

223A
Preferred™ Series 13 Heat Pump
with Puron® Refrigerant
Sizes 018 To 060
1-1/2 To 5 Nominal Tons



Product Data



Preferred™
SERIES

Bryant's heat pumps with Puron® refrigerant provide a collection of features unmatched by any other family of equipment. The 223A has been designed utilizing Bryant's Puron refrigerant. The environmentally sound refrigerant allows consumers to make a responsible decision in the protection of the earth's ozone layer.

This product has been designed and manufactured to meet Energy Star® criteria for energy efficiency when matched with appropriate coil components. Refer to the combination ratings in the Product Data for system combinations that meet Energy Star® guidelines.

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.

INDUSTRY LEADING FEATURES / BENEFITS

Efficiency

- 13 SEER/ 10.1 - 10.8 EER/ 7.7 - 8.3 HSPF (Nominal)
- Microtube Technology™ refrigeration system
- Indoor air quality accessories available

Sound

- Sound level as low as 70 dBA

Comfort

- System supports Thermidistat™ or standard thermostat controls

Reliability

- Puron® refrigerant - environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- Front-seating service valves
- Scroll compressor
- Internal pressure relief valve
- Internal thermal overload
- High pressure switch
- Loss of charge switch
- Filter drier
- Balanced refrigeration system for maximum reliability

Durability

DuraGuard Plus™ protection package:

- Solid, durable sheet metal construction
- Steel louver coil guard
- Ceramic coated cabinet screws
- Baked-on, complete 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 80 ft. (24.38 m) evaporator above condenser (See Longline Guide for more information.)
- Low ambient (down to -20°F/-28.9°C) with accessory kit

MODEL NUMBER NOMENCLATURE

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



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



ISO 9001
QMI-SAI Global



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
Puron Refrigerant	X	X	X	X	X	X	X
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
Suction Line Accumulator	X	X	X	X	X	X	X
High Pressure Switch	X	X	X	X	X	X	X
Loss of Charge Switch	X	X	X	X	X	X	X

X = Standard

PHYSICAL DATA

UNIT SIZE – SERIES, VOLTAGE	018 – C	024 – B	030 – C	036 – C	042 – B	048 – B	060 – C
Operating Weight lb (kg)	174 (78.9)	183 (83.0)	206 (93.4)	203 (92.1)	263 (119.32)	283 (128.4)	299 (135.6)
Shipping Weight lb (kg)	201 (91.2)	210 (95.3)	235 (106.6)	241 (109.3)	295 (133.8)	313 (142.0)	331 (150.1)
Compressor Type	Scroll						
Refrigerant	Puron® (R-410A)						
Control	TXV (Puron Hard Shutoff)						
Charge lb (kg)	6.4 (2.9)	5.5 (2.5)	7.5 (3.4)	7.2 (3.2)	8.1 (3.7)	11.6 (5.3)	12.4 (5.6)
Outdoor Heating Piston #	42	46	55	57	61	61	76
Cond Fan	Propeller Type, Direct Drive						
Air Discharge	Vertical						
Air Qty (CFM)	2614	2614	2614	3472	3810	4046	4046
Motor HP	1/10	1/10	1/10	1/8	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	21.56	20.12	25.15	20.12	22.63
Fins per In.	20	20	20	20	20	20	20
Rows	1	1	1	1	1	2	2
Circuits	5	5	5	6	6	8	8
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 80 ft. (24.38 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 – 50.3)	176 – 200 (53.6 – 60.0)	201 – 225 (61.3 – 68.6)	226 – 250 (68.9 – 76.2)
18,000 1 – Stage Puron HP	3/8	1/2	1	2	3	4	6	7	8	9	10	
		5/8	0	0	1	1	1	2	2	3	3	
24,000 1 – Stage Puron HP		5/8	0	1	1	2	3	3	4	4	5	
		3/4	0	0	0	0	1	1	1	1	1	
30,000 1 – Stage Puron HP		5/8	1	2	3	3	4	5	6	7	8	
		3/4	0	0	1	1	1	2	2	2	3	
		7/8	0	0	0	0	1	1	1	1	1	
36,000 1 – Stage Puron HP		5/8	1	2	4	5	6	7	9	10	11	
		3/4	0	0	1	1	2	2	3	3	4	
		7/8	0	0	0	0	1	1	1	1	2	
42,000 1 – Stage Puron HP		3/4	0	1	2	2	3	4	4	5	6	
		7/8	0	0	1	1	1	2	2	2	3	
48,000 1 – Stage Puron HP		3/4	0	1	2	3	4	5	5	6	7	
		7/8	0	0	1	1	2	2	2	3	3	
60,000 1 – Stage Puron HP		3/4	1	2	4	5	6	7	9	10	11	
		7/8	0	1	2	2	3	4	4	5	5	
		1 – 1/8	0	0	0	1	1	1	1	1	1	

Applications in this area 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

ACCESSORIES

ORDER NUMBER	DESCRIPTION	UNIT SIZES—SERIES, VOLTAGE						
		018—C	024—B	030—C	036—C	042—B	048—B	060—C
KAACH1701AAA	CRANKCASE HTR	X	X	X	X			
KAACH1601AAA	CRANKCASE HTR					X		
STANADARD	CRANKCASE HTR						S	S
KAAFT0101AAA	FREEZE THERMOSTAT	X	X	X	X	X	X	X
KSAHS1701AAA	HARD START (CAP/RELAY)	X	X	X	X	X	X	X
KHAIR0101AAA	ISOLATION RELAY	X	X	X	X	X	X	X
KSALA0301410	LOW AMBIENT PSW	X	X	X	X	X	X	X
HC34GE242	MOTOR FAN BALL BEARING	X	X	X				
HC36GE232	MOTOR FAN BALL BEARING				X			
HC38GE228	MOTOR FAN BALL BEARING					X		
HC40GE228	MOTOR FAN BALL BEARING						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
KHASS0606MPK*	SNOW STAND	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
KSATX0201PUR	TXV PURON HSO	X	X	X				
KSATX0301PUR	TXV PURON HSO				X	X		
KSATX0401PUR	TXV PURON HSO						X	
KSATX0501PUR	TXV PURON HSO							X

x = Accessory S = Standard

* Sold in 6 pk. quantities Obtain through RCD.

ACCESSORY THERMOSTATS

PART NUMBER	PROGRAM	GAS	ELECTRIC	HEAT PUMP	HYBRID HEAT	HEAT	COOL
T6—PRH01—A	7—Day	✓	✓	✓	✓	3	2
T6—PHP01	7—Day		✓	✓		3	2
T6—NRH01—A	NP	✓	✓	✓	✓	3	2
T6—NHP01	NP		✓	✓		3	2

THERMOSTAT ACCESSORIES		
PART NUMBER	BRIEF DESCRIPTION	THERMOSTATS USED WITH
SYSTXBRRS01	Indoor Remote Room Temperature Sensor	All T6— thermostats
T6—EXP01—A	ExP Computer Programming Accessory	T6—P thermostats
TSTATXXCNV10	Thermostat Conversion Kit (4 to 5 wire) — 10 pack	All Bryant® branded thermostats
TX—LBP01	Large Decorative Backplate	T6—Pxx, T6—Nxx, and T2—Pxx
TSTATXXSEN01—B	Outdoor Air Temperature Sensor	All T6— thermostats

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 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 using MotorMaster®

2. Compressor Start Assist - Capacitor and Relay

Start capacitor and relay gives a "hard" boost to compressor motor at each start up.

Usage Guideline:

Required for reciprocating compressors in the following applications:

- Long line
- Low ambient cooling
- Hard shut off expansion valve on indoor coil
- Liquid line solenoid on indoor coil

Required for single-phase scroll compressors in the following applications:

- Long line
- Low ambient cooling

Suggested for all compressors in areas with a history of low voltage problems.

3. 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. 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.

6. 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.

7. 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.

8. 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. The control will maintain working head pressure at low-ambient temperatures down to 0°F (-17.8°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).

9. 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 ± 6.5°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.

Accessory Description and Usage (Listed Alphabetically) - CONTINUED

10. 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.

11. 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.

12. 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 three-stage operation.

13. 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.

14. Sound Hood

Wraparound sound reducing cover for the compressor. Reduces the sound level by about 2 dBA.

Usage Guideline:

Suggested when unit is installed closer than 15 ft. (4.577 m) to quiet areas, bedrooms, etc.

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

15. 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:

Accessory required to meet AHRI rating and system reliability, where indoor not equipped.

Required in all heat pump applications designed with Puron refrigerant.

16. 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 AHRI rating, where indoor not equipped.

ELECTRICAL DATA

UNIT SIZE – SERIES, VOLTAGE	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 – C	208/230/1	253	197	48.0	9.0	0.7	11.9	14	14	66 (20.1)	62 (18.9)	20
024 – B				58.3	12.8	0.7	16.7	14	14	47 (14.3)	45 (13.7)	25
030 – C				77.0	16.0	0.8	20.8	12	12	60 (18.3)	57 (17.4)	30
036 – C				79.0	17.1	0.9	22.3	12	12	56 (17.1)	53 (16.2)	35
042 – B				109.0	19.9	1.2	26.0	10	10	77 (23.5)	73 (22.3)	40
048 – B				117.0	27.3	1.2	35.4	8	8	88 (26.8)	84 (25.6)	50
060 – C				134.0	26.3	1.2	34.1	8	8	91 (27.7)	87 (26.5)	50

* 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 2007 requirements of ASHRAE Standards 90.1

223A

A-WEIGHTED SOUND POWER

UNIT SIZE – SERIES, VOLTAGE	STANDARD RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA, without tone adjustment)						
		125	250	500	1000	2000	4000	8000
018–C	73	58.5	62.5	67.0	67.5	65.5	62.5	53.5
024–B	72	54.5	63.0	66.5	66.0	64.0	60.5	51.5
030–C	73	57.0	63.5	68.0	69.0	65.0	61.0	52.5
036–C	70	54.5	62.0	63.5	64.5	63.0	60.0	51.5
042–B	73	55.0	60.0	64.0	67.5	61.5	60.0	55.0
048–B	74	57.5	64.5	67.5	69.5	66.5	61.0	53.0
060–C	74	53.5	63.0	67.5	70.0	63.5	60.0	55.5

NOTE: Tested in accordance with AHRI Standard 270–2008 (not listed in AHRI).

CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

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

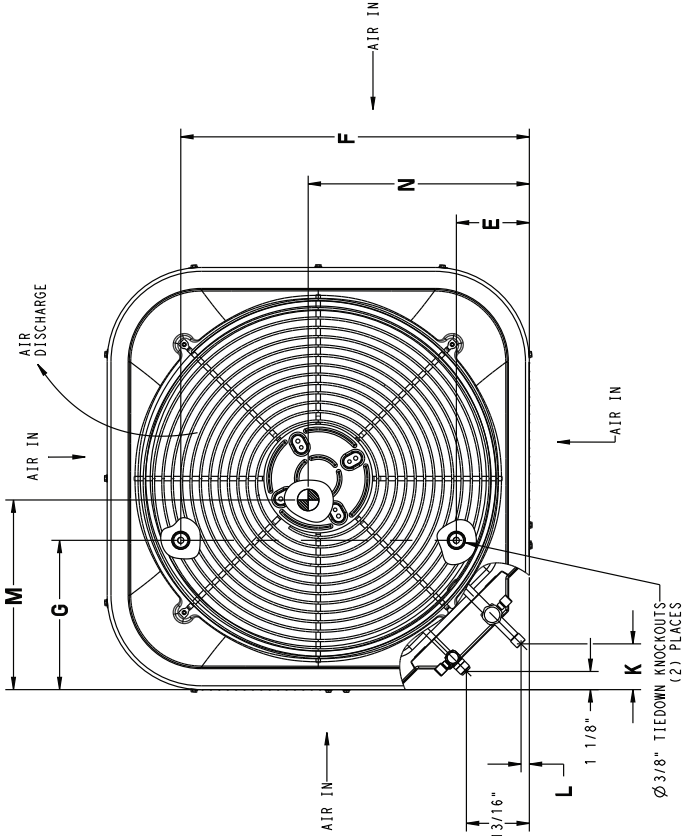
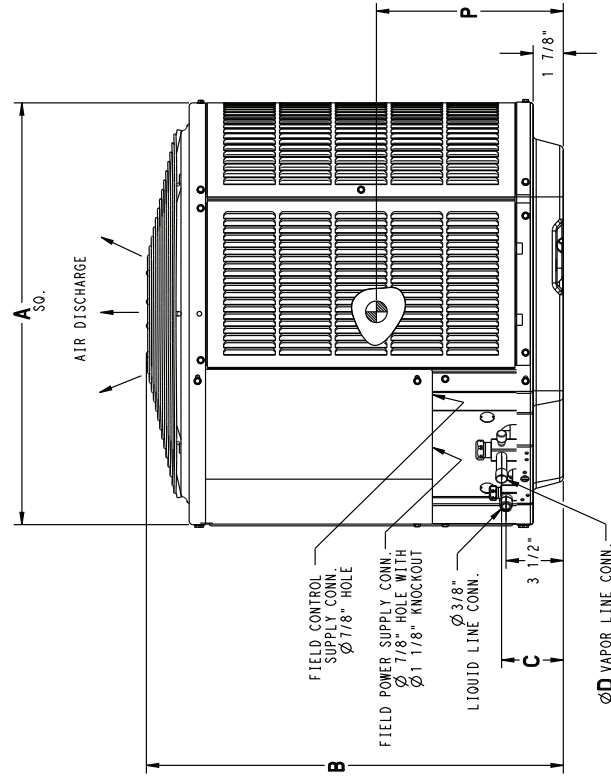
DIMENSIONS - ENGLISH

223A

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)		
223A018	C	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"	14"	14 3/4"	14"	174	201	32 3/8" X 35 1/2" X 32 9/16"		
223A024	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"	15 5/8"	16 3/4"	14 1/2"	183	210	32 3/8" X 35 1/2" X 32 9/16"		
223A030	C	X	0	0	31 3/16"	39 1/8"	3 3/4"	3/4"	6 9/16"	24 11/16"	9 1/8"	2 13/16"	1/2"	16 1/2"	15 1/2"	17"	206	235	32 3/8" X 35 1/2" X 42 3/4"		
223A036	C	X	0	0	35"	32 5/16"	3 3/4"	3/4"	6 9/16"	28 7/16"	9 1/8"	2 13/16"	1/2"	16"	16 1/2"	13 1/2"	203	241	36 1/8" X 39 5/16" X 35 15/16"		
223A042	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"	17 1/4"	19 1/8"	15 3/4"	263	295	36 1/8" X 39 5/16" X 42 3/4"		
223A048	B	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"	19"	19"	14 1/2"	283	313	36 1/8" X 39 5/16" X 35 15/16"		
223A060	C	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"	19"	19"	19"	299	331	36 1/8" X 39 5/16" X 42 3/4"		

X = YES
0 = NO

208-230-160	230-160	208/230-3-60	460-3-60
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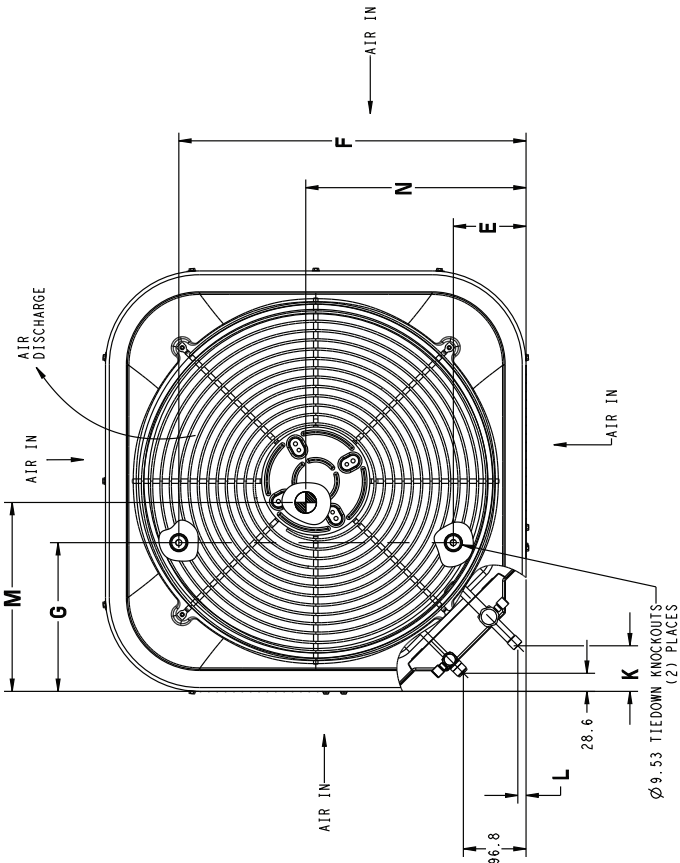
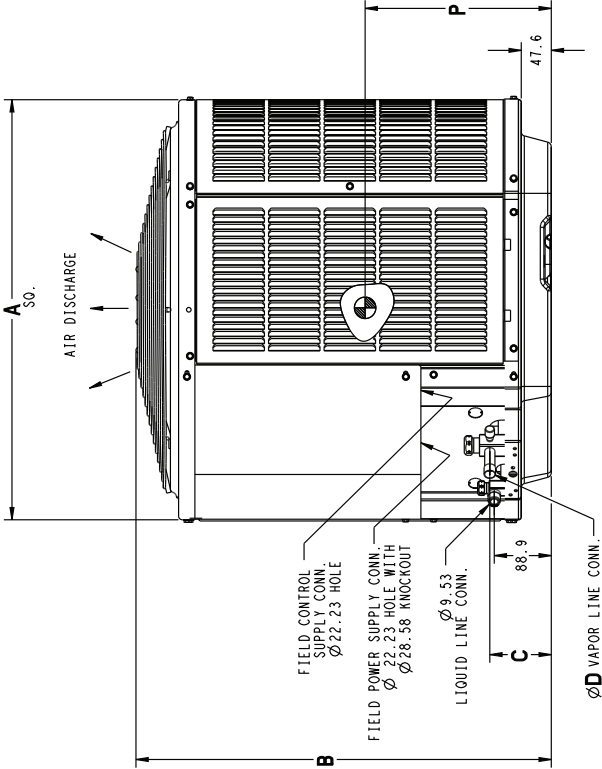
UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
-	26" X 26"
18, 24, 30	31 1/2" X 31 1/2"
36, 42, 48, 60	35" X 35"

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)	
223A018	C	X	O	O	792.2	735.0	95.2	15.9	166.7	627.1	231.8	71.4	12.7	355.6	374.6	355.6	78.9	91.2	822.3 X 901.7 X 827.1
223A024	B	X	O	O	792.2	735.0	95.2	15.9	166.7	627.1	231.8	71.4	12.7	396.9	425.4	368.3	83.0	95.2	822.3 X 901.7 X 827.1
223A030	C	X	O	O	792.2	993.8	95.2	19.0	166.7	627.1	231.8	71.4	12.7	419.1	393.7	431.8	93.4	106.6	822.3 X 901.7 X 1085.8
223A036	C	X	O	X	889.0	820.8	95.2	19.0	166.7	722.3	231.8	71.4	12.7	406.4	419.1	342.9	92.1	109.3	917.6 X 998.6 X 912.8
223A042	B	X	O	X	889.0	993.8	98.4	22.2	166.7	722.3	231.8	74.6	15.9	438.2	485.8	400.0	119.3	133.8	917.6 X 998.6 X 1085.8
223A048	B	X	O	X	889.0	820.8	98.4	22.2	166.7	722.3	231.8	74.6	15.9	482.6	482.6	368.3	128.4	142.0	917.6 X 998.6 X 912.8
223A060	C	X	O	X	889.0	993.8	98.4	22.2	166.7	722.3	231.8	74.6	15.9	482.6	482.6	482.6	135.6	150.1	917.6 X 998.6 X 1085.8

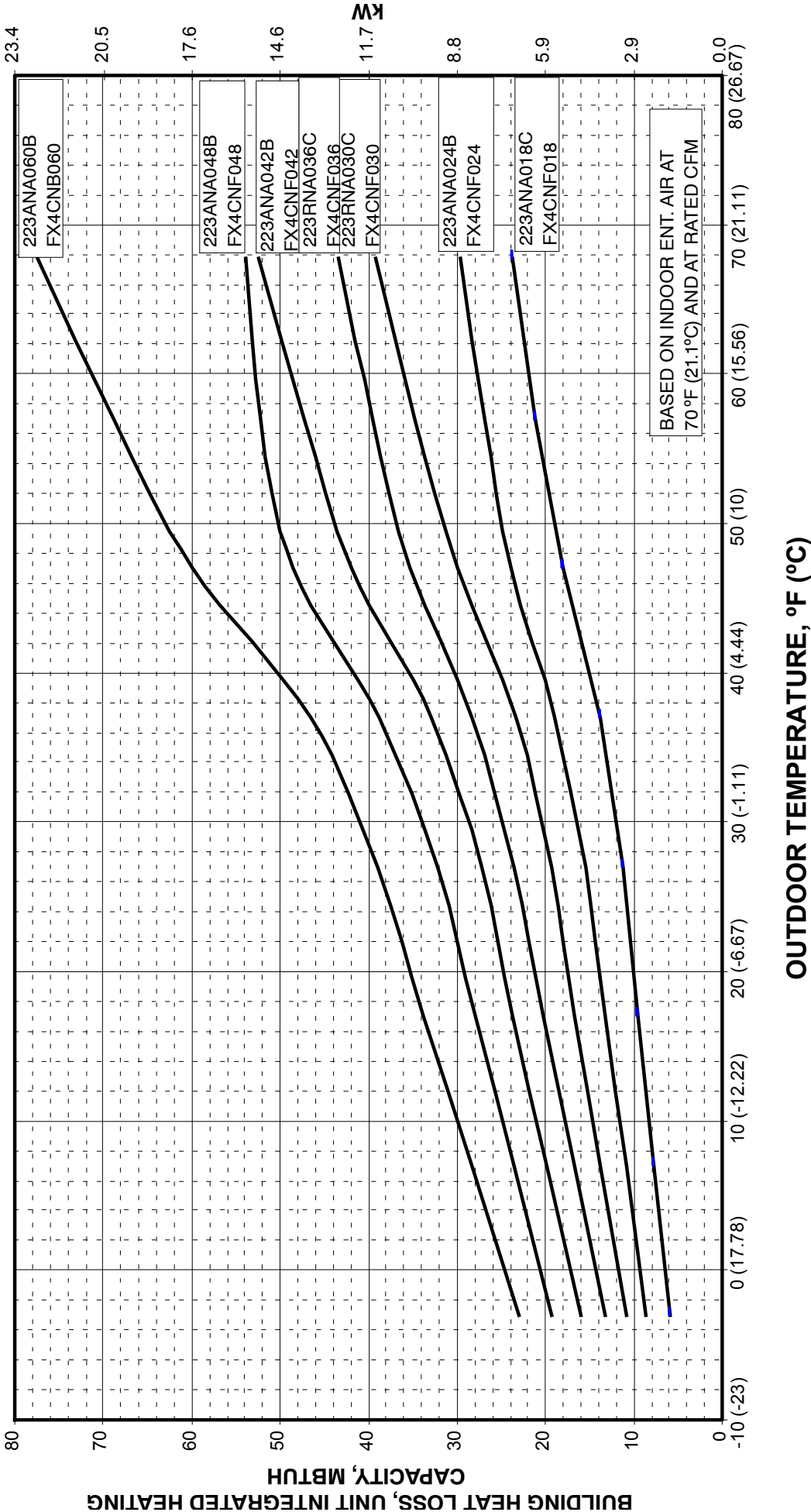
X = YES
O = NO

208-230-1-60	230-1-60	208/230-3-60	460-3-60
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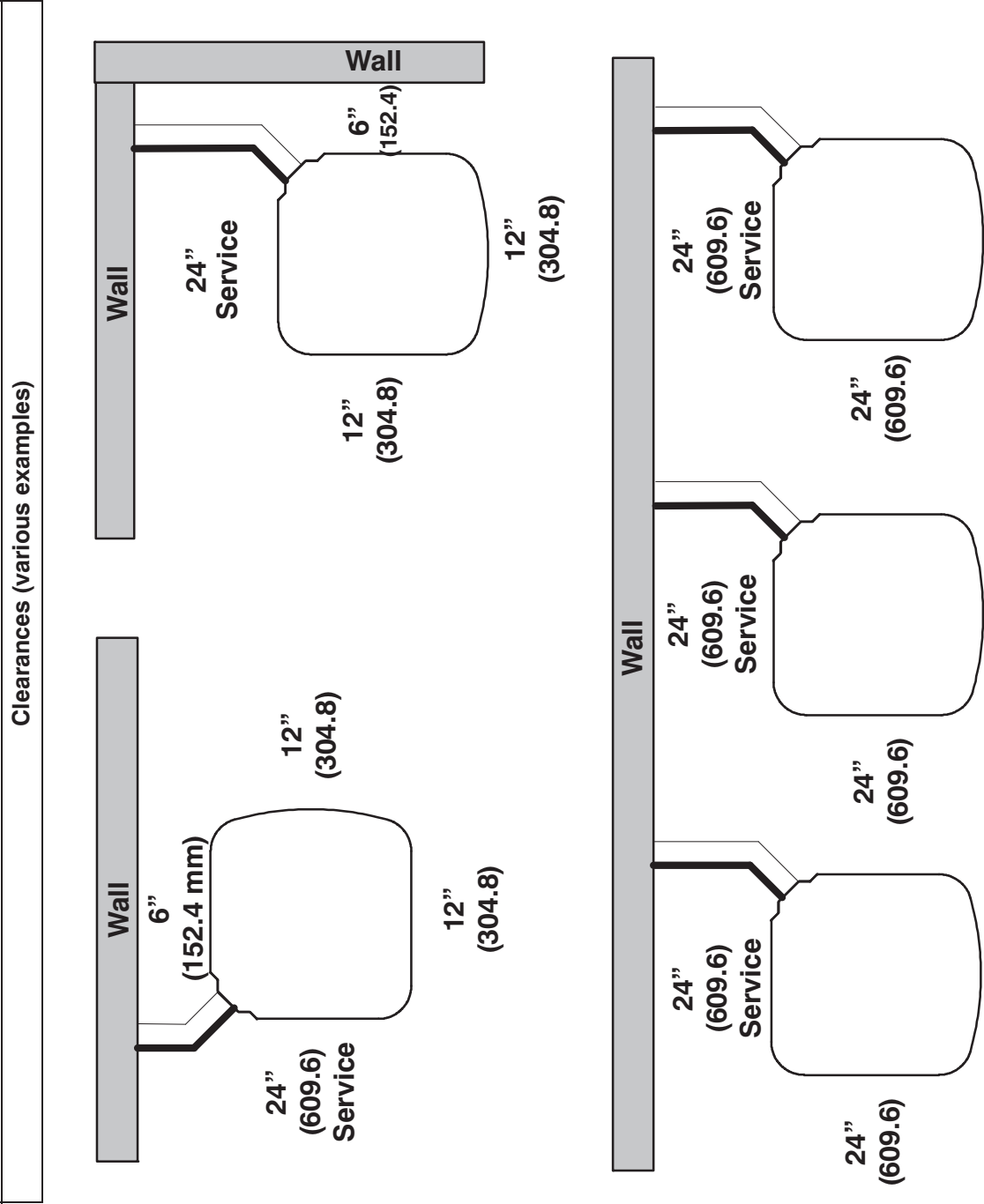


UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
-	660.4 X 660.4
18,24,30	800.1 X 800.1
36,42,48,60	889.0 X 889.0

223A BALANCE POINT WORKSHEET



CLEARANCES



Note: Numbers in () = mm

IMPORTANT: When installing multiple units in an alcove, roof well, or partially enclosed area, ensure there is adequate ventilation to prevent re-circulation of discharge air.

TESTED AHRI COMBINATION RATINGS*

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

For AHRI ratings certificates, please refer to the AHRI directory www.ahridirectory.org

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

http://cactaxcredits.info/bryant-ratings/hp_ratings_srch.php

Equipment performance calculator can be accessed at: <http://rpmobbry.wrightsoft.com/>

AHRI Ref. No.	Model Number	Coil Model Number	Furnace Model Number	Cooling Capacity	EER	SEER	High Temp		HSPF	Low Temp	
							E Capacity	E COP		H Capacity	H COP
4814272	223ANA018-C	FB4CNF018		17,400	11.5	13.7	17,600	3.58	8.0	10,200	2.32
3853218	223ANA024-B	FY5BNF024		23,000	11.0	13.0	23,000	3.66	8.0	14,800	2.54
4814402	223ANA030-C	FB4CNF030		30,400	11.2	13.0	30,400	3.56	8.2	18,300	2.44
4814513	223ANA036-C	FY5BNF036		34,200	11.0	13.0	35,200	3.64	8.0	21,400	2.50
4814636	223ANA042-B	FY5BNF042		41,000	11.0	13.0	42,000	3.64	8.2	26,000	2.52
4814775	223ANA048-B	FY5BNF048		47,000	11.7	13.2	48,500	3.72	8.5	30,200	2.64
4814866	223ANA060-C	FY5BNB060		59,500	10.8	13.0	60,500	3.62	7.7	38,500	2.56

* AHRI = Air Conditioning, Heating & Refrigeration Institute

Ratings are net values reflecting the effects of circulating fan heat. Supplemental electric heat is not included. Ratings are based on:

Cooling Standard: 80°F (27°C) db 67°F (19°C) wb indoor entering air temperature and 95°F (35°C) db air entering outdoor unit.

High-Temp Heating Standard: 70°F (21°C) db indoor entering air temperature and 47°F (8°C) db 43°F (6°C) wb air entering outdoor unit.

Low-Temp Heating Standard: 70°F (21°C) db indoor entering air temperature and 17°F (-8°C) db 15°F (-9°C) wb air entering outdoor unit.

COP — Coefficient of Performance

EER — Energy Efficiency Ratio

HSPF — Heating Seasonal Performance Factor

SEER — Seasonal Energy Efficiency Ratio

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**							
		Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†						
525	72 (22.2)	20.62	10.13	0.83	19.63	9.76	0.92	18.58	9.37	17.48	8.97	1.14	16.29	8.54	1.27	15.00	8.08	1.41	
	67 (19.4)	18.71	12.53	0.83	17.79	12.14	0.93	16.82	11.74	1.03	15.79	11.32	1.15	14.68	10.88	1.28	13.49	10.40	1.42
	63 (17.2)††	17.34	12.09	0.84	16.46	11.70	0.93	15.54	11.29	1.04	14.57	10.87	1.15	13.53	10.42	1.28	12.40	9.94	1.42
	62 (16.7)	16.99	14.91	0.84	16.14	14.50	0.93	15.25	14.07	1.04	14.32	13.59	1.15	13.41	13.41	1.28	12.51	12.51	1.42
	57 (13.9)	16.39	16.39	0.84	15.71	15.71	0.93	14.99	14.99	1.04	14.23	14.23	1.15	13.41	13.41	1.28	12.51	12.51	1.42
600	72 (22.2)	21.01	10.59	0.84	19.98	10.22	0.94	18.89	9.82	1.05	17.74	9.41	1.16	16.51	8.98	1.29	15.16	8.52	1.43
	67 (19.4)	19.07	13.30	0.85	18.11	12.91	0.94	17.10	12.50	1.05	16.03	12.07	1.17	14.89	11.62	1.29	13.68	11.13	1.43
	63 (17.2)††	17.68	12.81	0.85	16.77	12.42	0.95	15.81	12.01	1.05	14.80	11.57	1.17	13.73	11.11	1.30	12.57	10.62	1.44
	62 (16.7)	17.36	15.94	0.85	16.48	15.50	0.95	15.58	14.76	1.05	14.76	14.76	1.17	13.89	13.89	1.30	12.94	12.94	1.44
	57 (13.9)	17.05	17.05	0.86	16.33	16.33	0.95	15.57	15.57	1.05	14.77	14.77	1.17	13.89	13.89	1.30	12.94	12.94	1.44
675	72 (22.2)	21.30	11.03	0.86	20.23	10.65	0.96	19.11	10.25	1.06	17.93	9.84	1.18	16.67	9.40	1.31	15.30	8.93	1.45
	67 (19.4)	19.34	14.03	0.87	18.35	13.64	0.96	17.31	13.22	1.07	16.21	12.79	1.18	15.04	12.32	1.31	13.78	11.82	1.45
	63 (17.2)††	17.93	13.50	0.87	16.99	13.10	0.97	16.01	12.68	1.07	14.97	12.24	1.19	13.87	11.76	1.32	12.68	11.25	1.46
	62 (16.7)	17.68	16.86	0.87	16.85	16.85	0.97	16.05	16.05	1.07	15.20	15.20	1.19	14.29	14.29	1.32	13.29	13.29	1.45
	57 (13.9)	17.60	17.60	0.87	16.85	16.85	0.97	16.05	16.05	1.07	15.21	15.21	1.19	14.29	14.29	1.32	13.30	13.30	1.45
CONDENSER ENTERING AIR TEMPERATURES °F (°C)																			
EVAPORATOR AIR		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**							
		Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†						
		Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†						
700	72 (22.2)	26.97	13.80	1.66	25.72	13.32	1.86	24.41	12.81	2.09	23.03	12.29	2.34	21.54	11.73	2.61	19.91	11.13	2.91
	67 (19.4)	24.65	17.15	1.66	23.49	16.65	1.86	22.26	16.12	2.09	20.97	15.57	2.34	19.59	15.00	2.62	18.09	14.38	2.92
	63 (17.2)††	22.94	16.60	1.86	21.84	16.09	1.86	20.68	15.56	2.09	19.46	15.01	2.34	18.16	14.43	2.62	16.76	13.81	2.92
	62 (16.7)	22.50	20.46	1.86	21.42	19.93	1.86	20.30	19.36	2.09	19.16	18.75	2.34	17.96	17.96	2.62	16.82	16.82	2.92
	57 (13.9)	21.73	21.73	1.66	20.87	20.87	1.86	19.96	19.96	2.09	19.00	19.00	2.34	17.96	17.96	2.62	16.82	16.82	2.92
800	72 (22.2)	27.42	14.42	1.69	26.13	13.93	1.90	24.76	13.42	2.12	23.27	13.23	2.06	21.80	12.33	2.65	20.12	11.72	2.94
	67 (19.4)	25.09	18.20	1.69	23.88	17.68	1.90	22.60	17.15	2.12	21.27	16.60	2.37	19.84	16.01	2.65	18.29	15.38	2.95
	63 (17.2)††	23.37	17.58	1.69	22.22	17.07	1.90	21.02	16.52	2.13	19.76	15.96	2.38	18.41	15.37	2.65	16.96	14.73	2.95
	62 (16.7)	22.96	21.88	1.69	21.86	21.30	1.90	20.72	20.69	2.13	19.67	19.67	2.38	18.57	18.57	2.65	17.37	17.37	2.95
	57 (13.9)	22.57	22.57	1.69	21.66	21.66	1.90	20.70	20.70	2.13	19.67	19.67	2.38	18.57	18.57	2.65	17.37	17.37	2.95
900	72 (22.2)	27.75	15.01	1.73	26.42	14.51	1.93	26.10	14.39	2.16	24.55	13.82	2.09	22.87	13.22	2.36	20.25	12.28	2.98
	67 (19.4)	25.40	19.19	1.73	24.16	18.68	1.93	22.85	18.13	2.16	21.48	17.57	2.41	20.02	16.97	2.69	18.43	16.31	2.98
	63 (17.2)††	23.68	18.52	1.73	22.50	17.99	1.93	21.26	17.44	2.16	19.97	16.67	2.41	18.59	16.26	2.69	17.11	15.60	2.99
	62 (16.7)	23.36	23.12	1.73	22.32	22.31	1.93	21.30	21.30	2.16	20.23	20.23	2.41	19.07	19.07	2.69	17.81	17.81	2.99
	57 (13.9)	23.27	23.27	1.73	22.31	22.31	1.93	21.30	21.30	2.16	20.23	20.23	2.41	19.07	19.07	2.69	17.81	17.81	2.99

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)			Total Sys. KW**	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**	Capacity MBtuh		Total Sys. KW**		
		Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†			
223ANA030 – C Outdoor Section With FY4ANF030 Indoor Section																					
875	72 (22.2)	35.79	17.64	2.16	34.09	16.98	2.44	32.29	16.30	2.74	30.43	15.61	3.07	28.40	14.86	3.43	26.15	14.05	3.82		
	67 (19.4)	32.75	21.77	2.16	31.19	21.11	2.43	29.54	20.42	2.73	27.82	19.70	3.07	25.96	18.94	3.43	23.92	18.12	3.83		
	63 (17.2)†	30.50	21.10	2.15	29.04	20.44	2.43	27.50	19.74	2.73	25.89	19.02	3.07	24.15	18.26	3.43	22.26	17.45	3.83		
	62 (16.7)	29.92	25.87	2.15	28.49	25.18	2.43	26.99	24.45	2.73	25.43	23.67	3.06	23.79	22.80	3.43	22.14	22.14	3.83		
	57 (13.9)	28.64	28.64	2.15	27.51	27.51	2.42	26.31	26.31	2.73	25.04	25.04	3.07	23.66	23.66	3.43	22.14	22.14	3.83		
1000	72 (22.2)	36.41	18.38	2.21	34.64	17.72	2.48	32.77	17.03	2.78	30.84	16.33	3.12	28.73	15.57	3.48	26.40	14.75	3.87		
	67 (19.4)	33.35	23.03	2.20	31.72	22.36	2.48	30.00	21.65	2.78	28.22	20.92	3.11	26.27	20.15	3.47	24.17	19.31	3.87		
	63 (17.2)†	31.09	22.29	2.20	29.56	21.61	2.47	27.96	20.90	2.78	26.27	20.17	3.11	24.47	19.39	3.47	22.52	18.55	3.87		
	62 (16.7)	30.53	27.59	2.20	29.06	26.85	2.47	27.52	26.05	2.77	25.93	25.93	3.11	24.45	24.45	3.48	22.82	22.82	3.87		
	57 (13.9)	29.74	29.74	2.20	28.54	27.26	2.47	27.26	27.26	2.77	25.91	25.91	3.11	24.45	24.45	3.48	22.83	22.83	3.87		
1125	72 (22.2)	36.88	19.09	2.25	35.06	18.43	2.53	33.12	17.73	2.83	31.13	17.01	3.16	28.96	16.25	3.52	26.56	15.42	3.91		
	67 (19.4)	33.80	24.25	2.25	32.12	23.56	2.52	30.34	22.85	2.82	28.49	22.10	3.16	26.51	21.31	3.52	24.34	20.44	3.91		
	63 (17.2)†	31.54	23.44	2.24	29.96	22.75	2.52	28.30	22.03	2.82	26.56	21.28	3.15	24.71	20.48	3.52	22.71	19.60	3.92		
	62 (16.7)	31.05	29.15	2.24	29.55	28.32	2.52	28.04	28.04	2.82	26.61	26.61	3.15	25.08	25.08	3.52	23.36	23.36	3.92		
	57 (13.9)	30.66	30.66	2.24	29.39	29.39	2.52	28.04	28.04	2.82	26.62	26.62	3.15	25.08	25.08	3.52	23.37	23.37	3.92		

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†	
223ANA036 – C Outdoor Section With FY4ANF036 Indoor Section																			
1050	72 (22.2)	40.40	20.45	2.52	38.54	19.75	2.80	36.56	19.01	3.12	34.48	18.26	3.46	32.22	17.44	3.83	29.71	16.54	4.24
	67 (19.4)	36.96	25.67	2.51	35.23	24.94	2.80	33.39	24.19	3.11	31.45	23.40	3.45	29.35	22.56	3.83	27.05	21.63	4.23
	63 (17.2)††	34.44	24.83	2.51	32.80	24.10	2.79	31.07	23.34	3.10	29.24	22.53	3.45	27.26	21.68	3.82	25.10	20.74	4.22
	62 (16.7)	33.82	30.80	2.51	32.24	30.00	2.79	30.59	29.14	3.10	28.87	28.87	3.45	27.24	27.24	3.82	25.46	25.46	4.22
	57 (13.9)	33.00	33.00	2.51	31.70	31.70	2.79	30.32	30.32	3.10	28.85	28.85	3.45	27.25	27.25	3.82	25.47	25.47	4.22
1200	72 (22.2)	40.96	21.34	2.58	39.04	20.63	2.87	36.99	19.89	3.18	34.85	19.12	3.52	32.51	18.30	3.90	29.93	17.39	4.30
	67 (19.4)	37.50	27.20	2.58	35.70	26.46	2.86	33.80	25.70	3.17	31.80	24.89	3.51	29.64	24.02	3.89	27.27	23.06	4.29
	63 (17.2)††	34.96	26.27	2.57	33.27	25.52	2.85	31.47	24.74	3.17	29.58	23.92	3.51	27.55	23.04	3.88	25.34	22.07	4.28
	62 (16.7)	34.45	32.77	2.57	32.87	32.61	2.85	31.30	31.30	3.17	29.75	29.75	3.51	28.06	28.06	3.88	26.18	26.18	4.29
	57 (13.9)	34.14	34.14	2.57	32.77	32.77	2.85	31.31	31.31	3.17	29.75	29.75	3.51	28.06	28.06	3.88	26.18	26.18	4.29
1350	72 (22.2)	41.39	22.20	2.64	39.41	21.49	2.93	37.31	20.74	3.24	35.10	19.96	3.58	32.71	19.13	3.96	30.06	18.21	4.36
	67 (19.4)	37.90	28.69	2.64	36.05	27.94	2.92	34.10	27.15	3.23	32.05	26.32	3.58	29.84	25.42	3.95	27.43	24.41	4.35
	63 (17.2)††	35.36	27.66	2.63	33.61	26.90	2.92	31.77	26.10	3.23	29.84	25.25	3.57	27.76	24.33	3.94	25.51	23.30	4.34
	62 (16.7)	35.07	35.07	2.63	33.63	33.63	2.92	32.10	32.10	3.23	30.47	30.47	3.57	28.70	28.70	3.95	26.73	26.73	4.35
	57 (13.9)	35.07	35.07	2.63	33.63	33.63	2.92	32.10	32.10	3.23	30.48	30.48	3.57	28.71	28.71	3.95	26.73	26.73	4.35

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		Capacity MBtuh		Capacity MBtuh		Capacity MBtuh		Capacity MBtuh		Capacity MBtuh	
		Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†
1225	72 (22.2)	48.26	24.63	3.08	3.41	43.63	22.84	3.77	41.15	21.90	38.47	19.80	5.09
	67 (19.4)	44.21	30.69	3.06	3.39	39.96	28.86	3.76	37.67	27.90	35.20	25.76	5.08
	63 (17.2)††	41.23	29.75	3.05	3.38	37.24	27.91	3.75	35.09	26.94	32.79	24.80	5.08
	62 (16.7)	40.45	36.69	3.05	3.38	38.56	35.75	3.74	34.53	33.66	32.38	30.32	5.08
	57 (13.9)	39.05	39.05	3.04	3.37	37.54	35.93	3.74	34.22	34.22	32.37	30.32	5.08
1400	72 (22.2)	48.98	25.68	3.16	3.48	44.18	23.87	3.84	41.64	22.93	38.84	20.79	5.16
	67 (19.4)	44.93	32.50	3.14	3.47	40.50	30.64	3.83	38.12	29.66	35.57	27.46	5.16
	63 (17.2)††	41.93	31.44	3.13	3.45	37.78	29.58	3.82	35.53	28.58	33.17	27.53	5.16
	62 (16.7)	41.22	39.13	3.12	3.45	37.28	36.95	3.82	35.34	35.34	33.37	31.19	5.16
	57 (13.9)	40.48	40.48	3.12	3.48	38.87	37.16	3.82	35.34	35.34	33.38	31.19	5.16
1575	72 (22.2)	49.51	26.67	3.23	3.56	44.56	24.84	3.92	41.96	23.89	39.08	21.74	5.23
	67 (19.4)	45.43	34.21	3.21	3.54	40.87	32.32	3.90	38.43	31.32	35.82	29.06	5.23
	63 (17.2)††	42.44	33.06	3.20	3.53	38.16	31.15	3.89	35.87	30.14	33.43	27.86	5.23
	62 (16.7)	41.88	41.27	3.20	3.53	39.96	39.96	3.89	36.24	36.24	34.17	31.87	5.23
	57 (13.9)	41.65	41.65	3.20	3.53	39.96	39.96	3.89	36.24	36.24	34.18	31.87	5.23
CONDENSER ENTERING AIR TEMPERATURES °F (°C)													
EVAPORATOR AIR		75 (23.9)		85 (29.4)		95 (35)		105 (40.6)		115 (46.1)		125 (51.7)	
CFM	EWB °F (°C)	Capacity MBtuh		Capacity MBtuh		Capacity MBtuh		Capacity MBtuh		Capacity MBtuh		Capacity MBtuh	
		Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†	Total	Sens†
1400	72 (22.2)	55.40	28.31	3.28	3.64	50.16	26.29	4.04	47.32	25.21	44.24	22.81	5.48
	67 (19.4)	50.66	35.30	3.27	3.63	45.85	33.24	4.03	43.23	32.13	40.39	29.68	5.48
	63 (17.2)††	47.16	34.17	3.27	3.63	42.65	32.10	4.03	40.18	30.98	37.54	28.52	5.47
	62 (16.7)	46.25	42.22	3.27	3.63	41.87	40.03	4.03	39.52	38.79	37.13	34.77	5.47
	57 (13.9)	44.75	44.75	3.27	3.63	41.21	41.21	4.03	39.26	39.26	37.13	34.77	5.47
1600	72 (22.2)	56.26	29.55	3.36	3.72	50.81	27.50	4.12	47.87	26.42	44.68	23.99	5.56
	67 (19.4)	51.50	37.44	3.36	3.72	46.50	35.35	4.12	43.77	34.22	40.83	31.70	5.56
	63 (17.2)††	47.98	36.18	3.35	3.71	43.28	34.07	4.11	40.73	32.94	37.99	30.41	5.56
	62 (16.7)	47.16	45.12	3.35	3.71	42.69	42.69	4.11	40.59	40.59	38.33	35.82	5.56
	57 (13.9)	46.44	46.44	3.35	3.71	42.67	42.67	4.11	40.59	40.59	38.34	35.83	5.56
1800	72 (22.2)	56.87	30.73	3.45	3.81	51.25	28.65	4.20	48.26	27.57	44.97	25.11	5.64
	67 (19.4)	52.10	39.48	3.44	3.80	49.59	38.45	4.20	44.13	36.19	41.13	33.60	5.64
	63 (17.2)††	48.58	38.09	3.44	3.80	43.74	35.94	4.20	41.11	34.78	38.30	32.17	5.64
	62 (16.7)	47.96	47.60	3.44	3.80	43.85	43.85	4.20	41.66	41.66	39.30	36.65	5.64
	57 (13.9)	47.82	47.82	3.44	3.80	43.86	43.86	4.20	41.67	41.67	39.30	36.65	5.64

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†	
223ANA060 – C Outdoor Section With FY4ANF060 Indoor Section																			
1750	72 (22.2)	71.08	36.09	4.41	67.69	34.77	4.86	64.09	33.39	5.36	60.33	31.96	5.90	56.30	30.45	6.50	51.84	28.81	7.14
	67 (19.4)	65.19	45.05	4.36	62.05	43.69	4.81	58.73	42.27	5.30	55.30	40.82	5.85	51.61	39.29	6.44	47.57	37.62	7.09
	63 (17.2)††	60.79	43.67	4.31	57.85	42.31	4.76	54.78	40.90	5.26	51.57	39.45	5.81	48.15	37.91	6.40	44.41	36.26	7.05
	62 (16.7)	59.61	53.90	4.30	56.75	52.49	4.75	53.77	51.00	5.25	50.69	49.41	5.80	47.50	47.50	6.40	45.90	45.90	6.36
	57 (13.9)	57.48	57.48	4.28	55.20	55.20	4.74	52.79	52.79	5.24	50.24	50.24	5.79	47.49	47.49	6.40	44.42	44.42	7.06
2000	72 (22.2)	72.12	37.62	4.54	68.55	36.26	4.99	64.87	34.89	5.48	60.98	33.44	6.03	56.80	31.91	6.62	52.19	30.25	7.26
	67 (19.4)	66.24	47.72	4.48	62.96	46.34	4.93	59.50	44.89	5.43	55.93	43.42	5.97	52.11	41.85	6.57	47.93	40.14	7.21
	63 (17.2)††	61.83	46.19	4.44	58.77	44.80	4.89	55.56	43.36	5.38	52.22	41.88	5.93	48.67	40.31	6.53	44.80	38.60	7.18
	62 (16.7)	60.73	57.58	4.43	57.79	56.05	4.88	54.77	54.33	5.38	51.88	51.88	5.93	48.94	48.94	6.53	47.37	47.37	6.51
	57 (13.9)	59.63	59.63	4.42	57.18	57.18	4.87	54.60	54.60	5.38	51.89	51.89	5.93	48.94	48.94	6.53	45.66	45.66	7.19
2250	72 (22.2)	72.83	39.05	4.66	69.16	37.69	5.11	65.40	36.31	5.61	61.39	34.85	6.15	57.10	33.30	6.74	52.35	31.61	7.37
	67 (19.4)	66.96	50.26	4.61	63.58	48.86	5.06	60.01	47.39	5.55	56.35	45.89	6.09	52.43	44.28	6.69	48.14	42.52	7.33
	63 (17.2)††	62.58	48.57	4.56	59.40	47.16	5.01	56.09	45.69	5.51	52.66	44.18	6.05	49.01	42.56	6.65	45.05	40.80	7.30
	62 (16.7)	61.68	60.83	4.56	58.79	58.79	5.01	56.05	56.05	5.51	53.19	53.19	6.06	50.08	50.08	6.66	46.62	46.62	7.31
	57 (13.9)	61.37	61.37	4.55	58.79	58.79	5.01	56.06	56.06	5.51	53.19	53.19	6.06	50.08	50.08	6.66	46.62	46.62	7.31

† 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).

Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per AHRI standard 210/240–2008. If additional tubing length and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

HEAT PUMP HEATING PERFORMANCE

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 Sys. KWT	Capacity MBtuh Total	Integ* Integ*	Capacity MBtuh Total	Total Sys. KWT	Capacity MBtuh Total	Integ* Integ*	Capacity MBtuh Total	Total Sys. KWT	Capacity MBtuh Total	Integ* Integ*	Capacity MBtuh Total	Total Sys. KWT	Capacity MBtuh Total	Integ* Integ*			
223ANA018 - C Outdoor Section With F14ANF018 Indoor Section																				
65 (18.3)	525	6.61	6.08	8.47	7.79	10.49	9.56	12.71	11.29	0.91	15.25	13.88	0.96	18.01	18.01	21.07	21.07	23.90	23.90	1.15
	600	6.77	6.23	8.81	8.66	7.96	8.84	10.69	9.75	0.87	12.97	11.52	0.91	15.55	14.15	0.95	18.36	18.36	21.41	1.06
	675	6.92	6.37	8.82	8.32	8.11	0.85	10.87	9.91	0.88	13.19	11.71	0.91	15.80	14.38	0.95	18.65	18.65	21.54	1.05
70 (21.1)	525	6.29	5.79	8.83	8.20	7.53	0.87	10.20	9.30	0.91	12.39	11.01	0.95	14.87	13.53	1.00	17.64	17.64	20.64	1.14
	600	6.46	5.94	8.84	8.39	7.71	0.88	10.41	9.49	0.91	12.62	11.21	0.95	15.21	13.84	0.99	18.00	18.00	21.06	1.11
	675	6.61	6.08	8.86	8.53	7.84	0.86	10.59	9.66	0.92	12.87	11.43	0.95	15.46	14.07	0.99	18.28	18.28	21.29	1.10
75 (23.9)	525	5.96	5.48	8.86	7.87	7.23	0.90	9.91	9.03	0.95	12.09	10.74	0.99	14.52	13.21	1.04	17.27	17.27	20.23	1.19
	600	6.12	5.63	8.87	8.06	7.40	0.91	10.12	9.22	0.95	12.33	10.95	0.99	14.82	13.49	1.03	17.62	17.62	20.67	1.17
	675	6.27	5.77	8.89	8.24	7.58	0.92	10.30	9.39	0.95	12.54	11.14	0.99	15.07	13.71	1.03	17.90	17.90	20.94	1.15
223ANA024 - B Outdoor Section With F14ANF024 Indoor Section																				
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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	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total								
223ANAO30 - C Outdoor Section With FY4ANF030 Indoor Section																									
65 (18.3)	875	12.02	11.06	15.08	13.85	18.33	16.72	2.07	21.82	19.38	2.18	25.66	23.35	2.31	29.99	29.99	2.47	34.77	34.77	2.64	39.32	39.32	2.79		
	1000	12.26	11.28	15.33	14.09	19.81	16.97	2.06	22.12	19.64	2.16	26.04	23.69	2.28	30.47	30.47	2.42	35.11	35.11	2.55	39.58	39.58	2.69		
	1125	12.47	11.47	15.56	14.30	19.86	17.19	2.07	22.38	19.88	2.15	26.41	24.04	2.26	30.87	30.87	2.39	35.28	35.28	2.49	39.69	39.69	2.63		
70 (21.1)	875	11.62	10.69	14.71	13.52	17.98	16.40	2.18	21.49	19.08	2.30	25.25	22.98	2.43	29.55	29.55	2.60	34.31	34.31	2.79	38.81	38.81	2.94		
	1000	11.85	10.91	14.97	13.76	18.26	16.65	2.17	21.79	19.35	2.28	25.64	23.33	2.43	30.00	30.00	2.55	34.70	34.70	2.69	39.17	39.17	2.83		
	1125	12.07	11.10	15.20	13.97	18.51	16.88	2.18	22.05	19.59	2.27	25.97	23.63	2.38	30.39	30.39	2.52	34.94	34.94	2.63	39.35	39.35	2.77		
75 (23.9)	875	11.19	10.29	14.32	13.16	17.61	16.06	2.29	21.13	18.77	2.42	24.86	22.62	2.56	29.13	29.13	2.74	33.84	33.84	2.95	38.33	38.33	3.09		
	1000	11.42	10.51	14.58	13.40	17.90	16.32	2.29	21.44	19.04	2.40	25.23	22.95	2.52	29.56	29.56	2.68	34.25	34.25	2.84	38.72	38.72	2.98		
	1125	11.64	10.70	14.82	13.61	18.15	16.55	2.29	21.72	19.29	2.39	25.55	23.25	2.50	29.93	29.93	2.65	34.55	34.55	2.78	38.96	38.96	2.91		
OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)																									
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	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total								
223ANAO36 - C Outdoor Section With FY4ANF036 Indoor Section																									
65 (18.3)	1050	14.39	13.24	2.21	18.06	16.60	2.32	21.96	20.02	2.43	26.08	23.17	2.56	30.79	28.02	2.71	35.73	35.73	2.85	40.33	40.33	3.00	45.07	45.07	3.17
	1200	14.71	13.53	2.25	18.40	16.91	2.34	22.34	20.36	2.44	26.49	23.53	2.56	31.26	28.45	2.70	35.98	35.98	2.81	40.39	40.39	2.94	44.90	44.90	3.09
	1350	14.99	13.79	2.29	18.71	17.19	2.38	22.66	20.66	2.47	26.86	23.85	2.57	31.69	28.84	2.70	36.10	36.10	2.80	40.33	40.33	2.92	44.58	44.58	3.04
70 (21.1)	1050	13.84	12.73	2.30	17.57	16.15	2.42	21.50	19.60	2.54	25.64	22.78	2.67	30.17	27.46	2.83	35.32	35.32	2.99	39.94	39.94	3.15	44.64	44.64	3.32
	1200	14.16	13.02	2.33	17.92	16.46	2.44	21.87	19.94	2.55	26.04	23.13	2.67	30.67	27.91	2.82	35.60	35.60	2.95	40.07	40.07	3.09	44.62	44.62	3.24
	1350	14.45	13.29	2.37	18.22	16.75	2.48	22.20	20.24	2.58	26.40	23.45	2.69	31.12	28.32	2.82	35.80	35.80	2.93	40.08	40.08	3.06	44.43	44.43	3.19
75 (23.9)	1050	13.24	12.18	2.38	17.03	15.65	2.52	21.00	19.15	2.65	25.18	22.36	2.79	29.65	26.98	2.95	34.80	34.80	3.14	39.50	39.50	3.29	44.18	44.18	3.48
	1200	13.56	12.47	2.42	17.38	15.98	2.54	21.38	19.49	2.66	25.59	22.73	2.79	30.13	27.42	2.94	35.27	35.27	3.09	39.71	39.71	3.23	44.27	44.27	3.49
	1350	13.85	12.74	2.46	17.70	16.26	2.58	21.72	19.80	2.69	25.94	23.04	2.81	30.55	27.80	2.95	35.47	35.47	3.07	39.79	39.79	3.20	44.18	44.18	3.34

See notes on pg. 20

HEAT PUMP HEATING PERFORMANCE CONTINUED

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)											
		-3 (-19.4)			7 (-13.9)			17 (-8.3)			27 (-2.8)		
		Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†
EDB ° F (° C)	CFM	Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*	
223ANA042-B Outdoor Section With FY4ANF042 Indoor Section													
65 (18.3)	1225	17.53	16.13	2.72	21.61	19.86	2.83	26.00	23.71	2.95	30.74	27.30	3.08
	1400	17.88	16.45	2.75	21.99	20.20	2.85	26.39	24.06	2.96	31.20	27.71	3.08
	1575	18.21	16.75	2.80	22.32	20.51	2.89	26.75	24.39	2.99	31.61	28.08	3.10
70 (21.1)	1225	17.06	15.69	2.84	21.17	19.45	2.96	25.58	23.32	3.09	30.29	26.90	3.23
	1400	17.40	16.01	2.88	21.52	19.78	2.99	25.97	23.68	3.10	30.69	27.26	3.23
	1575	17.74	16.32	2.92	21.88	20.11	3.02	26.32	24.00	3.12	31.11	27.63	3.24
75 (23.9)	1225	16.54	15.21	2.96	20.69	19.02	3.09	25.13	22.91	3.23	29.85	26.51	3.39
	1400	16.89	15.54	3.00	21.08	19.37	3.12	25.53	23.28	3.24	30.29	26.90	3.38
	1575	17.21	15.83	3.05	21.41	19.67	3.16	25.90	23.62	3.27	30.67	27.24	3.40
OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)													
INDOOR AIR		-3 (-19.4)			7 (-13.9)			17 (-8.3)			27 (-2.8)		
		Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†
		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*	
223ANA048-B Outdoor Section With FY4ANF048 Indoor Section													
65 (18.3)	1400	21.02	19.34	3.15	25.66	23.58	3.27	30.63	27.92	3.39	36.31	32.25	3.55
	1600	21.41	19.70	3.20	26.07	23.95	3.30	31.08	28.34	3.41	36.82	32.70	3.55
	1800	21.77	20.03	3.25	26.44	24.30	3.35	31.50	28.72	3.45	37.27	33.10	3.58
70 (21.1)	1400	20.52	18.88	3.29	25.21	23.16	3.42	30.19	27.53	3.55	35.74	31.74	3.71
	1600	20.92	19.24	3.33	25.62	23.55	3.45	30.62	27.92	3.57	36.31	32.25	3.72
	1800	21.28	19.58	3.39	26.01	23.90	3.49	31.03	28.29	3.60	36.75	32.64	3.74
75 (23.9)	1400	19.98	18.39	3.42	24.76	22.75	3.57	29.75	27.12	3.72	35.19	31.25	3.88
	1600	20.37	18.74	3.47	25.14	23.10	3.60	30.19	27.53	3.73	35.69	31.70	3.88
	1800	20.76	19.10	3.53	25.53	23.46	3.64	30.60	27.90	3.77	36.15	32.11	3.90

See notes on pg. 20

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 Sys. KW†	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total	Capacity MBtuh Total	Integ* Total								
223ANA060 - C Outdoor Section With FY4ANF060 Indoor Section																									
65 (18.3)	1750	25.07	23.07	3.86	30.90	28.40	4.00	37.17	33.89	4.16	43.81	38.91	4.34	51.11	46.51	4.54	59.85	59.85	4.79	68.95	68.95	5.02	78.00	78.00	5.31
	2000	25.62	23.57	3.93	31.49	28.94	4.06	37.79	34.45	4.20	44.47	39.50	4.36	51.96	47.28	4.54	60.88	60.88	4.74	69.47	69.47	4.95	78.33	78.33	5.20
	2250	26.13	24.04	4.01	32.03	29.44	4.13	38.34	34.96	4.26	45.07	40.03	4.40	52.72	47.97	4.57	61.49	61.49	4.73	69.75	69.75	4.92	77.76	77.76	5.13
70 (21.1)	1750	24.34	22.40	4.03	30.22	27.77	4.19	36.54	33.32	4.36	43.21	38.36	4.55	50.41	45.87	4.76	58.98	58.98	5.03	68.13	68.13	5.26	77.06	77.06	5.56
	2000	24.89	22.90	4.10	30.80	28.30	4.24	37.17	33.69	4.40	43.87	38.96	4.57	51.17	46.57	4.75	60.00	60.00	4.97	68.71	68.71	5.18	77.50	77.50	5.44
	2250	25.40	23.37	4.18	31.34	28.80	4.31	37.72	34.39	4.45	44.46	39.49	4.60	51.85	47.19	4.77	60.72	60.72	4.95	69.06	69.06	5.15	77.77	77.77	5.39
75 (23.9)	1750	23.57	21.68	4.21	29.50	27.11	4.38	35.86	32.70	4.57	42.56	37.80	4.77	49.72	45.25	4.99	57.81	57.81	5.26	67.28	67.28	5.51	76.15	76.15	5.82
	2000	24.12	22.19	4.29	30.09	27.65	4.44	36.50	33.28	4.60	43.24	38.40	4.78	50.48	45.93	4.98	58.94	58.94	5.21	67.93	67.93	5.43	76.69	76.69	5.70
	2250	24.63	22.66	4.37	30.63	28.15	4.51	37.07	33.83	4.66	43.83	38.93	4.82	51.15	46.54	5.00	59.80	59.80	5.19	68.35	68.35	5.40	76.95	76.95	5.64

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

AIR-COOLED, SPLIT-SYSTEM HEAT PUMP

223A

1-1/2 TO 5 NOMINAL TONS

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 AHRI Standard 240.
- Unit will be certified for capacity and efficiency, and listed in the latest AHRI 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 are pressure tested and the outdoor unit is leak 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 Puron® (R-410A), 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.
- 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 Puron® (R-410A) refrigerant, POE compressor oil, accumulator, 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 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.
- 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.

223A

