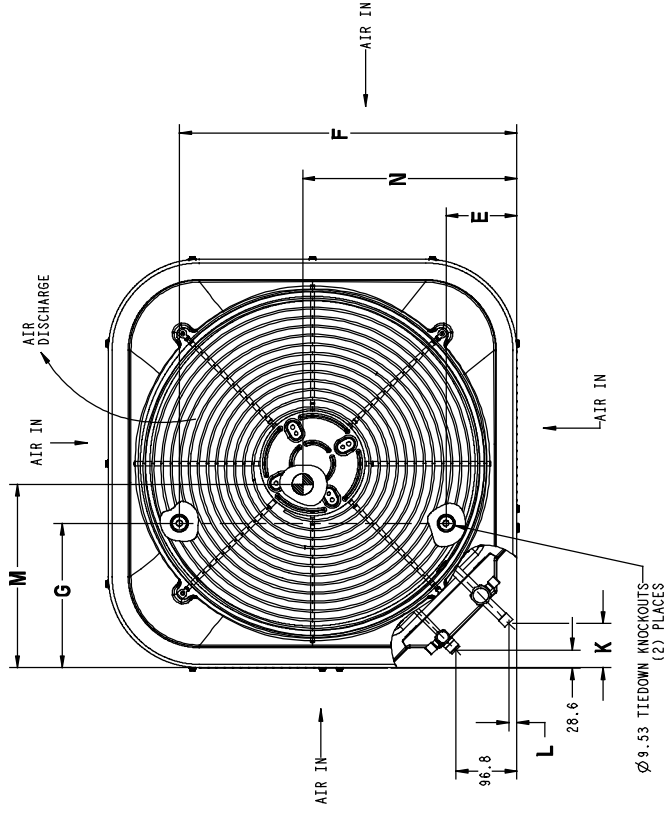
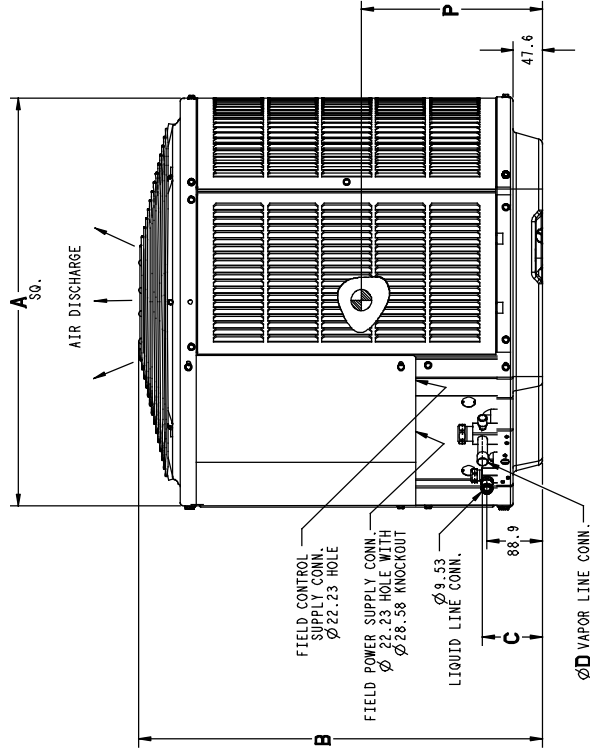
UNIT	SERIES	ELECTRICAL CHARACTERISTICS	A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT (KGS)	SHIPPING WEIGHT (KGS)	SHIPPING DIMENSIONS (L x W x H)
223R018	B	X 0 0 0	782.2	735.0	95.2	15.9	186.7	627.1	231.8	71.4	12.7	422.3	365.1	282.1	78.9	90.3	822.3 X 901.7 X 827.1
223R024	B	X 0 0 0	782.2	735.0	95.2	15.9	186.7	627.1	231.8	71.4	12.7	419.1	384.2	346.1	78.9	90.3	822.3 X 901.7 X 827.1
223R030	C	X 0 0 0	889.0	908.0	95.2	19.0	186.7	722.3	231.8	71.4	12.7	400.0	419.1	438.2	96.2	118.4	917.6 X 998.6 X 1000.1
223R036	B	X 0 0 0	889.0	908.0	95.2	19.0	166.7	722.3	231.8	71.4	12.7	501.6	469.9	457.2	105.2	119.3	917.6 X 998.6 X 1000.1
223R042	B	X 0 0 0	889.0	735.0	98.4	22.2	186.7	722.3	231.8	74.6	15.9	482.6	457.2	304.8	113.4	126.6	917.6 X 998.6 X 827.1
223R048	C	X 0 0 0	889.0	820.8	98.4	22.2	186.7	722.3	231.8	74.6	15.9	476.2	495.3	431.8	119.3	135.6	917.6 X 998.6 X 912.8
223R060	B	X 0 0 0	889.0	993.8	98.4	22.2	186.7	722.3	231.8	74.6	15.9	476.2	508.0	431.8	142.0	156.5	917.6 X 998.6 X 1085.8

NOTES:

1. ALLOW 762.0 CLEARANCE TO SERVICE SIDE OF UNIT.
1219.2 ABOVE UNIT, 152.4 ON ONE SIDE, 304.8 ON REMAINING SIDE,
AND 609.6 BETWEEN UNITS FOR PROPER AIRFLOW.
2. MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING
MODE IS 13°C, MAX. 52°C.
3. SERIES DESIGNATION IS THE 10TH POSITION OF THE
UNIT MODEL NUMBER.
4. CENTER OF GRAVITY 
5. ALL DIMENSIONS ARE IN "MM" UNLESS NOTED.

X = YES
0 = NO

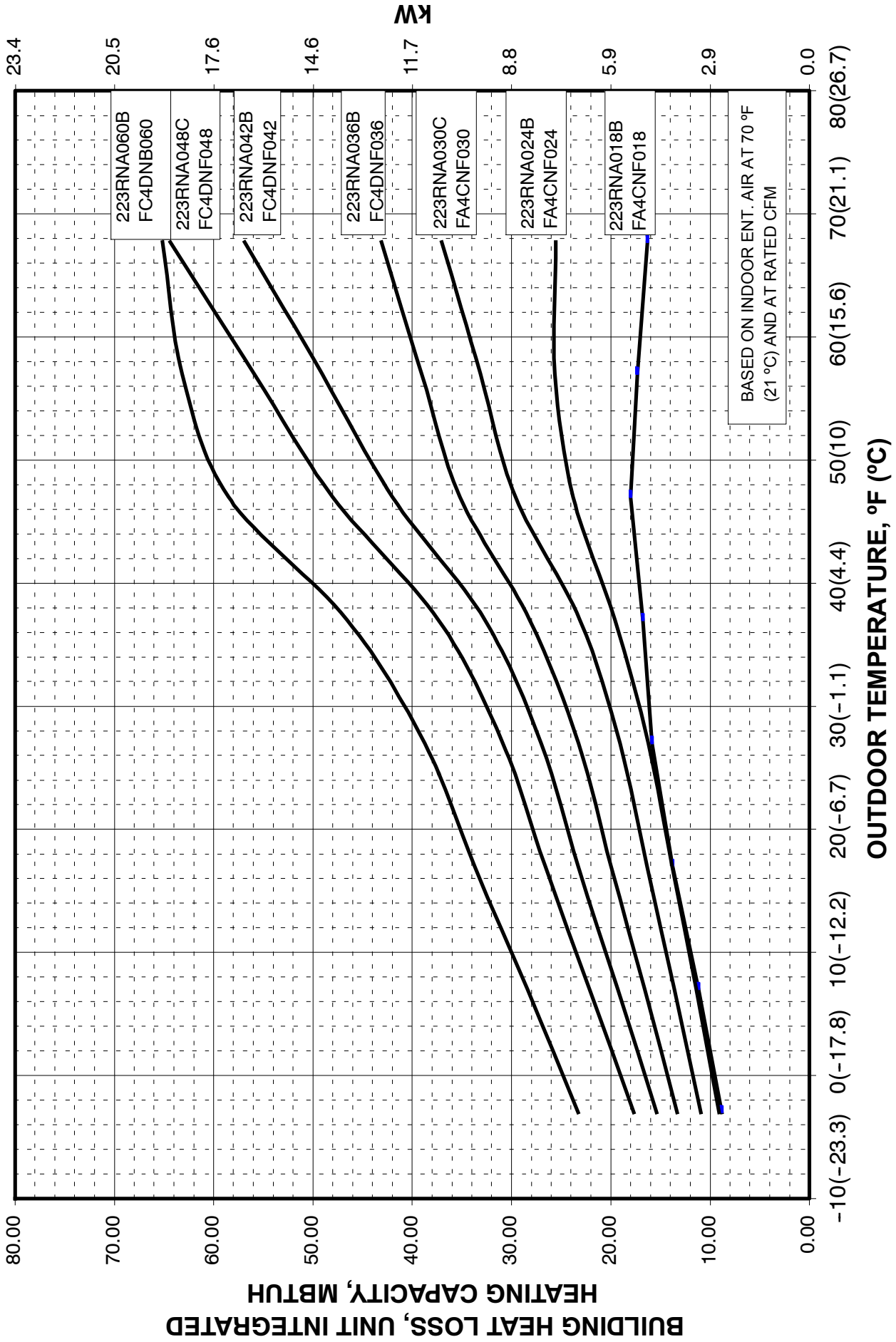
208-230-160	230-160	208/230-360	460-360
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UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
-	660.4 X 660.4
18, 24	800.1 X 800.1
30, 36, 42, 48, 60	889.0 X 889.0

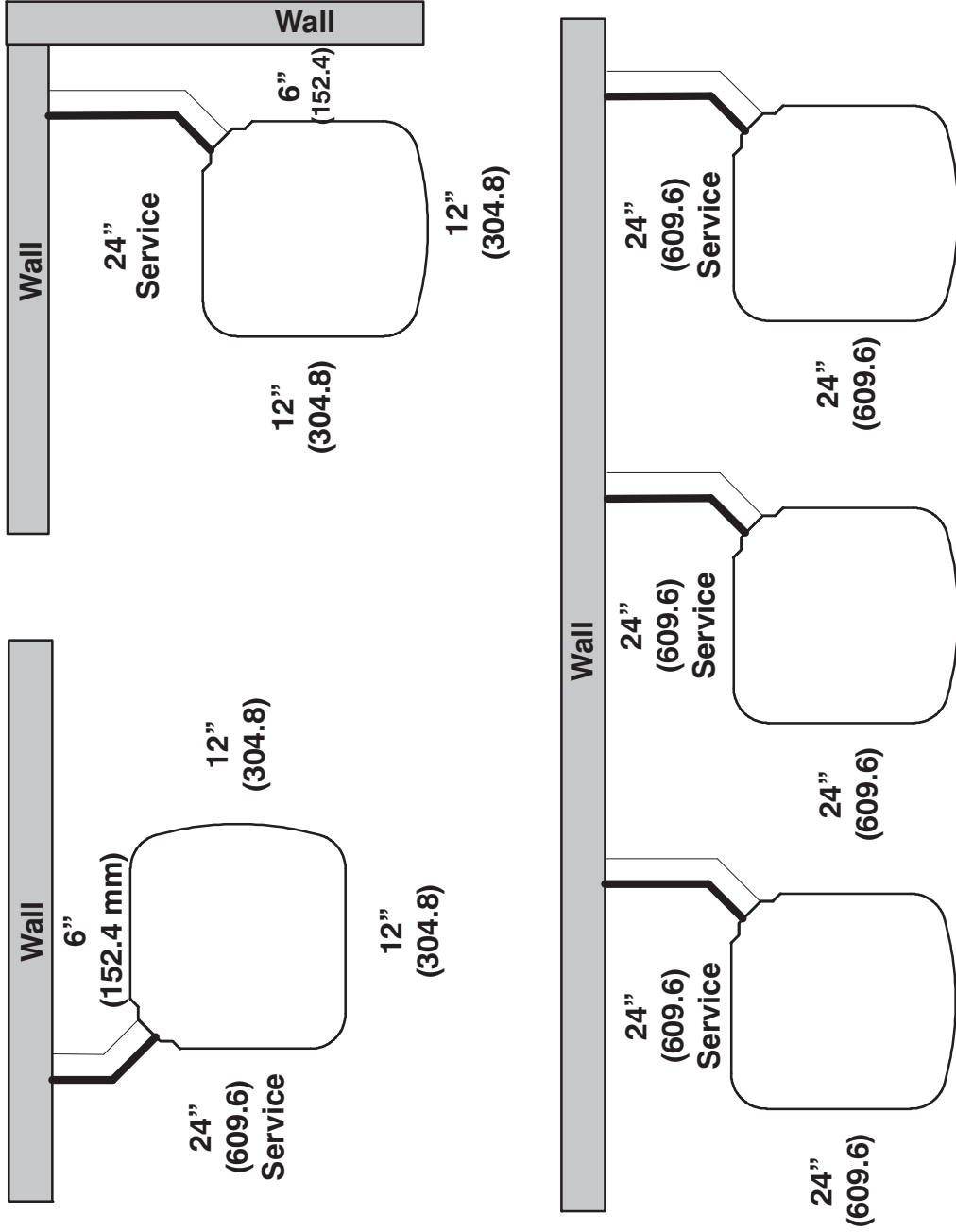
223R

223R BALANCE POINT WORKSHEET



CLEARANCES

Clearances (various examples)



Note: Numbers in () = mm

DETAILED COOLING CAPACITIES

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)																
CFM	EWB ° F (° C)	75 (23.9)		85 (29.4)		95 (35)		105 (40.6)		115 (46.1)		125 (51.7)						
		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†					
223RRA018 - B Outdoor Section With FA4CN(F)018 Indoor Section																		
	72 (22.2)	20.06	10.33	19.34	10.06	1.33	18.59	9.77	1.48	17.79	9.46	1.65	16.96	9.15	1.84	16.08	8.83	2.05
	67 (19.4)	18.25	12.89	17.57	12.59	1.33	16.85	12.28	1.48	16.09	11.97	1.65	15.30	11.64	1.83	14.49	11.30	2.04
525	63 (17.2)††	16.94	12.44	16.28	12.14	1.32	15.59	11.82	1.47	14.88	11.50	1.64	14.13	11.16	1.83	13.35	10.82	2.03
	62 (16.7)	16.64	15.38	16.00	15.05	1.32	15.35	14.70	1.47	14.67	14.33	1.64	13.95	13.95	1.83	13.32	13.32	2.03
	57 (13.9)	16.16	16.16	15.64	15.64	1.32	15.10	15.10	1.47	14.53	14.53	1.64	13.94	13.94	1.83	13.32	13.32	2.03
	72 (22.2)	20.39	10.80	19.65	10.52	1.36	18.87	10.23	1.51	18.05	9.92	1.68	17.19	9.61	1.87	16.29	9.28	2.08
	67 (19.4)	18.55	13.67	17.84	13.37	1.36	17.10	13.06	1.51	16.32	12.74	1.68	15.51	12.40	1.86	14.67	12.05	2.07
600	63 (17.2)††	17.22	13.17	16.55	12.87	1.35	15.84	12.55	1.50	15.09	12.21	1.67	14.32	11.87	1.86	13.53	11.51	2.06
	62 (16.7)	16.98	16.37	16.34	16.01	1.35	15.66	15.66	1.50	15.04	15.04	1.67	14.41	14.41	1.86	13.76	13.76	2.06
	57 (13.9)	16.75	16.75	16.21	16.21	1.35	15.64	15.64	1.50	15.04	15.04	1.67	14.42	14.42	1.86	13.76	13.76	2.06
	72 (22.2)	20.63	11.24	19.87	10.95	1.39	19.07	10.66	1.54	18.23	10.35	1.71	17.35	10.04	1.90	16.43	9.70	2.11
	67 (19.4)	18.77	14.41	18.05	14.11	1.38	17.28	13.79	1.54	16.49	13.46	1.71	15.66	13.12	1.89	14.80	12.76	2.10
675	63 (17.2)††	17.44	13.87	16.74	13.55	1.38	16.01	13.23	1.53	15.25	12.89	1.70	14.47	12.53	1.89	13.85	12.16	2.09
	62 (16.7)	17.27	17.27	16.67	16.67	1.38	16.08	16.08	1.53	15.46	15.46	1.70	14.80	14.80	1.89	14.12	14.12	2.09
	57 (13.9)	17.24	17.24	16.68	16.68	1.38	16.08	16.08	1.53	15.46	15.46	1.70	14.81	14.81	1.89	14.13	14.13	2.09

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CSRH*2412A**	1.03	0.85	353AAV036060
CNRH*2417A**	1.02	0.92	355(A,C)AV042040
CSRH*2412A**	1.02	0.92	355(A,C)AV042040
CAR**2417A**	1.01	0.91	355(A,C)AV042060
CNRH*2417A**	1.02	0.92	355(A,C)AV042060
CNRV*2417A**	1.01	0.91	355(A,C)AV042060
CSRH*2412A**	1.02	0.92	355(A,C)AV042060
CNRH*2417A**	1.01	0.91	355(A,C)AV042080
CSRH*2412A**	1.02	0.92	355(A,C)AV042080
CAR**1814A**	1.00	0.86	313*AV024045
CNRV*1814A**	1.02	0.86	313*AV024045

See notes on pg. 30

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FA4CN(F)018	1.00	1.00	
FA4CN(F)024	1.01	1.01	
FC4DNF018	1.02	0.94	
FC4DNF024	1.03	0.93	
FF1ENE018	1.00	1.00	
FF1ENE024	1.01	1.01	
FK4DNF001	1.02	0.92	
FK4DNF002	1.04	0.89	
CAR**1814A**	0.99	0.99	
CAR**2414A**	1.02	1.02	
CAR**2417A**	1.02	1.02	
CNRH*2412A**	1.02	1.02	
CAR**1814A**	0.99	0.91	315(A,J)AV036070
CAR**2414A**	1.01	0.91	315(A,J)AV036070
CNRH*2417A**	1.02	0.92	315(A,J)AV036070
CNRV*2414A**	0.99	0.89	315(A,J)AV036070
CNRH*1814A**	1.01	0.91	315(A,J)AV036070
CSRH*2412A**	1.02	0.92	315(A,J)AV036070
CAR**2417A**	1.02	0.92	315(A,J)AV048090
CNRH*2417A**	1.02	0.92	315(A,J)AV048090
CNRV*2417A**	1.02	0.92	315(A,J)AV048090
CSRH*2412A**	1.02	0.92	315(A,J)AV048090
CAR**2417A**	1.05	0.86	353AAV036040
CNRH*2417A**	1.05	0.86	353AAV036040
CNRV*2417A**	1.05	0.86	353AAV036040
CSRH*2412A**	1.05	0.86	353AAV036040
CAR**2417A**	1.04	0.85	353AAV036060
CNRH*2417A**	1.03	0.85	353AAV036060
CNRV*2417A**	1.03	0.85	353AAV036060

DETAILED COOLING CAPACITIES - CONTINUED

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†	
700	72 (22.2)	26.55	13.79	1.69	25.58	13.41	1.88	24.57	13.03	2.08	23.52	12.63	2.31	22.41	12.22	2.57	21.24	11.79	2.84
	67 (19.4)	24.11	12.20	1.67	23.20	11.81	1.86	22.26	11.42	2.07	21.27	11.00	2.30	20.24	10.57	2.53	19.15	10.12	2.82
	63 (17.2)††	22.37	10.59	1.66	21.51	10.15	1.85	20.61	9.70	2.06	19.67	9.33	2.28	18.69	8.98	2.53	17.65	8.57	2.80
	62 (16.7)	22.00	10.15	1.66	21.18	9.70	1.85	20.32	9.33	2.05	19.44	8.98	2.28	18.57	8.63	2.53	17.73	8.22	2.80
	57 (13.9)	21.50	9.70	1.66	20.82	9.33	1.85	20.11	8.98	2.05	19.36	8.63	2.28	18.57	8.28	2.53	17.73	7.87	2.80
800	72 (22.2)	27.00	14.44	1.73	25.99	14.06	1.91	24.95	13.67	2.12	23.86	13.27	2.35	22.71	12.85	2.61	21.51	12.42	2.88
	67 (19.4)	24.52	12.82	1.71	23.58	12.48	1.90	22.60	12.09	2.11	21.58	11.70	2.34	20.51	10.86	2.59	19.40	10.43	2.86
	63 (17.2)††	22.75	11.61	1.70	21.86	11.21	1.89	20.93	10.83	2.10	19.97	10.44	2.32	18.95	10.02	2.57	17.89	9.61	2.84
	62 (16.7)	22.48	11.26	1.70	21.64	10.83	1.89	20.83	10.44	2.09	19.67	10.05	2.32	18.21	9.61	2.57	17.89	9.20	2.84
	57 (13.9)	22.30	10.83	1.70	21.59	10.44	1.89	20.83	10.05	2.09	19.44	9.66	2.32	18.21	9.20	2.57	17.89	8.79	2.84
900	72 (22.2)	27.33	15.05	1.77	26.29	14.68	1.95	25.22	14.29	2.16	24.10	13.88	2.39	22.93	13.46	2.65	21.69	13.02	2.92
	67 (19.4)	24.82	13.32	1.75	23.85	13.02	1.94	22.85	12.63	2.15	21.81	12.24	2.37	20.72	11.82	2.62	19.58	11.41	2.90
	63 (17.2)††	23.03	11.87	1.74	22.12	11.48	1.93	21.17	11.09	2.14	20.18	10.69	2.36	19.15	10.28	2.62	18.07	9.87	2.88
	62 (16.7)	22.97	11.48	1.74	22.22	11.09	1.93	21.43	10.70	2.14	20.61	10.30	2.37	19.15	9.87	2.62	18.07	9.46	2.88
	57 (13.9)	22.97	11.09	1.74	22.22	10.70	1.93	21.43	10.30	2.14	20.61	9.91	2.37	19.15	9.46	2.62	18.07	9.05	2.89

223R/N/A/024 - B Outdoor Section With F4C/N(F/C)024 Indoor Section

COOLING INDOOR MODEL		CAPACITY			POWER			FURNACE MODEL		
		Total	Sens†	Total	Total	Sens†	Total	Total	Sens†	Total
*FA4CN(F/C)024		1.00	1.00	1.00	0.95	0.95	315(A-JAV)036070			
FA4CN(F/C)030		1.01	1.01	1.01	0.93	0.93	315(A-JAV)036070			
FA4CN(F/C)030		1.01	1.01	1.01	0.93	0.93	315(A-JAV)048090			
FC4DNF024		1.02	1.02	1.02	0.94	0.94	315(A-JAV)048090			
FC4DNF024		1.02	1.02	1.02	0.95	0.95	315(A-JAV)048090			
FC4DNF030		1.03	1.03	1.03	0.94	0.94	315(A-JAV)048090			
FC4DNF030		1.03	1.03	1.03	0.95	0.95	315(A-JAV)048090			
FF1ENE030		1.00	1.00	1.00	0.94	0.94	315(A-JAV)048090			
FF1ENE030		1.00	1.00	1.00	0.94	0.94	315(A-JAV)048090			
FK4DN(F/B)003		1.03	1.03	1.03	0.94	0.94	315(A-JAV)048090			
FK4DN(F/B)003		1.03	1.03	1.03	0.95	0.95	315(A-JAV)060110			
FK4DNF001		1.02	1.02	1.02	0.94	0.94	315(A-JAV)060110			
FK4DNF001		1.03	1.03	1.03	0.95	0.95	315(A-JAV)060110			
FK4DNF002		1.03	1.03	1.03	0.94	0.94	315(A-JAV)060110			
FK4DNF002		1.03	1.03	1.03	0.95	0.95	315(A-JAV)060110			
CAR**2414A**		1.01	1.01	1.01	0.94	0.94	315(A-JAV)066135			
CAR**2417A**		1.01	1.01	1.01	0.96	0.96	315(A-JAV)066135			
CAR**3014A**		1.01	1.01	1.01	0.94	0.94	315(A-JAV)066135			
CAR**3017A**		1.01	1.01	1.01	0.95	0.95	315(A-JAV)066155			
CNRH*2418A**		1.01	1.01	1.01	0.94	0.94	315(A-JAV)066155			
CNRH*2417A**		1.02	1.02	1.02	0.94	0.94	315(A-JAV)066155			
CNRH*3017A**		1.01	1.01	1.01	0.92	0.92	353AAV036040			
CNRH*2414A**		1.01	1.01	1.01	0.92	0.92	353AAV036040			
CNRH*2417A**		1.01	1.01	1.01	0.92	0.92	353AAV036040			
CNRH*3014A**		1.01	1.01	1.01	0.92	0.92	353AAV036040			
CNRH*3017A**		1.01	1.01	1.01	0.92	0.92	353AAV036040			
CNRH*2412A**		1.01	1.01	1.01	0.92	0.92	353AAV036040			
CNRH*3012A**		1.01	1.01	1.01	0.92	0.92	353AAV036040			
CAR**2414A**		1.01	1.01	1.01	0.92	0.92	315(A-JAV)036070			
CAR**3014A**		1.01	1.01	1.01	0.92	0.92	315(A-JAV)036070			
CNRH*2417A**		1.00	1.00	1.00	0.94	0.94	315(A-JAV)036070			
CNRH*3017A**		1.01	1.01	1.01	0.93	0.93	315(A-JAV)036070			
CNRH*2414A**		1.00	1.00	1.00	0.94	0.94	315(A-JAV)036070			
CNRH*3014A**		1.01	1.01	1.01	0.92	0.92	315(A-JAV)036070			
CNRH*3017A**		1.01	1.01	1.01	0.92	0.92	315(A-JAV)036070			



223R

DETAILED COOLING CAPACITIES - CONTINUED

223RNA024 – B Outdoor Section With FA4CN(F,C)024 Indoor Section

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CNRH*3017A**	1.02	0.94	355(A,C)AV060100
CSRH*2412A**	1.01	0.95	355(A,C)AV060100
CSRH*3012A**	1.01	0.93	355(A,C)AV060100
CNRH*2417A**	1.00	0.94	355(A,C)AV060120
CNRH*3017A**	1.01	0.93	355(A,C)AV060120
CSRH*2412A**	1.01	0.95	355(A,C)AV060120
CSRH*3012A**	1.01	0.93	355(A,C)AV060120
CAR**2414A**	1.01	0.93	313*AV024045
CNRH*2417A**	1.01	0.94	313*AV024045
CNRV*2414A**	1.01	0.94	313*AV024045
CSRH*2412A**	1.03	0.95	313*AV024045

See notes on pg. 30

DETAILED COOLING CAPACITIES - CONTINUED

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**	
Total	Sens†			Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†					
223R/A030 – C Outdoor Section With FA4CNF030 Indoor Section																			
	72 (22.2)	33.41	17.19	2.08	32.15	16.70	2.33	30.82	16.19	2.62	29.48	15.67	2.93	28.07	15.14	3.27	26.59	14.58	3.65
	67 (19.4)	30.35	21.27	2.09	29.17	20.77	2.34	27.95	20.24	2.62	26.70	19.71	2.94	25.38	19.15	3.28	24.01	18.58	3.65
875	63 (17.2)††	28.14	20.54	2.09	27.04	20.03	2.35	25.89	19.50	2.63	24.70	18.96	2.94	23.45	18.39	3.28	22.15	17.80	3.64
	62 (16.7)	27.65	20.31	2.09	26.59	24.76	2.35	25.48	24.19	2.63	24.35	23.58	2.94	23.19	22.92	3.28	22.01	22.01	3.64
	57 (13.9)	26.74	26.74	2.09	25.88	25.88	2.35	24.98	24.98	2.63	24.04	24.04	2.94	23.05	23.05	3.28	22.01	22.01	3.64
	72 (22.2)	34.01	17.96	2.12	32.69	17.46	2.38	31.32	16.94	2.66	29.92	16.42	2.98	28.46	15.88	3.32	26.93	15.32	3.69
	67 (19.4)	30.89	22.55	2.13	29.67	22.03	2.38	28.40	21.50	2.67	27.10	20.96	2.98	25.75	20.39	3.32	24.33	19.80	3.69
1000	63 (17.2)††	28.65	21.73	2.14	27.51	21.21	2.39	26.31	20.67	2.67	25.08	20.12	2.98	23.80	19.54	3.32	22.46	18.94	3.69
	62 (16.7)	28.24	26.98	2.14	27.16	26.38	2.39	26.04	25.74	2.67	24.91	24.91	2.98	23.85	23.85	3.32	22.76	22.76	3.69
	57 (13.9)	27.75	27.75	2.14	26.84	26.84	2.39	25.89	25.89	2.67	24.90	24.90	2.98	23.86	23.86	3.32	22.76	22.76	3.69
	72 (22.2)	34.47	18.70	2.17	33.10	18.19	2.42	31.69	17.66	2.71	30.25	17.14	3.02	28.75	16.59	3.37	27.18	16.02	3.74
	67 (19.4)	31.31	23.79	2.18	30.05	23.26	2.43	28.74	22.71	2.71	27.41	22.15	3.03	26.02	21.57	3.37	24.57	20.97	3.74
1125	63 (17.2)††	29.05	22.89	2.18	27.87	22.36	2.44	26.64	21.80	2.72	25.38	21.24	3.03	24.07	20.84	3.37	22.70	20.02	3.74
	62 (16.7)	28.77	28.44	2.18	27.67	27.67	2.44	26.64	26.64	2.72	25.61	25.61	3.03	24.52	24.52	3.37	23.38	23.38	3.74
	57 (13.9)	28.60	28.60	2.18	27.64	27.64	2.44	26.64	26.64	2.72	25.61	25.61	3.03	24.52	24.52	3.37	23.38	23.38	3.74

COOLING INDOOR MODEL		CAPACITY			POWER	FURNACE MODEL		
		Total	Sens†	Total		Total	Sens†	Total
*FA4CN(F)C030	FA4CN(F)C030	1.00	1.00	1.00	0.94	315(A-J)AV048090		
FC4DN(F)B036	FC4DN(F)B036	1.02	0.98	1.01	0.95	315(A-J)AV048090		
FK4DN(F)030	FK4DN(F)030	1.01	0.95	1.03	0.95	315(A-J)AV048090		
FF4DN(F)036	FF4DN(F)036	0.99	0.99	1.00	0.95	315(A-J)AV060110		
FK4DN(F)001	FK4DN(F)001	1.01	1.01	1.01	0.94	315(A-J)AV060110		
FK4DN(F)002	FK4DN(F)002	1.00	0.94	1.00	0.94	315(A-J)AV060110		
CAR**3014A**	CAR**3014A**	1.00	1.00	1.03	0.95	315(A-J)AV060110		
CAR**3014A**	CAR**3014A**	1.00	1.00	1.00	0.94	315(A-J)AV066135		
CAR**3617A**	CAR**3617A**	1.01	1.01	1.01	0.95	315(A-J)AV066135		
CAR**3621A**	CAR**3621A**	1.01	1.01	1.03	0.95	315(A-J)AV066135		
CNRF**3618A**	CNRF**3618A**	1.01	1.01	1.00	0.94	315(A-J)AV066155		
CNRH**3017A**	CNRH**3017A**	1.01	1.01	1.00	0.94	315(A-J)AV066155		
CNRH**3014A**	CNRH**3014A**	1.01	1.01	1.03	0.95	315(A-J)AV066155		
CNRV**3017A**	CNRV**3017A**	1.01	1.01	1.03	0.95	315(A-J)AV066155		
CNRV**3617A**	CNRV**3617A**	1.01	1.01	1.01	0.93	353AAV036040		
CNRV**3621A**	CNRV**3621A**	1.01	1.01	1.01	0.91	353AAV036040		
CNRH**3017A**	CNRH**3017A**	1.01	1.01	1.01	0.93	353AAV036040		
CNRH**3014A**	CNRH**3014A**	1.04	1.02	1.01	0.93	353AAV036040		
CAR**3014A**	CAR**3014A**	0.99	0.96	1.01	0.93	353AAV036040		
CAR**3617A**	CAR**3617A**	1.00	0.94	1.01	0.93	353AAV036040		
CNRH**3017A**	CNRH**3017A**	1.00	0.94	1.04	0.94	353AAV036060		
CNRH**3617A**	CNRH**3617A**	1.00	0.94	1.01	0.94	353AAV036060		
CNRV**3014A**	CNRV**3014A**	1.01	0.96	1.01	0.91	353AAV036060		
CNRH**3012A**	CNRH**3012A**	1.01	0.95	1.01	0.94	353AAV036060		
CNRH**3612A**	CNRH**3612A**	1.02	0.96	1.01	0.94	353AAV036060		
CAR**3017A**	CAR**3017A**	1.00	0.94	1.01	0.94	353AAV036060		
CAR**3617A**	CAR**3617A**	1.01	0.94	1.01	0.94	353AAV036060		
CNRH**3017A**	CNRH**3017A**	1.00	0.94	1.01	0.94	353AAV036060		
CNRH**3617A**	CNRH**3617A**	1.00	0.94	1.01	0.94	353AAV036060		
CNRV**3017A**	CNRV**3017A**	1.00	0.94	1.01	0.94	353AAV036060		
CNRV**3617A**	CNRV**3617A**	1.00	0.94	1.01	0.94	353AAV036060		
CNRV**3012A**	CNRV**3012A**	1.01	0.94	1.04	0.94	353AAV036060		
CNRV**3617A**	CNRV**3617A**	1.00	0.94	1.01	0.94	353AAV036060		
CNRV**3621A**	CNRV**3621A**	1.00	0.94	1.01	0.94	353AAV036060		
CNRH**3012A**	CNRH**3012A**	1.01	0.94	1.01	0.94	353AAV036060		
CNRH**3617A**	CNRH**3617A**	1.00	0.94	1.04	0.94	353AAV036060		
CNRV**3017A**	CNRV**3017A**	1.00	0.94	1.01	0.94	353AAV036060		
CNRV**3617A**	CNRV**3617A**	1.00	0.94	1.01	0.94	353AAV036060		
CNRV**3012A**	CNRV**3012A**	1.01	0.94	1.03	0.97	353AAV036060		

223R

DETAILED COOLING CAPACITIES - CONTINUED

223R/A030 - C Outdoor Section With FA4CNF030 Indoor Section

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CAR**3621A**	1.00	0.94	355(A,C)/AV060080
CNRH*3017A**	1.00	0.94	355(A,C)/AV060080
CNRH*3617A**	1.00	0.94	355(A,C)/AV060080
CNRV*3621A**	1.00	0.94	355(A,C)/AV060080
CSRH*3012A**	1.01	0.95	355(A,C)/AV060080
CSRH*3612A**	1.02	0.96	355(A,C)/AV060100
CAR**3621A**	1.01	0.95	355(A,C)/AV060100
CNRH*3017A**	1.00	0.94	355(A,C)/AV060100
CNRH*3617A**	1.00	0.94	355(A,C)/AV060100
CNRV*3621A**	1.00	0.94	355(A,C)/AV060100
CSRH*3012A**	1.01	0.95	355(A,C)/AV060100
CSRH*3612A**	1.03	0.95	355(A,C)/AV060100
CNRH*3017A**	1.00	0.94	355(A,C)/AV060120
CNRH*3617A**	1.00	0.94	355(A,C)/AV060120
CNRV*3017A**	1.00	0.94	355(A,C)/AV060120
CSRH*3012A**	1.02	0.94	355(A,C)/AV060120
CSRH*3612A**	1.01	0.95	313*AV048070
CAR**3017A**	1.01	0.95	313*AV048070
CNRH*3017A**	1.01	0.95	313*AV048070
CNRH*3617A**	1.01	0.95	313*AV048070
CNRV*3017A**	1.01	0.95	313*AV048070
CNRV*3617A**	1.01	0.95	313*AV048070
CSRH*3012A**	1.01	0.95	313*AV048070
CSRH*3612A**	1.04	0.97	313*AV048070
CAR**3621A**	1.02	0.92	313*AV048090
CNRH*3017A**	1.01	0.95	313*AV048090
CNRH*3617A**	1.01	0.95	313*AV048090
CNRV*3621A**	1.01	0.95	313*AV048090
CSRH*3012A**	1.01	0.95	313*AV048090
CSRH*3612A**	1.04	0.93	313*AV048090

See notes on pg. 30

DETAILED COOLING CAPACITIES - CONTINUED

223RNA036-B Outdoor Section With FC4DN(FB)036 Indoor Section

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CNRH*3617A**	0.97	0.99	355(A,C)AV060120
CNRH*4221A**	0.99	0.97	355(A,C)AV060120
CSRH*3612A**	0.98	0.96	355(A,C)AV060120
CSRH*4212A**	0.99	0.97	355(A,C)AV060120
CNRH*4221A**	0.99	1.01	313*AV048070
CSRH*3612A**	1.00	1.00	313*AV048070
CSRH*4212A**	1.01	1.01	313*AV048070
CAR*3621A**	0.99	0.99	313*AV048090
CAR*4221A**	1.00	1.00	313*AV048090
CNRH*3617A**	0.98	0.98	313*AV048090
CNRH*4221A**	0.99	0.99	313*AV048090
CNRV*3621A**	0.98	0.98	313*AV048090
CNRV*4221A**	0.99	0.99	313*AV048090
CSRH*3612A**	1.01	1.01	313*AV048090
CSRH*4212A**	1.02	0.97	313*AV048090
CAR*3621A**	0.99	0.99	313*AV060110
CAR*4221A**	1.00	1.00	313*AV060110
CNRH*3617A**	0.98	0.98	313*AV060110
CNRH*4221A**	1.00	1.00	313*AV060110
CNRV*3621A**	0.98	0.98	313*AV060110
CNRV*4221A**	1.00	1.00	313*AV060110
CSRH*3612A**	1.02	0.97	313*AV060110
CSRH*4212A**	1.02	0.98	313*AV060110

See notes on pg. 30

DETAILED COOLING CAPACITIES - CONTINUED

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†		Total	Sens†					
223R/N042 - B Outdoor Section With FC4DN(FB)042 Indoor Section																									
1225		72 (22.2)	50.08	25.79	2.96	48.26	25.08	3.25	46.37	24.35	3.57	44.42	23.60	3.94	42.42	22.84	4.34	40.37	22.07	4.78					
		67 (19.4)	45.43	31.81	2.92	43.73	31.07	3.21	41.97	30.32	3.53	40.16	29.55	3.89	39.31	28.77	4.29	36.43	27.98	4.73					
		63 (17.2)††	42.03	30.67	2.89	40.43	29.93	3.18	38.77	29.17	3.50	37.08	28.39	3.86	35.35	27.61	4.25	33.59	26.82	4.69					
		62 (16.7)	41.25	37.74	2.89	39.70	36.95	3.18	38.12	36.14	3.50	36.50	35.29	3.85	34.88	34.39	4.25	33.27	33.27	4.69					
		57 (13.9)	39.87	39.87	2.88	38.63	38.63	3.17	37.34	37.34	3.49	36.02	36.02	3.85	34.66	34.66	4.25	33.26	33.26	4.69					
		72 (22.2)	51.04	26.98	3.02	49.14	26.26	3.31	47.19	25.52	3.64	45.16	24.77	4.00	43.09	24.00	4.40	40.96	23.21	4.84					
		67 (19.4)	46.33	33.77	2.98	44.56	33.02	3.27	42.73	32.25	3.59	40.85	31.47	3.95	38.93	30.67	4.35	36.98	29.86	4.79					
		63 (17.2)††	42.87	32.51	2.96	41.20	31.75	3.24	39.48	30.97	3.56	37.72	30.18	3.92	35.93	29.38	4.32	34.11	28.57	4.75					
		62 (16.7)	42.20	40.31	2.95	40.62	39.46	3.24	39.01	38.59	3.56	37.40	37.40	3.92	35.94	35.94	4.32	34.46	34.46	4.76					
		57 (13.9)	41.47	41.47	2.95	40.15	40.15	3.24	38.79	38.79	3.56	37.39	37.39	3.92	35.94	35.94	4.32	34.46	34.46	4.76					
		72 (22.2)	51.77	28.11	3.08	49.81	27.38	3.37	47.80	26.63	3.70	45.72	25.86	4.06	43.58	25.09	4.46	41.39	24.29	4.90					
		67 (19.4)	47.00	35.63	3.04	45.17	34.87	3.33	43.29	34.08	3.65	41.35	33.28	4.01	39.38	32.46	4.41	37.38	31.63	4.85					
63 (17.2)††	43.52	34.25	3.01	41.80	33.48	3.30	40.02	32.69	3.62	38.21	31.88	3.98	36.37	31.05	4.38	34.51	30.21	4.82							
62 (16.7)	43.06	42.55	3.01	41.46	41.46	3.30	40.00	40.00	3.62	38.52	38.52	3.98	37.01	37.01	4.38	35.46	35.46	4.83							
57 (13.9)	42.81	42.81	3.01	41.44	41.44	3.30	40.01	40.01	3.62	38.53	38.53	3.98	37.02	37.02	4.38	35.46	35.46	4.83							

COOLING INDOOR MODEL	CAPACITY		POWER	FURNACE MODEL	
	Total	Sens†		Total	Sens†
*FC4DN(FB)042	1.00	1.00	1.00	315(A,J)AV066135	
FA4CN(F)048	1.00	1.02	1.02	315(A,J)AV066135	
FK4DN(FB)048	1.00	0.96	0.96	315(A,J)AV066135	
FK4DN(F)003	1.00	0.98	0.98	315(A,J)AV066135	
FK4DN(F)005	1.00	0.94	0.94	315(A,J)AV066155	
FK4DN(B)006	1.01	0.95	0.95	315(A,J)AV066155	
CAR**4817A**	1.00	1.02	1.02	315(A,J)AV066155	
CAR**4821A**	1.00	1.02	1.02	315(A,J)AV066155	
CAR**4824A**	1.00	1.02	1.02	315(A,J)AV066155	
CNRH*4821A**	1.00	1.00	1.00	315(A,J)AV066155	
CNRH*4821A**	1.00	1.02	1.02	315(A,J)AV066155	
CNRH*4821A**	1.00	1.00	1.00	315(A,J)AV066155	
CNRH*4821A**	1.00	1.02	1.02	315(A,J)AV066155	
CNRV*4824A**	1.00	1.00	1.00	353AAV036040	
CNRV*4824A**	0.99	1.01	1.01	353AAV036040	
CNRH*4812A**	1.00	1.02	1.02	353AAV036040	
CNRH*4821A**	1.00	0.96	0.96	315(A,J)AV036070	
CNRH*4821A**	0.98	0.96	0.96	315(A,J)AV036070	
CNRH*4821A**	0.98	0.96	0.96	315(A,J)AV036070	
CNRH*4812A**	0.99	0.97	0.97	315(A,J)AV036070	
CAR**4817A**	1.00	0.98	0.98	315(A,J)AV048090	
CNRH*4821A**	0.98	0.96	0.96	315(A,J)AV048090	
CNRH*4821A**	0.99	0.97	0.97	315(A,J)AV048090	
CNRH*4821A**	0.99	0.97	0.97	315(A,J)AV048090	
CNRH*4812A**	0.99	0.96	0.96	315(A,J)AV060110	
CAR**4821A**	1.00	0.98	0.98	315(A,J)AV060110	
CNRH*4821A**	0.98	0.93	0.93	315(A,J)AV060110	
CNRH*4821A**	0.99	0.95	0.95	315(A,J)AV060110	
CNRH*4821A**	0.98	0.93	0.93	315(A,J)AV060110	
CNRV*4821A**	1.00	0.96	0.96	315(A,J)AV060110	
CNRV*4821A**	0.98	0.96	0.96	315(A,J)AV060110	
CNRH*4812A**	1.00	0.98	0.98	315(A,J)AV060110	
CNRH*4812A**	0.98	0.96	0.96	315(A,J)AV060110	
CAR**4824A**	1.00	0.96	0.96	315(A,J)AV066135	
CNRH*4821A**	0.99	0.95	0.95	315(A,J)AV066135	

223R

DETAILED COOLING CAPACITIES - CONTINUED

223RNA042 - B Outdoor Section With FC4DN(FB)042 Indoor Section

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CAR**4821A**	0.99	0.97	355(A,C)AV060080
CNRH*4221A**	0.98	0.96	355(A,C)AV060080
CNRH*4821A**	0.99	0.97	355(A,C)AV060080
CNRV*4221A**	0.98	0.96	355(A,C)AV060080
CNRV*4821A**	0.99	0.97	355(A,C)AV060080
CSRH*4212A**	0.98	0.96	355(A,C)AV060080
CSRH*4812A**	0.99	0.97	355(A,C)AV060100
CAR**4821A**	0.99	0.97	355(A,C)AV060100
CNRH*4221A**	0.98	0.96	355(A,C)AV060100
CNRH*4821A**	0.99	0.97	355(A,C)AV060100
CNRV*4221A**	0.98	0.96	355(A,C)AV060100
CNRV*4821A**	0.99	0.97	355(A,C)AV060100
CSRH*4212A**	0.98	0.96	355(A,C)AV060100
CSRH*4812A**	0.99	0.97	355(A,C)AV060100
CAR**4224A**	0.98	0.96	355(A,C)AV060120
CAR**4824A**	0.99	0.97	355(A,C)AV060120
CNRH*4221A**	0.98	0.96	355(A,C)AV060120
CNRH*4821A**	0.99	0.97	355(A,C)AV060120
CNRV*4824A**	0.98	0.96	355(A,C)AV060120
CSRH*4212A**	0.98	0.96	355(A,C)AV060120
CSRH*4812A**	0.99	0.97	355(A,C)AV060120
CAR**4817A**	1.00	1.00	313*AV048070
CNRH*4821A**	1.00	1.00	313*AV048070
CSRH*4212A**	1.00	1.00	313*AV048070
CSRH*4812A**	1.00	1.00	313*AV048090
CAR**4221A**	0.98	0.96	313*AV048090
CAR**4821A**	1.00	0.96	313*AV048090
CNRH*4221A**	0.98	0.93	313*AV048090
CNRH*4821A**	1.00	0.96	313*AV048090
CNRV*4221A**	0.98	0.93	313*AV048090
CNRV*4821A**	1.00	0.96	313*AV048090
CSRH*4212A**	1.00	0.96	313*AV048090
CSRH*4812A**	1.00	0.92	313*AV048090
CAR**4221A**	0.99	0.95	313*AV060110
CAR**4821A**	1.00	0.92	313*AV060110
CNRH*4221A**	0.98	0.93	313*AV060110
CNRH*4821A**	1.00	0.92	313*AV060110
CNRV*4221A**	0.98	0.93	313*AV060110
CNRV*4821A**	1.00	0.92	313*AV060110
CSRH*4212A**	1.00	0.92	313*AV060110
CSRH*4812A**	1.00	0.92	313*AV060110
CAR**4224A**	0.99	0.95	313*AV060135
CAR**4824A**	1.00	0.96	313*AV060135
CNRH*4221A**	0.98	0.93	313*AV060135
CNRH*4821A**	1.00	0.92	313*AV060135
CNRV*4824A**	1.00	0.92	313*AV060135
CSRH*4212A**	1.00	0.92	313*AV060135
CSRH*4812A**	1.00	0.92	313*AV060135

See notes on pg. 30

DETAILED COOLING CAPACITIES - CONTINUED

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**						
		Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†							
1400	72 (22.2)	55.04	28.28	3.34	53.08	27.52	3.72	51.02	26.73	4.14	48.86	25.91	4.60	46.59	25.05	5.10	44.20	24.17	5.65
	67 (19.4)	49.88	34.89	3.32	48.06	34.11	3.69	46.14	33.29	4.10	44.14	32.44	4.56	42.03	31.56	5.06	39.82	30.84	5.59
	63 (17.2)††	46.22	33.67	3.30	44.50	32.88	3.67	42.69	32.05	4.08	40.70	31.19	4.53	38.80	30.29	5.02	36.71	29.36	5.56
	62 (16.7)	45.40	41.48	3.29	43.73	40.64	3.66	41.99	39.75	4.08	40.19	38.81	4.53	39.32	37.77	5.02	36.47	36.47	5.55
	57 (13.9)	43.98	43.98	3.29	42.63	42.63	3.66	41.21	41.21	4.07	39.72	39.72	4.52	38.14	38.14	5.02	36.47	36.47	5.55
	72 (22.2)	56.13	29.64	3.41	54.09	28.86	3.79	51.95	28.06	4.20	49.70	27.22	4.66	47.35	26.36	5.17	44.88	25.46	5.71
1600	67 (19.4)	50.87	37.09	3.38	48.97	36.29	3.75	46.98	35.46	4.17	44.89	34.59	4.63	42.71	33.69	5.12	40.44	32.75	5.66
	63 (17.2)††	47.13	35.72	3.36	45.34	34.92	3.73	43.46	34.07	4.15	41.50	33.19	4.60	39.44	32.28	5.09	37.29	31.32	5.62
	62 (16.7)	46.43	44.35	3.36	44.75	43.44	3.73	42.99	42.43	4.14	41.24	41.24	4.60	39.57	39.57	5.09	37.81	37.81	5.63
	57 (13.9)	45.74	45.74	3.35	44.32	44.32	3.73	42.82	42.82	4.14	41.24	41.24	4.60	39.58	39.58	5.09	37.82	37.82	5.63
	72 (22.2)	56.97	30.91	3.47	54.86	30.13	3.85	52.65	29.32	4.27	50.34	28.47	4.73	47.92	27.60	5.23	45.38	26.69	5.78
	67 (19.4)	51.62	39.18	3.45	49.66	38.37	3.82	47.61	37.52	4.23	45.47	36.64	4.69	43.23	35.72	5.19	40.90	34.75	5.73
1800	63 (17.2)††	47.83	37.67	3.42	45.98	36.85	3.80	44.06	35.99	4.21	42.04	35.09	4.66	39.94	34.16	5.16	37.74	33.17	5.69
	62 (16.7)	47.39	46.93	3.42	45.74	45.74	3.80	44.16	44.16	4.21	42.51	42.51	4.67	40.77	40.77	5.17	38.93	38.93	5.71
	57 (13.9)	47.22	47.22	3.42	45.73	45.73	3.80	44.16	44.16	4.21	42.51	42.51	4.67	40.77	40.77	5.17	38.93	38.93	5.71

223RNF048 - C Outdoor Section With FC4DN(FB)048 Indoor Section

COOLING INDOOR MODEL		CAPACITY		POWER	FURNACE MODEL	
		Total	Sens†		Total	Sens†
*FC4DN(FB)048	1.00	1.00	0.98	315(A-J)AV06155		
FC4DN(FB)060	1.01	0.97	0.96	315(A-J)AV066155		
FK4DN(B,F)005	1.00	0.98	0.96	315(A-J)AV066155		
FK4DN(B)006	1.01	0.93	0.98	353AAV048080		
CAR**6021A**	1.00	1.02	0.98	353AAV048080		
CAR**6024A**	1.00	1.02	1.00	353AAV048080		
CNRH**6024A**	1.00	1.02	0.98	353AAV048080		
CNRH**6012A**	1.01	1.03	0.97	353AAV060100		
CAR**4817A**	0.97	0.97	0.97	315(A-J)AV048090		
CNRH**4821A**	0.97	0.97	0.97	315(A-J)AV048090		
CNRH**6024A**	0.99	0.97	0.97	315(A-J)AV048090		
CNRH**4812A**	0.98	0.98	0.98	315(A-J)AV048090		
CNRH**6012A**	1.00	0.98	0.98	315(A-J)AV048090		
CAR**4821A**	0.97	0.97	0.97	315(A-J)AV060110		
CAR**6021A**	0.99	0.97	0.97	315(A-J)AV060110		
CNRH**4821A**	0.97	0.97	0.97	315(A-J)AV060110		
CAR**4824A**	0.99	0.97	0.97	315(A-J)AV066135		
CNRH**6024A**	0.99	0.97	0.97	315(A-J)AV066135		
CNRH**4821A**	0.97	0.97	0.97	315(A-J)AV066135		
CNRH**6012A**	1.00	0.98	0.98	315(A-J)AV066135		
CAR**6024A**	0.97	0.97	0.97	315(A-J)AV066135		
CNRH**4821A**	0.97	0.97	0.97	315(A-J)AV066135		
CNRH**6024A**	0.99	0.98	0.98	315(A-J)AV066135		
CNRH**4812A**	1.00	0.98	0.98	315(A-J)AV066135		
CNRH**6012A**	1.00	0.98	0.98	315(A-J)AV066135		
CAR**4824A**	0.97	0.97	0.97	315(A-J)AV066135		
CNRH**4821A**	0.98	0.98	0.98	315(A-J)AV066135		
CNRH**6024A**	1.00	0.98	0.98	315(A-J)AV066135		
CNRH**4821A**	0.98	0.98	0.98	315(A-J)AV066135		
CNRH**6024A**	1.00	0.98	0.98	315(A-J)AV066135		
CNRH**4821A**	0.98	0.98	0.98	315(A-J)AV066135		
CNRV**4824A**	0.98	0.96	0.96	315(A-J)AV066155		

See notes on pg. 30



DETAILED COOLING CAPACITIES - CONTINUED

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)																	
CFM	EWB ° F (° C)	75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
		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†	
223RNA060 – B Outdoor Section With FC4DN(FB)060 Indoor Section																			
	72 (22.2)	70.50	36.75	4.38	67.86	35.72	4.80	65.14	34.65	5.25	63.34	33.58	5.76	59.41	32.46	6.32	56.35	31.30	6.92
1750	67 (19.4)	64.26	45.56	4.31	61.84	44.49	4.72	59.33	43.41	5.18	56.73	42.30	5.69	54.02	41.15	6.24	51.19	39.96	6.84
	63 (17.2)††	59.75	44.06	4.26	57.48	43.00	4.67	55.12	41.91	5.13	52.68	40.79	5.63	50.13	39.63	6.18	47.47	38.43	6.77
	62 (16.7)	58.65	54.28	4.25	56.45	53.17	4.66	54.17	52.01	5.12	51.84	50.79	5.62	49.44	49.44	6.17	47.10	47.10	6.77
	57 (13.9)	56.80	56.80	4.23	55.03	55.03	4.65	53.18	53.18	5.11	51.26	51.26	5.61	49.23	49.23	6.17	47.10	47.10	6.77
2000	72 (22.2)	71.76	38.47	4.48	69.01	37.41	4.89	66.19	36.35	5.35	63.29	35.25	5.85	60.25	34.12	6.41	57.08	32.96	7.01
	67 (19.4)	65.44	48.40	4.40	62.92	47.32	4.82	60.31	46.22	5.27	57.62	45.09	5.78	54.81	43.91	6.33	51.88	42.70	6.93
	63 (17.2)††	60.88	46.73	4.35	58.53	45.65	4.76	56.07	44.54	5.22	53.54	43.39	5.72	50.90	42.21	6.27	48.16	40.98	6.86
	62 (16.7)	59.96	58.07	4.35	57.70	56.85	4.76	55.40	54.88	5.21	53.15	53.15	5.72	51.00	51.00	6.27	48.74	48.74	6.88
2250	72 (22.2)	72.70	40.09	4.56	69.87	39.03	4.98	66.96	37.95	5.43	63.97	36.85	5.94	60.86	35.71	6.50	57.61	34.53	7.10
	67 (19.4)	66.33	51.11	4.49	63.72	50.01	4.90	61.03	48.89	5.36	58.27	47.73	5.87	55.39	46.53	6.42	52.40	45.29	7.02
	63 (17.2)††	61.73	49.26	4.43	59.31	48.16	4.85	56.78	47.03	5.30	54.17	45.86	5.81	51.47	44.65	6.36	48.66	43.38	6.95
	62 (16.7)	61.09	60.60	4.43	58.94	58.94	4.85	56.86	56.86	5.31	54.70	54.70	5.82	52.45	52.45	6.37	50.07	50.07	6.98
	57 (13.9)	60.93	60.93	4.43	58.94	58.94	4.85	56.86	56.86	5.31	54.71	54.71	5.82	52.45	52.45	6.37	50.08	50.08	6.98

COOLING INDOOR MODEL	CAPACITY		POWER	FURNACE MODEL	
	Total	Sens†		Total	Sens†
*FC4DN(FB)060	1.00	1.00	0.97	315(A-J)AV066155	
FK4DNB006	0.98	0.97	0.97	315(A-J)AV066155	
CAR**6024A**	0.97	0.97	0.97	315(A-J)AV066155	
CNRH*6024A**	0.97	0.97	0.96	313*AV060110	
CNRV*6024A**	0.97	0.97	0.96	313*AV060110	
CSRH*6012A**	0.97	0.97	0.95	313*AV060135	
CAR**6024A**	0.97	0.97	0.95	353AAV060120	

COOLING INDOOR MODEL	CAPACITY		POWER	FURNACE MODEL	
	Total	Sens†		Total	Sens†
CNRH*6024A**	0.96	0.96	0.94	353AAV060100	
CSRH*6012A**	0.97	0.97	0.95	353AAV060100	
CAR**6024A**	0.97	0.97	0.95	353AAV060120	
CNRH*6024A**	0.97	0.97	0.95	353AAV060120	
CNRV*6024A**	0.97	0.97	0.95	353AAV060120	
CSRH*6012A**	0.97	0.97	0.96	353AAV060120	

* Tested combination.

† Total and sensible capacities are net capacities. Blower motor heat has been subtracted.

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

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

†† At TVA rating indoor condition (75°F edb/63°F ewb). All other indoor air temperatures are at 80°F edb.

EWB — Entering Wet Bulb

NOTES:

1. Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per ARI standard 210/240–94. 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.

HEAT PUMP HEATING PERFORMANCE

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)															
EDB	CFM	-3 (-19.4)		7 (-13.9)		17 (-8.3)		27 (-2.8)		37 (2.8)		47 (8.3)		57 (13.9)		67 (19.4)	
		Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt
65 (18.3)		9.66	8.89	12.20	11.21	15.14	13.80	17.80	15.81	18.43	16.77	17.95	17.03	17.03	16.00	17.03	15.87
600		9.85	9.06	12.42	11.41	15.39	14.04	17.70	15.72	17.72	16.12	17.05	17.05	16.00	17.05	16.42	1.35
675		10.02	9.22	12.62	11.60	15.62	14.24	17.80	15.83	17.01	15.48	17.05	17.05	16.00	17.05	16.42	1.35
70 (21.1)		9.43	8.68	11.94	10.97	14.84	13.53	17.79	15.80	18.11	17.39	18.81	18.81	18.21	18.21	17.62	1.50
600		9.62	8.85	11.33	10.36	14.38	13.07	17.45	15.83	18.44	16.78	18.00	18.00	17.34	17.34	16.82	1.47
675		9.79	9.01	12.35	11.35	15.32	13.97	17.80	15.81	17.96	16.94	17.40	17.40	16.62	16.62	15.45	1.45
75 (23.9)		9.19	8.45	11.88	10.73	14.44	13.25	17.67	15.70	18.47	17.72	19.53	19.53	19.14	19.14	18.57	1.61
600		9.38	8.63	11.89	10.93	14.45	13.48	17.81	15.81	18.78	17.94	18.78	18.78	18.15	18.15	17.76	1.58
675		9.55	8.79	12.08	11.10	15.00	13.68	17.87	15.87	18.61	17.87	18.22	18.22	17.74	17.74	16.92	1.56

223RBA018-B Outdoor Section With FA4CN(F,C)018 Indoor Section

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CSRH*2412A**	0.85	0.83	355(A,C)AV042060
CNRH*2417A**	0.92	0.85	355(A,C)AV042060
CSRH*2412A**	0.84	0.83	355(A,C)AV042080
CAR**2417A**	1.00	0.95	313*AV024045
CNRV**2417A**	0.98	0.90	313*AV024045

See notes on pg. 40

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FA4CN(F,C)018	1.00	1.00	
FA4CN(F,C)024	0.87	0.93	
FC4DNF018	0.96	0.89	
FC4DNF024	0.84	0.83	
FF1ENE018	1.00	1.00	
FF1ENE024	0.84	0.90	
FK4DNF001	0.77	0.78	
FK4DNF002	0.77	0.75	
CAR**1814A**	1.01	1.03	
CAR**2414A**	0.86	0.91	
CAR**2417A**	0.86	0.91	
CNRH*2418A**	0.87	0.89	
CNRH*2417A**	0.87	0.89	
CNRV*1814A**	0.96	0.96	
CNRV*2414A**	0.87	0.89	
CNRV*2417A**	0.87	0.89	
CSRH*2412A**	0.77	0.84	
CAR**1814A**	1.04	1.00	315(A,J)AV036070
CAR**2414A**	0.91	0.87	315(A,J)AV036070
CNRH*2417A**	0.93	0.85	315(A,J)AV036070
CNRV*1814A**	1.03	0.94	315(A,J)AV036070
CNRV*2414A**	0.93	0.85	315(A,J)AV036070
CSRH*2412A**	0.86	0.83	315(A,J)AV036070
CAR**2417A**	0.90	0.86	315(A,J)AV048090
CNRH*2417A**	0.91	0.84	315(A,J)AV048090
CNRV*2417A**	0.91	0.84	315(A,J)AV048090
CSRH*2412A**	0.84	0.82	315(A,J)AV048090
CAR**2417A**	0.77	0.75	353AA V036040
CNRH*2417A**	0.83	0.77	353AA V036040
CNRV*2417A**	0.83	0.77	353AA V036040
CSRH*2412A**	0.77	0.75	353AA V036040
CAR**2417A**	0.81	0.77	353AA V036060
CNRH*2417A**	0.87	0.80	353AA V036060
CNRV*2417A**	0.87	0.80	353AA V036060
CSRH*2412A**	0.81	0.79	353AA V036060
CNRH*2417A**	0.93	0.85	355(A,C)AV042040
CSRH*2412A**	0.85	0.83	355(A,C)AV042040
CAR**2417A**	0.91	0.87	355(A,C)AV042060
CNRH*2417A**	0.93	0.85	355(A,C)AV042060
CNRV*2417A**	0.92	0.84	355(A,C)AV042060

HEAT PUMP HEATING PERFORMANCE - CONTINUED

223RNA030-C Outdoor Section With FA4CNF030 Indoor Section

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CNRH*3617A**	0.97	0.95	313*AV048070
CNRV*3017A**	0.97	0.95	313*AV048070
CNRV*3617A**	0.97	0.95	313*AV048070
CSRH*3012A**	0.97	0.95	313*AV048070
CSRH*3612A**	0.95	0.90	313*AV048070
CAR**3621A**	0.97	0.92	313*AV048090
CNRH*3017A**	0.97	0.94	313*AV048090
CNRH*3617A**	0.97	0.94	313*AV048090
CNRV*3621A**	0.97	0.94	313*AV048090
CSRH*3012A**	0.97	0.94	313*AV048090
CSRH*3612A**	0.95	0.89	313*AV048090

See notes on pg. 40

HEAT PUMP HEATING PERFORMANCE - CONTINUED

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)															HEATING INDOOR MODEL		CAPACITY		POWER		FURNACE MODEL		HEATING INDOOR MODEL		CAPACITY		POWER		FURNACE MODEL	
		-3 (-19.4)			7 (-13.9)			17 (-8.3)			27 (-2.8)			37 (2.8)																		
EDB °F (°C)	CFM	Capacity MBtuh		Total Syst. KWt	Capacity MBtuh		Total Syst. KWt	Capacity MBtuh		Total Syst. KWt	Capacity MBtuh		Total Syst. KWt	Capacity MBtuh		Total Syst. KWt	Capacity MBtuh		Total Syst. KWt	Capacity MBtuh		Total Syst. KWt	Capacity MBtuh		Total Syst. KWt							
		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*								
65 (18.3)	1050	14.68	13.51	2.27	18.21	16.73	2.38	22.03	20.32	2.48	26.28	23.34	2.62	31.04	28.25	2.79	35.84	35.84	2.93	39.93	39.93	3.08	44.35	44.35	3.26							
	1200	14.89	13.70	2.29	18.43	16.93	2.38	22.28	20.32	2.48	26.57	23.60	2.61	31.38	28.55	2.76	35.43	35.43	2.87	39.36	39.36	3.00	41.49	41.49	3.08							
	1350	15.07	13.87	2.31	18.62	17.11	2.39	22.51	20.52	2.48	26.84	23.84	2.61	31.61	28.76	2.73	35.06	35.06	2.83	38.68	38.68	2.95	39.03	39.03	2.95							
	1500	14.32	13.17	2.37	17.88	16.43	2.48	21.70	19.78	2.59	25.91	23.01	2.74	30.63	27.87	2.92	35.73	35.73	3.06	39.83	39.83	3.23	44.39	44.39	3.43							
70 (21.1)	1200	14.51	13.35	2.38	18.10	16.64	2.48	21.94	20.00	2.59	26.20	23.27	2.72	30.97	28.18	2.89	35.50	35.50	3.01	39.46	39.46	3.15	42.80	42.80	3.28							
	1350	14.70	13.53	2.40	18.30	16.82	2.50	22.16	20.20	2.59	26.45	23.50	2.72	31.25	28.44	2.87	35.19	35.19	2.97	38.95	38.95	3.10	40.47	40.47	3.15							
	1500	13.92	12.81	2.46	17.53	16.10	2.59	21.37	19.48	2.71	25.54	22.68	2.86	30.23	27.50	3.05	35.38	35.38	3.23	39.79	39.79	3.39	44.37	44.37	3.60							
	1200	14.13	13.00	2.48	17.75	16.31	2.59	21.62	19.71	2.70	25.83	22.94	2.84	30.56	27.81	3.01	35.55	35.55	3.16	39.45	39.45	3.31	43.67	43.67	3.48							
75 (23.9)	1350	14.33	13.18	2.50	17.96	16.50	2.60	21.83	19.91	2.71	26.09	23.17	2.84	30.85	28.07	3.00	35.27	35.27	3.12	39.08	39.08	3.25	41.71	41.71	3.35							

223R

HEAT PUMP HEATING PERFORMANCE - CONTINUED

223RNA036 – B Outdoor Section With FC4DN(F-B)036 Indoor Section

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CNRV*3621A**	1.00	1.01	353AAV060100
CNRV*4221A**	0.99	0.98	353AAV060100
CSRH*3612A**	0.98	0.96	353AAV060100
CSRH*4212A**	0.97	0.94	353AAV060100

See notes on pg. 40

HEAT PUMP HEATING PERFORMANCE - CONTINUED

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)												HEATING INDOOR MODEL		CAPACITY		POWER		FURNACE MODEL		HEATING INDOOR MODEL		CAPACITY		POWER		FURNACE MODEL													
		-3 (-13.9)			7 (-13.9)			17 (-8.3)			27 (-2.8)																			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)		
		EDB °F (°C)	CFM	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh																	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh
65 (18.3)	1400	1225	16.95	15.59	2.57	21.12	19.40	2.68	25.58	23.32	2.79	30.39	28.99	2.91	35.81	32.59	3.07	41.84	38.79	41.84	3.25	48.79	48.79	3.47	56.86	56.86	3.77														
		1575	17.24	15.86	2.80	21.41	19.67	2.70	25.90	23.61	2.79	30.77	27.33	2.91	36.25	32.99	3.05	42.37	42.37	42.37	3.21	49.49	49.49	3.43	57.61	57.61	3.64														
		1575	17.49	16.09	2.63	21.68	19.92	2.72	26.19	23.88	2.81	31.10	27.62	2.92	36.67	33.37	3.05	42.83	42.83	42.83	3.20	50.05	50.05	3.41	57.65	57.65	3.58														
70 (21.1)	1400	1225	16.49	15.17	2.67	20.72	19.04	2.79	25.21	22.98	2.91	30.01	26.66	3.04	35.34	32.16	3.20	41.32	41.32	41.32	3.39	48.09	48.09	3.62	56.01	56.01	3.92														
		1575	16.77	15.43	2.70	21.01	19.30	2.81	25.53	23.27	2.92	30.36	26.96	3.04	35.77	32.55	3.18	41.83	41.83	41.83	3.35	48.77	48.77	3.57	56.90	56.90	3.82														
		1575	17.03	15.67	2.74	21.28	19.55	2.84	25.81	23.53	2.93	30.67	27.24	3.04	36.15	32.89	3.18	42.25	42.25	42.25	3.34	49.32	49.32	3.54	57.30	57.30	3.74														
75 (23.9)	1400	1225	15.98	14.69	2.77	20.29	18.65	2.91	24.82	22.63	3.04	29.64	26.33	3.18	34.88	31.74	3.35	40.80	40.80	40.80	3.54	47.43	47.43	3.78	55.20	55.20	4.09														
		1575	16.26	14.96	2.80	20.60	18.93	2.93	25.14	22.92	3.05	29.99	26.63	3.17	35.30	32.12	3.32	41.31	41.31	41.31	3.50	48.08	48.08	3.72	56.05	56.05	4.00														
		1575	16.53	15.21	2.84	20.87	19.18	2.95	25.43	23.19	3.06	30.29	26.91	3.18	35.67	32.46	3.31	41.73	41.73	41.73	3.48	48.63	48.63	3.69	56.70	56.70	3.92														

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)												HEATING INDOOR MODEL		CAPACITY		POWER		FURNACE MODEL		HEATING INDOOR MODEL		CAPACITY		POWER		FURNACE MODEL													
		-3 (-13.9)			7 (-13.9)			17 (-8.3)			27 (-2.8)																			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)		
		EDB °F (°C)	CFM	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh																	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh
65 (18.3)	1400	1225	16.95	15.59	2.57	21.12	19.40	2.68	25.58	23.32	2.79	30.39	28.99	2.91	35.81	32.59	3.07	41.84	38.79	41.84	3.25	48.79	48.79	3.47	56.86	56.86	3.77														
		1575	17.24	15.86	2.80	21.41	19.67	2.70	25.90	23.61	2.79	30.77	27.33	2.91	36.25	32.99	3.05	42.37	42.37	42.37	3.21	49.49	49.49	3.43	57.61	57.61	3.64														
		1575	17.49	16.09	2.63	21.68	19.92	2.72	26.19	23.88	2.81	31.10	27.62	2.92	36.67	33.37	3.05	42.83	42.83	42.83	3.20	50.05	50.05	3.41	57.65	57.65	3.58														
70 (21.1)	1400	1225	16.49	15.17	2.67	20.72	19.04	2.79	25.21	22.98	2.91	30.01	26.66	3.04	35.34	32.16	3.20	41.32	41.32	41.32	3.39	48.09	48.09	3.62	56.01	56.01	3.92														
		1575	16.77	15.43	2.70	21.01	19.30	2.81	25.53	23.27	2.92	30.36	26.96	3.04	35.77	32.55	3.18	41.83	41.83	41.83	3.35	48.77	48.77	3.57	56.90	56.90	3.82														
		1575	17.03	15.67	2.74	21.28	19.55	2.84	25.81	23.53	2.93	30.67	27.24	3.04	36.15	32.89	3.18	42.25	42.25	42.25	3.34	49.32	49.32	3.54	57.30	57.30	3.74														
75 (23.9)	1400	1225	15.98	14.69	2.77	20.29	18.65	2.91	24.82	22.63	3.04	29.64	26.33	3.18	34.88	31.74	3.35	40.80	40.80	40.80	3.54	47.43	47.43	3.78	55.20	55.20	4.09														
		1575	16.26	14.96	2.80	20.60	18.93	2.93	25.14	22.92	3.05	29.99	26.63	3.17	35.30	32.12	3.32	41.31	41.31	41.31	3.50	48.08	48.08	3.72	56.05	56.05	4.00														
		1575	16.53	15.21	2.84	20.87	19.18	2.95	25.43	23.19	3.06	30.29	26.91	3.18	35.67	32.46	3.31	41.73	41.73	41.73	3.48	48.63	48.63	3.69	56.70	56.70	3.92														

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)												HEATING INDOOR MODEL		CAPACITY		POWER		FURNACE MODEL		HEATING INDOOR MODEL		CAPACITY		POWER		FURNACE MODEL													
		-3 (-13.9)			7 (-13.9)			17 (-8.3)			27 (-2.8)																			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)		
		EDB °F (°C)	CFM	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh																	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh	Total Syst. KWt	Integ*	Total Capacity MBtuh
65 (18.3)	1400	1225	16.95	15.59	2.57	21.12	19.40	2.68	25.58	23.32	2.79	30.39	28.99	2.91	35.81	32.59	3.07	41.84	38.79	41.84	3.25	48.79	48.79	3.47	56.86	56.86	3.77														
		1575	17.24	15.86	2.80	21.41	19.67	2.70	25.90	23.61	2.79	30.77	27.33	2.91	36.25	32.99	3.05	42.37	42.37	42.37	3.21	49.49	49.49	3.43	57.61	57.61	3.64														
		1575	17.49	16.09	2.63	21.68	19.92	2.72	26.19	23.88	2.81	31.10	27.62	2.92	36.67	33.37	3.05	42.83	42.83	42.83	3.20	50.05	50.05	3.41	57.65	57.65	3.58														
70 (21.1)	1400	1225	16.49	15.17	2.67	20.72	19.04	2.79	25.21	22.98	2.91	30.01	26.66	3.04	35.34	32.16	3.20	41.32	41.32	41.32	3.39	48.09	48.09	3.62	56.01	56.01	3.92														
		1575	16.77	15.43	2.70	21.01	19.30	2.81	25.53	23.27	2.92	30.36	26.96	3.04	35.77	32.55	3.18	41.83	41.83	41.83	3.35	48.77	48.77	3.57	56.90	56.90	3.82														
		1575	17.03	15.67	2.74	21.28	19.55	2.84	25.81	23.53	2.93	30.67	27.24	3.04	36.15	32.89	3.18	42.25	42.25	42.25	3.34	49.32	49.32	3.54	57.30	57.30	3.74														
75 (23.9)	1400	1225	15.98	14.69	2.77	20.29	18.65	2.91	24.82	22.63	3.04	29.64	26.33	3.18	34.88	31.74	3.35	40.80	40.80	40.80	3.54	47.43	47.43	3.78	55.20	55.20	4.09														
		1575	16.26	14.96	2.80	20.60	18.93	2.93	25.14	22.92	3.05	29.99	26.63	3.17	35.30	32.12	3.32	41.31	41.31	41.31	3.50	48.08	48.08	3.72	56.05	56.05	4.00														
		1575	16.53	15.21	2.84	20.87	19.18	2.95	25.43	23.19	3.06	30.29	26.91	3.18	35.67	32.46	3.31	41.73	41.73	41.73	3.48	48.63	48.63	3.69	56.70	56.70	3.92														

223R

HEAT PUMP HEATING PERFORMANCE - CONTINUED

223RNA042 - B Outdoor Section With FC4DN(F)042 Indoor Section

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CNRV*4824A**	0.98	0.98	355(A,C)AV060120
CSRH*4212A**	0.96	0.97	355(A,C)AV060120
CSRH*4812A**	0.98	0.97	355(A,C)AV060120
CAR**4817A**	1.00	1.01	313*AV048070
CNRH*4821A**	1.00	1.02	313*AV048070
CSRH*4212A**	1.00	1.02	313*AV048070
CSRH*4812A**	1.00	1.01	313*AV048070
CAR**4221A**	0.98	1.00	313*AV048090
CAR**4821A**	0.99	0.98	313*AV048090
CNRH*4221A**	0.98	1.00	313*AV048090
CNRH*4821A**	0.99	0.98	313*AV048090
CNRV*4221A**	0.98	1.00	313*AV048090
CNRV*4821A**	0.99	0.98	313*AV048090
CSRH*4212A**	0.99	0.98	313*AV048090
CSRH*4812A**	0.99	0.98	313*AV048090
CAR**4221A**	0.98	0.99	313*AV060110
CAR**4821A**	0.98	0.96	313*AV060110
CNRH*4221A**	0.98	1.00	313*AV060110
CNRH*4821A**	0.98	0.96	313*AV060110
CNRV*4221A**	0.98	1.00	313*AV060110
CNRV*4821A**	0.98	0.96	313*AV060110
CSRH*4212A**	0.98	0.97	313*AV060110
CSRH*4812A**	0.99	0.97	313*AV060110
CAR**4224A**	0.98	0.99	313*AV060135
CAR**4824A**	0.99	0.98	313*AV060135
CNRH*4221A**	0.98	1.01	313*AV060135
CNRH*4821A**	0.99	0.97	313*AV060135
CNRV*4824A**	0.99	0.97	313*AV060135
CSRH*4212A**	0.99	0.98	313*AV060135
CSRH*4812A**	0.99	0.98	313*AV060135

See notes on pg. 40

HEAT PUMP HEATING PERFORMANCE - CONTINUED

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES * F (° C)																							
EDB *F (°C)	CFM	-3 (-19.4)		7 (-13.9)		17 (-8.3)		27 (-2.8)		37 (2.8)		47 (8.3)		57 (13.9)		67 (19.4)									
		Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt	Capacity MBtuh	Total Syst. KWt								
65 (18.3)	1400	19.05	17.52	2.95	23.49	21.59	3.09	28.30	25.80	3.22	33.74	29.96	3.39	39.76	36.18	3.58	46.47	46.47	3.81	53.21	53.21	3.99	58.68	58.68	4.19
	1600	19.34	17.79	2.98	23.80	21.87	3.10	28.66	26.13	3.23	34.12	30.30	3.38	40.20	36.58	3.55	46.76	46.76	3.71	52.58	52.58	3.90	60.88	60.88	4.45
	1800	19.61	18.04	3.02	24.07	22.12	3.12	28.97	26.42	3.24	34.49	30.63	3.38	40.59	36.99	3.55	46.99	46.99	3.68	50.19	50.19	3.79	65.03	65.03	4.79
70 (21.1)	1400	18.58	17.09	3.07	23.10	21.22	3.22	27.90	25.44	3.37	33.29	29.57	3.55	39.29	35.75	3.75	45.90	45.90	3.99	53.03	53.03	4.19	59.59	59.59	4.45
	1600	18.88	17.37	3.10	23.41	21.51	3.24	28.23	25.74	3.37	33.69	29.92	3.53	39.71	36.13	3.72	46.43	46.43	3.91	52.57	52.57	4.09	63.66	63.66	4.79
	1800	19.15	17.62	3.14	23.69	21.77	3.26	28.54	26.02	3.38	34.02	30.22	3.54	40.10	36.49	3.71	46.46	46.46	3.86	51.89	51.89	4.04	67.81	67.81	4.81
75 (23.9)	1400	18.04	16.60	3.19	22.86	20.82	3.36	27.52	25.09	3.52	32.83	29.16	3.71	38.80	35.31	3.92	45.36	45.36	4.17	52.70	52.70	4.41	59.42	59.42	4.67
	1600	18.35	16.89	3.22	22.98	21.12	3.38	27.85	25.39	3.52	33.23	29.52	3.69	39.25	35.71	3.89	45.89	45.89	4.12	52.48	52.48	4.30	57.23	57.23	4.47
	1800	18.63	17.14	3.26	23.27	21.38	3.40	28.15	25.67	3.53	33.59	29.83	3.70	39.62	36.05	3.88	46.29	46.29	4.05	52.03	52.03	4.24	53.79	53.79	4.28

22SRNA048 - C Outdoor Section With FC4DN(FB)048 Indoor Section

HEATING INDOOR MODEL		CAPACITY		POWER		FURNACE MODEL	
Model	Capacity	Power	Model	Capacity	Power	Model	Capacity
*FC4DN(FB)048	1.00	1.00	353AAV048080	1.00	1.04	353AAV048080	1.00
FC4DN(FB)060	0.97	0.95	353AAV048080	1.00	1.01	353AAV048080	1.00
FK4DN(F)005	0.98	1.00	353AAV060100	0.99	1.02	353AAV060100	0.99
FK4DN(F)008	0.99	0.96	353AAV060100	0.98	0.99	353AAV060100	0.98
CAR**6021A**	0.98	1.02	353AAV060100	0.99	1.02	353AAV060100	0.99
CAR**6024A**	0.98	1.02	353AAV060100	0.99	1.01	353AAV060100	0.99
CNRV**6024A**	1.01	1.04	353AAV060100	0.99	1.02	353AAV060100	0.99
CNRV**6024A**	1.01	1.04	353AAV060100	0.99	1.01	353AAV060100	0.99
CAR**4817A**	1.03	1.03	315(A)JAV048090	0.99	0.99	353AAV060100	0.99
CNRH**4821A**	0.99	1.04	315(A)JAV048090	0.98	0.98	353AAV060100	0.98
CNRH**6024A**	0.99	1.03	315(A)JAV048090	0.99	1.01	353AAV060100	0.99
CNRH**4812A**	0.99	1.03	315(A)JAV048090	0.99	1.01	353AAV060100	0.99
CNRH**6012A**	0.99	1.02	315(A)JAV048090	0.99	1.01	353AAV060100	0.99
CAR**4821A**	0.99	1.03	315(A)JAV060110	0.99	1.01	353AAV060120	0.99
CAR**4824A**	0.99	1.03	315(A)JAV060110	0.99	1.01	353AAV060120	0.99
CNRH**4821A**	0.99	1.01	315(A)JAV060110	0.99	1.01	353AAV060120	0.99
CNRH**6012A**	0.99	1.01	315(A)JAV060110	0.99	1.01	353AAV060120	0.99
CAR**6021A**	0.98	0.99	355(A)CJAV060080	0.99	1.05	355(A)CJAV060080	0.99
CAR**6024A**	0.98	0.99	355(A)CJAV060080	0.99	1.02	355(A)CJAV060080	0.99
CNRV**4821A**	0.99	1.03	355(A)CJAV060080	0.99	1.02	355(A)CJAV060080	0.99
CNRV**6012A**	0.99	1.03	355(A)CJAV060080	0.99	1.02	355(A)CJAV060080	0.99
CAR**4824A**	0.98	1.01	355(A)CJAV060100	0.99	1.04	355(A)CJAV060100	0.99
CAR**4821A**	0.98	1.01	355(A)CJAV060100	0.99	1.04	355(A)CJAV060100	0.99
CNRV**4824A**	0.99	1.01	355(A)CJAV060100	0.99	1.03	355(A)CJAV060100	0.99
CNRV**6012A**	0.99	1.01	355(A)CJAV060100	0.99	1.03	355(A)CJAV060100	0.99
CAR**6024A**	0.98	0.98	355(A)CJAV060120	0.99	1.04	355(A)CJAV060120	0.99
CAR**6021A**	0.98	0.98	355(A)CJAV060120	0.99	1.04	355(A)CJAV060120	0.99
CNRV**4821A**	0.99	1.01	355(A)CJAV060120	0.99	1.02	355(A)CJAV060120	0.99
CNRV**6012A**	0.99	1.01	355(A)CJAV060120	0.99	1.02	355(A)CJAV060120	0.99
CAR**4817A**	1.00	1.03	353AAV048080	0.99	1.03	353AAV048080	0.99
CNRH**4821A**	1.00	1.04	353AAV048080	0.99	1.02	353AAV048080	0.99
CNRH**6024A**	1.00	1.04	353AAV048080	0.99	1.03	353AAV048080	0.99

See notes on pg. 40



HEAT PUMP HEATING PERFORMANCE - CONTINUED

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES * F (° C)																							
EDB F (° C)	CFM	-3 (-19.4)		7 (-13.9)		17 (-8.3)		27 (-2.8)		37 (2.8)		47 (8.3)		57 (13.9)		67 (19.4)									
		Capacity MBtuh Total	Total Syst. KW†	Capacity MBtuh Total	Total Syst. KW†	Capacity MBtuh Total	Total Syst. KW†	Capacity MBtuh Total	Total Syst. KW†	Capacity MBtuh Total	Total Syst. KW†	Capacity MBtuh Total	Total Syst. KW†	Capacity MBtuh Total	Total Syst. KW†	Capacity MBtuh Total	Total Syst. KW†								
65 (18.3)	1750	25.55	23.51	4.00	31.12	28.60	4.15	37.22	33.93	4.32	43.95	39.03	4.51	51.52	46.98	4.73	59.41	59.41	4.89	66.58	66.58	5.11	70.86	70.86	5.23
	2000	25.93	23.85	4.04	31.51	28.95	4.18	37.64	34.32	4.34	44.43	39.46	4.50	52.16	47.46	4.67	58.90	58.90	4.83	62.08	62.08	4.90	61.09	61.09	4.86
	2250	26.27	24.17	4.09	31.87	29.29	4.22	38.02	34.67	4.36	44.86	39.84	4.52	52.15	47.46	4.65	55.78	55.78	4.74	58.17	58.17	4.78	57.17	57.17	4.75
70 (21.1)	1750	25.04	23.03	4.16	30.68	28.19	4.33	36.79	33.54	4.51	43.44	38.58	4.71	50.89	46.31	4.93	59.20	59.20	5.13	66.69	66.69	5.36	68.39	68.39	5.40
	2000	25.42	23.38	4.20	31.07	28.55	4.35	37.21	33.93	4.52	43.92	39.00	4.70	51.51	46.87	4.91	58.86	58.86	5.05	63.44	63.44	5.18	63.52	63.52	5.16
	2250	25.77	23.70	4.25	31.42	28.87	4.39	37.59	34.28	4.55	44.35	39.39	4.72	52.01	47.33	4.87	58.41	58.41	5.02	60.28	60.28	5.06	59.74	59.74	5.03
75 (23.9)	1750	24.48	22.52	4.32	30.19	27.74	4.51	36.33	33.12	4.70	42.84	38.14	4.91	50.44	45.90	5.16	58.71	58.71	5.37	66.48	66.48	5.62	70.09	70.09	5.73
	2000	24.87	22.88	4.36	30.59	28.11	4.53	36.76	33.52	4.71	43.40	38.55	4.90	50.87	46.29	5.12	58.74	58.74	5.29	65.11	65.11	5.48	65.42	65.42	5.47
	2250	25.22	23.20	4.42	30.96	28.45	4.57	37.15	33.87	4.74	43.83	38.93	4.92	51.43	46.81	5.11	58.41	58.41	5.26	61.98	61.98	5.35	61.91	61.91	5.33

223R/NA060-B Outdoor Section With FC4DN(F,B)060 Indoor Section

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
FK4DNB006	1.00	1.00	315(A,J)AV066135	CNRH*6024A**	1.00	1.04	315(A,J)AV066155	CNRH*6024A**	1.00	1.02	315(A,J)AV066155	CNRH*6024A**	1.00	1.03	313*AV060110	CNRH*6024A**	1.00	1.05	353AAV060120
CAR**6024A**	1.00	1.04	315(A,J)AV066135	CNRH*6024A**	1.00	1.02	315(A,J)AV066155	CNRH*6024A**	1.00	1.03	313*AV060110	CNRH*6024A**	1.00	1.04	313*AV060110	CNRH*6024A**	1.00	1.05	353AAV060120
CNRH*6024A**	1.00	1.05	315(A,J)AV066135	CNRH*6024A**	1.00	1.03	313*AV060110	CNRH*6024A**	1.01	1.03	313*AV060110	CNRH*6024A**	1.01	1.04	313*AV060110	CNRH*6024A**	1.00	1.05	353AAV060120
CNRH*6024A**	1.00	1.05	315(A,J)AV066135	CNRH*6024A**	1.00	1.03	313*AV060110	CNRH*6024A**	1.01	1.04	313*AV060110	CNRH*6024A**	1.01	1.04	313*AV060110	CNRH*6024A**	1.00	1.05	353AAV060120
CNRH*6024A**	1.00	1.02	315(A,J)AV066135	CNRH*6024A**	1.01	1.04	313*AV060110	CNRH*6024A**	1.01	1.04	313*AV060110	CNRH*6024A**	1.01	1.04	313*AV060110	CNRH*6024A**	1.01	1.03	353AAV060120
CAR**6024A**	1.00	1.03	315(A,J)AV066155	CAR**6024A**	0.98	1.02	353AAV060100	CAR**6024A**	0.98	1.02	353AAV060100	CAR**6024A**	0.98	1.02	353AAV060100	CAR**6024A**	0.98	1.03	353AAV060120

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

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

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

EDB — Entering Dry Bulb

GUIDE SPECIFICATIONS

GENERAL

System Description

Outdoor-mounted, air-cooled, split-system heat pump unit suitable for ground or rooftop installation. Unit consists of a hermetic compressor, an air-cooled coil, propeller-type condenser fan, and a control box. Unit will discharge supply air upward as shown on contract drawings. Unit will be used in a refrigeration circuit to match up to a packaged fan coil or coil unit.

Quality Assurance

- Unit will be rated in accordance with the latest edition of ARI Standard 240.
- Unit will be certified for capacity and efficiency, and listed in the latest ARI directory.
- Unit construction will comply with latest edition of ANSI/ASHRAE and with NEC.
- Unit will be constructed in accordance with UL standards and will carry the UL label of approval. Unit will have C-UL approval.
- Unit cabinet will be capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 500-hr salt spray test.
- Air-cooled condenser coils will be leak tested and pressure tested.
- Unit constructed in ISO9001 approved facility.

Delivery, Storage, and Handling

- Unit will be 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 heat pump unit. Contained within the unit enclosure is all factory wiring, piping, controls, compressor, refrigerant charge (R-22), and special features required prior to field start-up.

Unit Cabinet

- Unit cabinet will be constructed of galvanized steel, bonderized, and coated with a powder coat paint.

Fans

- Condenser fan will be direct-drive propeller type, discharging air upward.

AIR-COOLED, SPLIT-SYSTEM HEAT PUMP

223R

1-1/2 TO 5 NOMINAL TONS

- Condenser fan motors will be totally enclosed, 1-phase type with class B insulation and permanently lubricated bearings.
- Shafts will be corrosion resistant.
- Fan blades will be statically and dynamically balanced.
- Condenser fan openings will be equipped with steel wire safety guards.

Compressor

- Compressor will be hermetically sealed.
- Compressor will be mounted on rubber vibration isolators.

Condenser Coil

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

Refrigeration Components

- Refrigeration circuit components will include liquid-line shutoff valve with sweat connections, vapor-line shutoff valve with sweat connections, system charge of refrigerant, compressor oil, accumulator, loss of charge switch, and reversing valve.

Operating Characteristics

- The capacity of the unit will meet or exceed _____ Btuh at a suction temperature of _____ °F/°C. The power consumption at full load will not exceed _____ kW.
- Combination of the unit and the evaporator or fan coil unit will have 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 will have a SEER of _____ Btuh/watt or greater at DOE conditions.

Electrical Requirements

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

Special Features

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

