

**MODEL 225B  
PREFERRED™ SERIES 15 HEAT PUMP  
WITH PURON® REFRIGERANT  
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 225B has been designed utilizing Bryant's non-ozone depleting Puron refrigerant.

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 AHRI 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](http://www.ahridirectory.org)) for the most up-to-date ratings information.**

### INDUSTRY LEADING FEATURES / BENEFITS

#### Efficiency

- 14.0 - 16.0 SEER/ 11.0 - 13.0 EER/ 8.2 - 9.0 HSPF (Nominal)
- Microtube Technology™ refrigeration system
- Indoor air quality accessories available

#### Sound

- Sound level as low as 68 dBA

#### Comfort

- System supports Thermidistat™ or standard thermostat controls

#### Reliability

- Non-ozone depleting Puron® refrigerant
- 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
- 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 -10°F/-23°C) with accessory kit

## 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	5	B	N	A	0	3	6	0	0	0	A
Product Family 2=HP	Tier 2= Legacy Series	SEER 5=15 SEER	Major Series B=Puron	Voltage N= 208-230-1 or 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](http://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	37	42	48	60	61
Puron Refrigerant	X	X	X	X	X	X	X	X
Maximum SEER Rating*	15	16.0	15.5	16.0	16.0	16.0	15.0	16.0
Scroll Compressor	X	X	X	X	X	X	X	X
Crankcase Heater				X			X	X
Louvered Coil Guard	X	X	X	X	X	X	X	X
Field Installed Filter Drier	X	X	X	X	X	X	X	X
Front Seating Service Valves	X	X	X	X	X	X	X	X
Internal Pressure Relief Valve	X	X	X	X	X	X	X	X
Internal Thermal Overload	X	X	X	X	X	X	X	X
Long Line capability	X	X	X	X	X	X	X	X
Low Ambient capability with Kit	X	X	X	X	X	X	X	X
Suction Line Accumulator	X	X	X	X	X	X	X	X
High Pressure Switch	X	X	X	X	X	X	X	X
Loss of Charge Switch	X	X	X	X	X	X	X	X

\* Based on system combination ratings  
X = Standard

# PHYSICAL DATA

UNIT SIZE SERIES	18	24	30	37	42	48	60	61
Compressor Type	Scroll							
REFRIGERANT	Puron® (R-410A)							
Control	TXV (Puron® Shutoff)							
Charge (lb)	5.6 (2.54)	7.60 (3.45)	7.0 (3.18)	11.20 (5.08)	8.90 (4.04)	9.87 (4.48)	12.50 (5.67)	13.00 (5.90)
Outdoor Heating Piston #	42	46	52	55	61	TXV	76	65
COND FAN	Propeller Type, Direct Drive							
Air Discharge	Vertical							Vertical
Air Qty (CFM)	2233	3223	3223	3223	3810	4046	4046	4400
Motor HP	1/12	1/12	1/12	1/12	1/5	1/4	1/4	1/3
Motor RPM	800	800	800	810	800	810	800	767
COND COIL								
Face Area (Sq ft)	15.09	20.12	20.12	20.10	17.60	20.10	25.15	35.47
Fins per In.	20	20	20	20	20	20	20	20
Rows	1	1	1	2	2	2	2	2
Circuits	4	5	5	8	7	8	9	12
VALVE CONNECT. (In. ID)								
Vapor	5/8	5/8	3/4	3/4	7/8	7/8	7/8	7/8
Liquid	3/8							3/8
REFRIGERANT TUBES (In. OD)								
Rated Vapor*	5/8	5/8	3/4	3/4	7/8	7/8	1-1/8	1-1/8
Max Liquid Line	3/8"							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

Acceptable vapor line diameters provide adequate oil return to the compressor while avoiding excessive capacity loss. The suction line diameters shown in the chart below are acceptable for HP systems with Puron refrigerant:

### VAPOR LINE SIZING AND COOLING CAPACITY LOSSES - PURON® REFRIGERANT 1- STAGE HEAT PUMP APPLICATIONS

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 HP with Puron	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 HP with Puron	3/8	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 HP with Puron	3/8	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
37,000 1-Stage HP with Puron	3/8	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 HP with Puron	3/8	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 HP with Puron	3/8	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 HP with Puron	3/8	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

Standard Length = 80 ft. (24.4 m) or less total equivalent length

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

# REFRIGERANT PIPING LENGTH LIMITATIONS

## Maximum Line Lengths:

The maximum allowable total equivalent length for heat pumps varies depending on the vertical separation. See the tables below for allowable lengths depending on whether the outdoor unit is on the same level, above or below the indoor unit.

### MAXIMUM LINE LENGTHS FOR HEAT PUMP APPLICATIONS

	MAXIMUM ACTUAL LENGTH ft (m)	MAXIMUM EQUIVALENT LENGTH† ft (m)	MAXIMUM VERTICAL SEPARATION ft (m)
Units on equal level	200 (61)	250 (76.2)	N/A
Outdoor unit ABOVE indoor unit	200 (61)	250 (76.2)	200 (61)
Outdoor unit BELOW indoor unit	See Table 'Maximum Total Equivalent Length: Outdoor Unit BELOW Indoor Unit'		

† Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.

### MAXIMUM TOTAL EQUIVALENT LENGTH† - OUTDOOR UNIT BELOW INDOOR UNIT

Size	Liquid Line Diameter w/ TXV	HP with Puron® Refrigerant – Maximum Total Equivalent Length† Vertical Separation ft (m) Outdoor unit BELOW indoor unit;						
		0–20 (0 – 6.1)	21–30 (6.4 – 9.1)	31–40 (9.4 – 12.2)	41–50 (12.5 – 15.2)	51–60 (15.5 – 18.3)	61–70 (18.6 – 21.3)	71–80 (21.6 – 24.4)
18000 HP with Puron	3/8	250*	250*	250*	250*	250*	250*	250*
24000 HP with Puron	3/8	250*	250*	250*	250*	250*	250*	250*
30000 HP with Puron	3/8	250*	250*	250*	250*	250*	250*	250*
37,000 HP with Puron	3/8	250*	250*	250*	250*	250*	250*	250*
42000 HP with Puron	3/8	250*	250*	250*	250*	250*	250*	150
48000 HP with Puron	3/8	250*	250*	250*	250*	230	160	--
60000 HP with Puron	3/8	250*	225*	190	150	110	--	--

\* Maximum actual length not to exceed 200 ft (61 m)

† Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.

-- = outside acceptable range

## LONG LINE APPLICATIONS

An application is considered Long Line when the refrigerant level in the system requires the use of accessories to maintain acceptable refrigerant management for systems reliability. Defining a system as long line depends on the liquid line diameter, actual length of the tubing, and vertical separation between the indoor and outdoor units.

For Heat Pump systems, the chart below shows when an application is considered Long Line. Beyond these lengths, long line accessories are required:

### HP WITH PURON® REFRIGERANT LONG LINE DESCRIPTION FT (M) BEYOND THESE LENGTHS, LONG LINE ACCESSORIES ARE REQUIRED

Liquid Line Size	Units On Same Level	Outdoor Below Indoor	Outdoor Above Indoor
3/8	80 (24.4)	20 (6.1) vertical or 80 (24.4) total	80 (24.4)

Note: See Long Line Guideline for details

# ACCESSORIES

ACCESSORY NO.	DESCRIPTION	UNIT SIZE							
		18-A	24-A	30-A	37-A	42-A	48-B	60-A	61-A
HC32GE229	MOTOR,FAN	X	X	X					
HC38GE228	MOTOR,FAN					X			
HC40GE228	MOTOR,FAN						X	X	
KHAFM0201AAA*	MOTOR,FAN								X
KAACH1601AAA	CRANKCASE HEATER					X	X		S
KAACH1701AAA	CRANKCASE HEATER	X	X	X					
KAACS0201PTC	KIT PTC	X	X	X	X	X	X	X	X
KAATD0101TDR	TIME DELAY	X	X	X	X	X	X	X	X
KHAIR0201AAA	ISOLATION RELAY	X	X	X	X	X	X	X	X
KHALS0401LLS	SOLENOID VALVE	X	X	X	X	X	X	X	X
KHASS0606MPK†	SNOW STAND	X	X	X	X	X	X	X	X
KSACY0101AAA	CYCLE PROTECTOR	X	X	X	X	X	X	X	X
KSAFT0101AAA	FREEZE THERM	X	X	X	X	X	X	X	X
KSAHS1701AAA	HARD START	X	X	X		X	X	X	X
KSAHS1501AAA	HARD START				X				
KSAHS2501AAA	HARD START						X		X
KSALA0301410	LOW AMBIENT	X	X	X	X	X	X	X	X
KSALA0601AAA	MOTORMASTER	X	X	X	X	X	X	X	X
KSASF0201AAA	SUPPORT FEET	X	X	X	X	X	X	X	X
KSASH0601COP	SOUND BLKT	X	X	X		X	X		
KSASH2401COP	SOUND BLKT						X	X	S
KSATX0201PUR	TXV KIT, COPPER	X	X	X					
KSATX0301PUR	TXV KIT, COPPER				X	X			
KSATX0401PUR	TXV KIT, COPPER						X	X	X
KSBTX0201PUR	TXV KIT, ALUMINIUM	X	X	X					
KSBTX0301PUR	TXV KIT, ALUMINIUM				X	X			
KSBTX0401PUR	TXV KIT, ALUMINIUM						X	X	X

x = Accessory

S = Standard

\* Required for use with low ambient or Motormaster kits. Efficiency will not be met with this accessory installed.

† Order through RCD–Totaline, part number KHASS0606MPK (qty 6).

# ACCESSORY THERMOSTATS

Part Number	Description	Capabilities			Heat Stages	Cool Stages
		Gas	Electric	Heat Pump		
T6–WEM01	Housewise™ Wi-Fi Programmable Relative Humidity Thermostat	√	√	√	4	2
T6–PRH01–A	Programmable Relative Humidity Thermostat	√	√	√	3	2
T6–PHP01	Programmable Thermostat (HP or AC)		√	√	3	2
T6–NRH01–A	Non–Programmable Relative Humidity Thermostat	√	√	√	3	2
T6–NHP01	Non–Programmable Thermostat (HP or AC)		√	√	3	2
T2–WHS01	Wi-Fi® Programmable	√	√	√	3	2
T2–PHP01	5–2 Day Programmable Thermostat		√	√	3	2
T2–NHP01	Non–Programmable Thermostat (HP or AC)		√	√	3	2
T2SNHP01	Non–Programmable Thermostat (HP or AC)		√	√	2	1

Thermostat Accessories		
Part Number	Description	Used With
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
TX–MBP01	Medium Decorative Backplate	T2–Nxx
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*	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	No
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 Piping and Longline Guideline.

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

‡ In units equipped with ECM OD motor, motor needs to be replaced per unit accessory guide to work properly. This motor kit comes with a new defrost board that also needs to be installed. Unit will not meet AHRI rated efficiency once motor and control board are replaced to use this accessory.



## 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 -10°F (-23°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. 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.

### 15. 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	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MAX FUSE** or CKT BRK AMPS
		MAX	MIN	LRA	RLA	FLA		
18-A	208/230/1	253	197	48.0	9.00	0.5	11.8	20
24-A				58.3	12.80	0.5	16.5	25
30-A				73.0	14.10	0.5	18.1	30
37-A				75.0	16.80	0.6	21.6	35
42-A				109.0	21.10	1.2	27.6	40
48-B				130.0	24.40	1.3	31.8	45
60-A				134.0	26.40	1.2	34.2	50
61-A				152.5	24.90	2.8	33.9	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

## A-WEIGHTED SOUND POWER

UNIT SIZE - VOLTAGE, SERIES	STANDARD RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dB, without tone adjustment)						
		125	250	500	1000	2000	4000	8000
18-A	72	50.5	60.0	65.0	67.5	64.5	61.5	53.5
24-A	68	49.5	58.5	61.5	62.0	61.0	58.5	51.5
30-A	69	50.5	58.5	61.5	64.0	61.5	58.5	51.5
37-A	71	68.2	66.4	67.5	68.4	59.6	58.2	52.4
42-A	72	56.5	64.5	66.5	66.5	64.5	61.0	54.5
48-B	72	58.5	63.0	65.5	67.0	63.5	60.0	52.0
60-A	73	58.5	62.5	65.0	67.0	64.0	61.0	56.5
61-A	70	61.7	65.6	68.1	65.8	59.8	58.4	56.1

NOTE: Size 37-30 tested in accordance with AHRI Standard 270-08 (not listed in AHRI), all other units tested in accordance with AHRI standard 270-95(not listed in AHRI)

## CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE - VOLTAGE, SERIES	REQUIRED SUBCOOLING °F (°C)
18-A	12 (6.7)
24-A	14 (7.8)
30-A	10 (5.6)
37-A	10 (5.6)
42-A	10 (5.6)
48-B	9 (5.0)
60-A	11 (6.1)
61-A	7 (3.89)

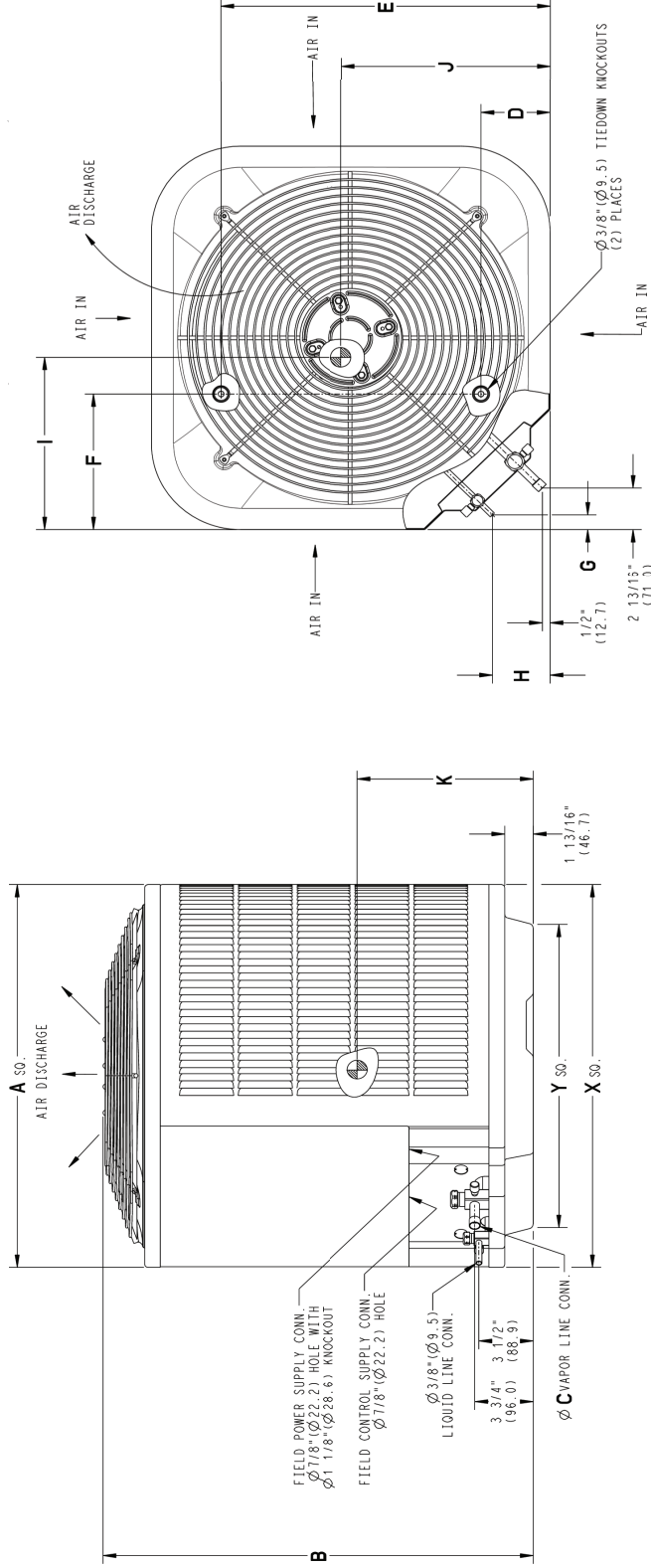


# DIMENSIONS

UNIT	SERIES	ELECTRICAL CHARACTERISTICS	A		B		C		D		E		F		G		H		I		J		K		OPERATING WEIGHT		SHIPPING WEIGHT		SHIPPING LENGTH / WIDTH (Sq.)		SHIPPING HEIGHT	
			INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	Lbs	Kgs	Lbs	Kgs	INCH	MM	INCH	MM
225BNA018000GAAA	A	Y N N N	31 3/16	792.5	28 11/16	728.7	5/8	15.9	6 9/16	166.1	24 11/16	628.3	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	16	406.4	15	381.0	14	355.6	169	76.7	207	93.9	33 5/16	846.6	33 3/16	843.1
225BNA020000GAAA	A	Y N N N	35	889.0	32 1/16	815.1	5/8	15.9	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	15 3/4	400.1	16 3/4	425.5	16 1/2	419.1	200	90.7	233	105.7	37 1/8	943.1	36 5/8	929.5
225BNA030000GAAA	A	Y N N N	35	889.0	32 1/16	815.1	3/4	19.1	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	16 1/4	412.8	16	406.4	15 1/2	393.7	196	88.9	242	109.8	37 1/8	943.1	36 5/8	929.5
225BNA037000BAAA	A	Y N N N	35	889.0	32 1/16	815.1	3/4	19.1	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	17 3/8	441.3	17 1/2	444.5	13 3/4	349.3	235	106.6	273	123.8	37 1/8	943.1	36 5/8	929.5
225BNA042000GAAA	A	Y N N N	35	889.0	28 11/16	728.7	7/8	22.2	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	17	431.8	16 3/4	425.5	14 3/4	374.7	245	111.1	290	131.5	37 1/8	943.1	33 3/16	843.1
225BNA048000BAAA	B	Y N N N	35	889.0	32 1/16	815.1	7/8	22.2	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	16 1/8	409.6	18	457.2	14 7/8	377.8	258	117.0	296	134.3	37 1/8	943.1	36 5/8	929.5
225BNA060000GAAA	A	Y N N N	35	889.0	38 7/8	997.8	7/8	22.2	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	17 1/4	438.2	16 1/4	412.8	18 1/4	463.6	294	133.4	345	156.5	37 1/8	943.1	43 3/8	1102.2
225BNA061000BAAA	A	Y N N N	35	889.0	45 11/16	1160.5	7/8	22.2	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	17 7/8	454.0	16 1/4	412.8	19	482.6	316	143.3	362	164.2	37 1/8	943.1	50 3/16	1274.9

Y=YES  
N=NO

NOTES:  
1. CENTER OF GRAVITY



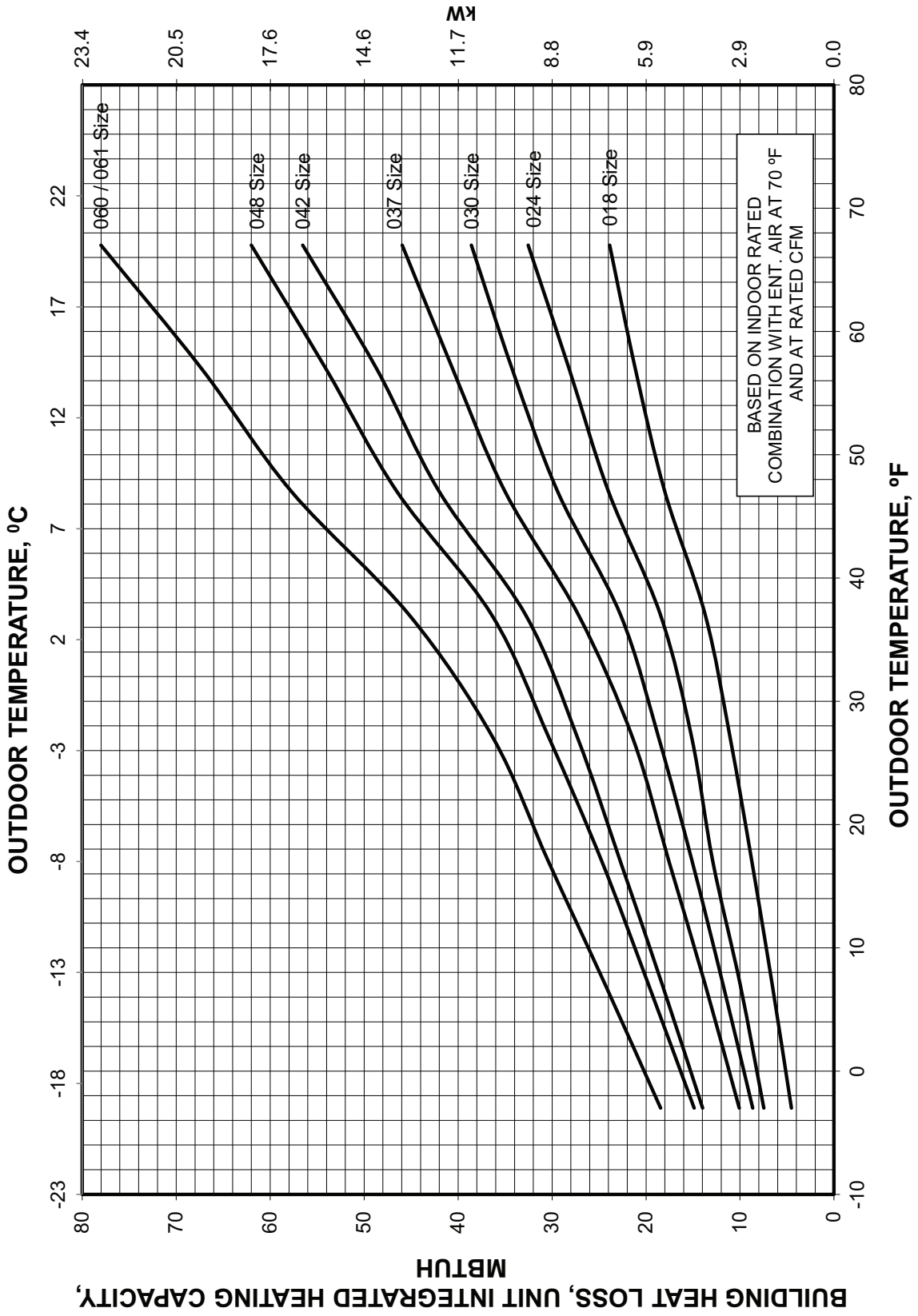
UNIT SIZE	"X" MINIMUM GROUND MOUNTING PAD APPLICATION DIMENSIONS		"Y" MINIMUM ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS	
	23 1/8	587.3	17 7/8	454.6
-	25 3/4	654.0	20 7/16	518.5
18	31 3/16	792.5	22 15/16	583.2
24, 30, 37, 42, 48, 60, 61	35	889.0	26 3/4	679.7

NOTE: ALL DIMENSIONS IN INCH (MM)

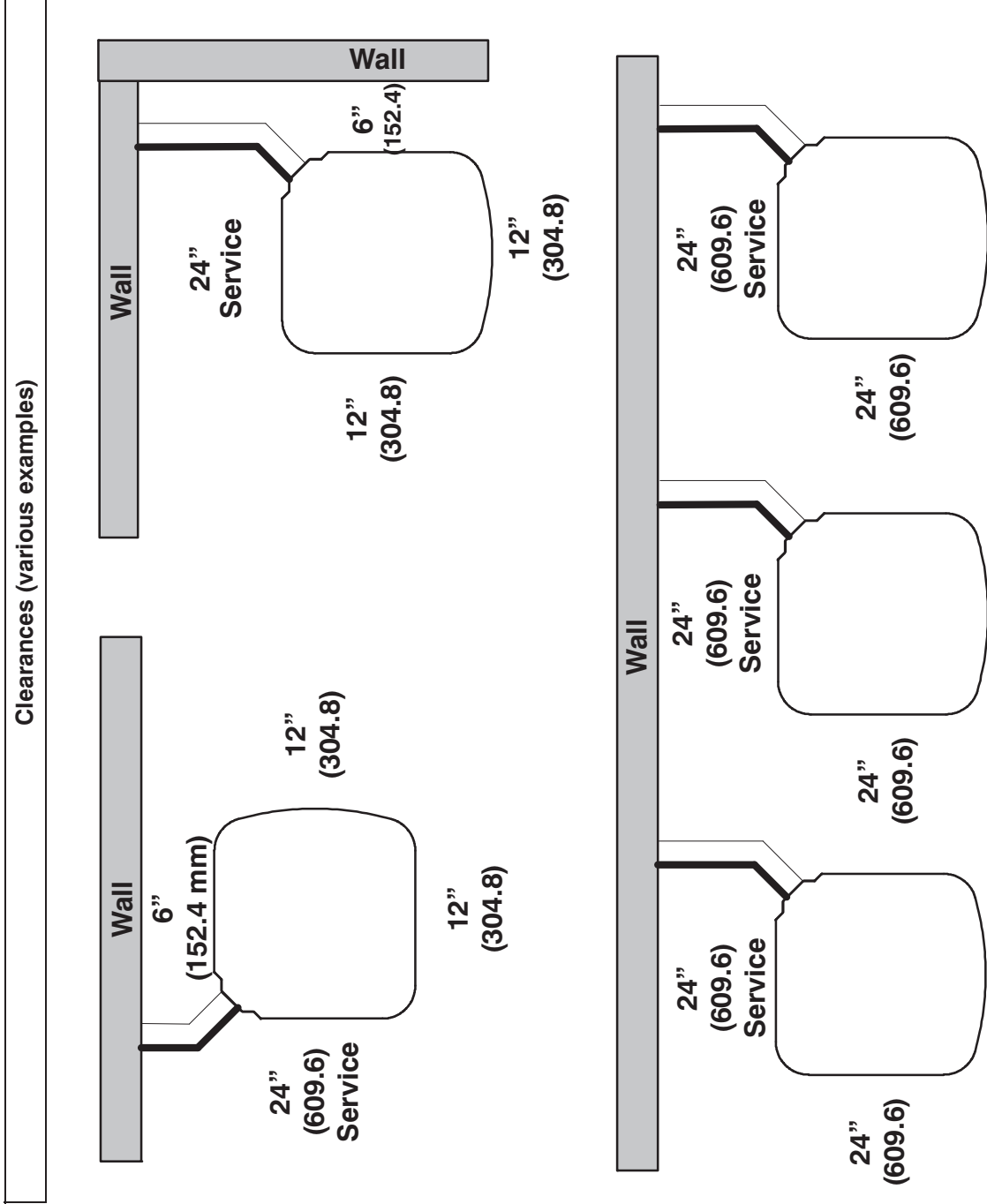
U.S. ECCN: Not Subject to Regulation (N.S.R.)

SDM912-4 295B REV. G

**225B 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](http://www.ahridirectory.org)

Additional ratings and system combinations can be accessed via the Bryant database at: [www.MyBryantRatings.com](http://www.MyBryantRatings.com)

For performance data at specific application &/or design conditions with various indoor unit combinations, the equipment performance calculator can be accessed at : <http://rpmobbry.wrightsoft.com/>

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
225BNA018-A	FX4DNF019L		17,800	12.5	15.0	17,400	3.88	8.5	10,600	2.56
225BNA024-A	FX4DNF025L		24,000	12.5	15.0	24,000	3.94	8.5	14,800	2.70
225BNA030-A	FX4DN(B,F)031L		28,400	12.0	15.0	28,200	3.98	8.5	17,000	2.66
225BNA037-A	FX4DN(B,F)049L		35,000	13.0	16.0	35,000	4.16	8.5	20,800	2.86
225BNA042-A	FX4DN(B,F)043L		42,000	12.5	15.0	42,000	3.80	8.5	26,800	2.60
225BNA048-B	FX4DN(B,F)061L		48000	13.0	16.0	46500	3.84	9.0	29,600	2.74
225BNA060-A	FX4DN(B,F)061L		57,000	12.5	15.0	56,500	3.84	8.5	35,400	2.68
225BNA061-A	FX4DN(B,F)061L		55000	13.0	16.0	55000	3.82	8.5	33,600	2.82

\* 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)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
		CFM	EWB ° F (° C)	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	
Total	Sens†			Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†		
<b>228BNA018—A Outdoor Section With FX4DNF019 Indoor Section</b>																			
525	72 (22.2)	21.38	11.10	1.10	20.34	10.70	1.25	19.25	10.28	1.42	18.10	9.85	1.60	16.88	9.40	1.80	15.59	8.93	2.03
	67 (19.4)	19.37	13.52	1.10	18.43	13.12	1.25	17.43	12.70	1.41	16.38	12.26	1.59	15.26	11.81	1.79	14.08	11.33	2.02
	63 (17.2)††	17.92	13.00	1.10	17.05	12.60	1.25	16.12	12.18	1.41	15.14	11.74	1.59	14.10	11.28	1.79	12.99	10.80	2.01
	62 (16.7)	17.54	15.88	1.10	16.69	15.47	1.25	15.79	15.04	1.41	14.85	14.58	1.59	13.91	13.91	1.78	13.03	13.03	2.01
	57 (13.9)	16.80	16.80	1.10	16.15	16.15	1.25	15.45	15.45	1.41	14.70	14.70	1.59	13.89	13.89	1.78	13.01	13.01	2.01
600	72 (22.2)	21.87	11.69	1.11	20.79	11.28	1.26	19.64	10.85	1.43	18.44	10.41	1.61	17.17	9.95	1.81	15.83	9.47	2.04
	67 (19.4)	19.84	14.44	1.11	18.85	14.03	1.26	17.80	13.60	1.42	16.70	13.15	1.60	15.54	12.69	1.80	14.31	12.20	2.03
	63 (17.2)††	18.37	13.86	1.11	17.45	13.45	1.26	16.48	13.02	1.42	15.45	12.57	1.60	14.37	12.10	1.80	13.22	11.61	2.02
	62 (16.7)	18.01	17.11	1.11	17.13	16.68	1.26	16.21	16.12	1.42	15.36	15.36	1.60	14.49	14.49	1.80	13.56	13.56	2.02
	57 (13.9)	17.61	17.61	1.11	16.90	16.90	1.26	16.15	16.15	1.42	15.34	15.34	1.60	14.47	14.47	1.80	13.54	13.54	2.02
675	72 (22.2)	22.26	12.24	1.12	21.13	11.82	1.27	19.94	11.39	1.44	18.70	10.94	1.62	17.39	10.48	1.82	16.02	10.00	2.05
	67 (19.4)	20.21	15.33	1.12	19.17	14.90	1.27	18.08	14.47	1.43	16.95	14.01	1.61	15.75	13.53	1.81	14.49	13.03	2.04
	63 (17.2)††	18.73	14.69	1.12	17.76	14.27	1.27	16.76	13.83	1.43	15.70	13.37	1.61	14.58	12.89	1.81	13.40	12.38	2.03
	62 (16.7)	18.42	18.24	1.12	17.56	17.56	1.27	16.76	16.76	1.43	15.90	15.90	1.61	14.98	14.98	1.81	14.00	14.00	2.04
	57 (13.9)	18.29	18.29	1.12	17.54	17.54	1.27	16.74	16.74	1.43	15.88	15.88	1.61	14.96	14.96	1.81	13.98	13.98	2.04

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 MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	
Total	Sens†			Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†		
<b>228BNA024—A Outdoor Section With FX4DNF025 Indoor Section</b>																			
700	72 (22.2)	28.25	14.67	1.50	27.04	14.21	1.70	25.76	13.71	1.91	24.38	13.19	2.15	22.88	12.63	2.41	21.23	12.03	2.71
	67 (19.4)	25.63	17.92	1.48	24.52	17.44	1.67	23.33	16.94	1.88	22.05	16.40	2.12	20.86	15.83	2.38	19.12	15.20	2.88
	63 (17.2)††	23.76	17.24	1.46	22.71	16.76	1.66	21.59	16.25	1.87	20.38	15.71	2.10	19.07	15.13	2.37	17.61	14.49	2.88
	62 (16.7)	23.28	21.08	1.46	22.25	20.58	1.65	21.17	20.06	1.87	20.00	19.48	2.10	18.77	18.68	2.37	17.59	17.59	2.88
	57 (13.9)	22.30	22.30	1.46	21.50	21.50	1.65	20.65	20.65	1.86	19.72	19.72	2.10	18.70	18.70	2.37	17.56	17.56	2.88
800	72 (22.2)	28.87	15.41	1.53	27.60	14.93	1.73	26.26	14.44	1.94	24.83	13.91	2.17	23.27	13.34	2.44	21.57	12.73	2.73
	67 (19.4)	26.21	19.09	1.50	25.04	18.60	1.69	23.80	18.09	1.90	22.47	17.55	2.14	21.02	16.96	2.40	19.44	16.32	2.71
	63 (17.2)††	24.31	18.34	1.48	23.21	17.84	1.68	22.04	17.33	1.89	20.78	16.77	2.12	19.42	16.18	2.39	17.92	15.53	2.70
	62 (16.7)	23.85	22.64	1.48	22.80	22.10	1.68	21.69	21.51	1.89	20.58	20.58	2.12	19.49	19.49	2.39	18.28	18.28	2.70
	57 (13.9)	23.30	23.30	1.48	22.45	22.45	1.67	21.53	21.53	1.89	20.55	20.55	2.12	19.46	19.46	2.39	18.26	18.26	2.70
900	72 (22.2)	29.34	16.11	1.56	28.03	15.63	1.75	26.65	15.12	1.96	25.17	14.59	2.20	23.56	14.01	2.46	21.82	13.39	2.76
	67 (19.4)	26.65	20.21	1.52	25.44	19.71	1.72	24.16	19.19	1.93	22.79	18.63	2.16	21.30	18.03	2.43	19.68	17.38	2.73
	63 (17.2)††	24.73	19.38	1.50	23.59	18.88	1.70	22.39	18.35	1.91	21.09	17.78	2.14	19.89	17.17	2.41	18.16	16.50	2.71
	62 (16.7)	24.35	24.04	1.50	23.29	23.29	1.70	22.31	22.31	1.91	21.27	21.27	2.15	20.12	20.12	2.41	18.86	18.86	2.72
	57 (13.9)	24.14	24.14	1.50	23.24	23.24	1.70	22.28	22.28	1.91	21.24	21.24	2.15	20.10	20.10	2.41	18.84	18.84	2.72

See note on pg. 16

# DETAILED COOLING CAPACITIES# CONTINUED

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)																	
		75 (23.9)			85 (29.4)			95 (65)			105 (40.6)			115 (46.1)			125 (51.7)		
		CFM	EWB ° F (° C)	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	
Total	Sens†			Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†					
225BNA030 - A Outdoor Section With FX4DNF031 Indoor Section																			
	72 (22.2)	34.40	17.74	32.81	17.14	2.05	81.16	16.82	2.29	29.42	15.88	2.56	27.55	15.20	2.87	25.53	14.48	3.23	
	67 (19.4)	31.23	21.80	29.80	21.20	2.04	28.29	20.57	2.28	26.69	19.93	2.55	24.96	19.24	2.86	23.10	18.49	3.22	
875	63 (17.2)†	29.95	20.97	27.82	20.37	2.03	26.22	19.74	2.27	24.73	19.09	2.54	23.11	18.39	2.86	21.35	17.84	3.22	
	62 (16.7)	28.38	25.74	27.09	25.12	2.03	25.75	24.46	2.26	24.33	23.73	2.54	22.91	22.91	2.86	21.51	21.51	3.22	
	57 (13.9)	27.40	27.40	26.39	26.39	2.02	25.32	25.32	2.26	24.15	24.15	2.54	22.88	22.88	2.86	21.48	21.48	3.22	
	72 (22.2)	35.08	18.63	33.43	18.02	2.08	31.71	17.39	2.32	29.89	16.74	2.59	27.95	16.05	2.90	25.86	15.92	3.25	
	67 (19.4)	31.88	23.23	30.37	22.61	2.06	28.80	21.98	2.30	27.13	21.31	2.58	25.35	20.60	2.89	23.43	19.84	3.24	
1000	63 (17.2)†	29.57	22.30	28.18	21.68	2.05	26.71	21.05	2.29	25.16	20.38	2.57	23.49	19.66	2.88	21.67	18.88	3.24	
	62 (16.7)	29.06	27.61	27.73	26.92	2.05	26.39	26.39	2.29	25.13	25.13	2.57	23.77	23.77	2.88	22.28	22.28	3.24	
	57 (13.9)	28.58	28.58	27.49	27.49	2.05	26.34	26.34	2.29	25.10	25.10	2.57	23.74	23.74	2.88	22.26	22.26	3.24	
	72 (22.2)	35.61	19.48	33.89	18.86	2.11	32.11	18.22	2.35	30.24	17.56	2.62	28.25	16.86	2.93	26.10	16.12	3.28	
	67 (19.4)	32.37	24.59	30.81	23.96	2.09	29.18	23.31	2.33	27.47	22.63	2.60	25.64	21.90	2.91	23.68	21.10	3.27	
1125	63 (17.2)†	30.05	23.56	28.60	22.94	2.08	27.09	22.29	2.32	25.49	21.60	2.59	23.78	20.86	2.91	21.93	20.05	3.27	
	62 (16.7)	29.68	29.51	28.45	28.45	2.08	27.22	27.22	2.32	25.91	25.91	2.60	24.49	24.49	2.91	22.92	22.92	3.27	
	57 (13.9)	29.56	29.56	28.41	28.41	2.08	27.19	27.19	2.32	25.88	25.88	2.59	24.46	24.46	2.91	22.89	22.89	3.27	

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)																	
		75 (23.9)			85 (29.4)			95 (65)			105 (40.6)			115 (46.1)			125 (51.7)		
		CFM	EWB ° F (° C)	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	Capacity MBtu/h		Total Sys-tem KW**	
Total	Sens†			Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†					
225BNA037 - A Outdoor Section With FX4DN(B-F)049L Indoor Section																			
	72 (22.2)	42.58	22.75	40.39	21.89	2.43	38.17	21.02	2.70	35.86	20.13	2.99	33.42	19.21	3.33	30.80	18.24	3.73	
	67 (19.4)	38.21	27.66	36.25	26.81	2.39	34.27	25.96	2.66	32.22	25.09	2.95	30.04	24.18	3.29	27.71	23.21	3.69	
1050	63 (17.2)†	35.13	26.47	33.34	25.64	2.36	31.53	24.81	2.63	29.66	23.95	2.92	27.68	23.06	3.27	25.63	22.14	3.67	
	62 (16.7)	34.44	32.48	32.73	31.63	2.35	31.00	30.75	2.62	29.26	29.80	2.92	27.57	27.57	3.27	25.85	25.85	3.67	
	57 (13.9)	33.22	33.22	31.88	31.88	2.35	30.52	30.52	2.62	29.08	29.08	2.92	27.53	27.53	3.26	25.81	25.81	3.67	
	72 (22.2)	43.63	23.99	41.32	23.10	2.47	38.97	22.21	2.74	36.54	21.29	3.03	33.99	20.35	3.37	31.26	19.85	3.77	
	67 (19.4)	39.14	29.58	37.08	26.70	2.42	35.00	27.83	2.69	32.84	26.93	2.99	30.58	25.99	3.33	29.01	22.44	3.73	
1200	63 (17.2)†	36.00	28.25	34.11	27.40	2.39	32.21	26.54	2.66	30.25	25.66	2.96	28.18	24.73	3.30	25.96	23.74	3.70	
	62 (16.7)	35.41	34.99	33.84	34.03	2.39	31.94	31.94	2.66	30.38	30.38	2.96	28.69	28.69	3.30	26.84	26.84	3.71	
	57 (13.9)	34.81	34.81	33.36	33.36	2.39	31.88	31.88	2.66	30.33	30.33	2.96	28.66	28.66	3.30	26.81	26.81	3.71	
	72 (22.2)	44.45	25.15	42.03	24.25	2.51	39.59	23.34	2.78	37.06	22.41	3.07	34.41	21.44	3.41	31.59	20.43	3.80	
	67 (19.4)	39.88	31.41	37.73	30.52	2.46	35.56	29.61	2.73	33.34	28.69	3.02	30.98	27.71	3.36	28.50	26.67	3.76	
1350	63 (17.2)†	36.68	29.96	34.71	29.07	2.43	32.75	28.19	2.70	30.72	27.28	2.99	28.58	26.32	3.33	26.31	25.28	3.74	
	62 (16.7)	36.31	36.11	34.67	34.67	2.43	33.09	33.09	2.70	31.42	31.42	3.00	29.63	29.63	3.34	27.67	27.67	3.75	
	57 (13.9)	36.17	36.17	34.61	34.61	2.43	33.04	33.04	2.70	31.38	31.38	3.00	29.59	29.59	3.34	27.64	27.64	3.75	

See note on pg. 16

# DETAILED COOLING CAPACITIES# CONTINUED

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)																	
		75 (23.9)			85 (29.4)			95 (65)			105 (40.6)			115 (46.1)			125 (51.7)		
		CFM	EWB ° F (° C)	Capacity Total	Capacity Sens#	Total Sys-tem KW**	Capacity Total	Capacity Sens#	Total Sys-tem KW**	Capacity Total	Capacity Sens#	Total Sys-tem KW**	Capacity Total	Capacity Sens#	Total Sys-tem KW**	Capacity Total	Capacity Sens#	Total Sys-tem KW**	
225BNA042 - A Outdoor Section With FX4DNF043 Indoor Section																			
	72 (22.2)	50.43	25.70	24.76	2.86	45.51	23.81	3.26	42.89	22.83	3.69	40.16	21.82	4.13	37.25	20.76	4.61		
	67 (19.4)	45.65	31.32	30.39	2.96	41.22	29.44	3.33	38.86	28.47	3.73	36.38	27.46	4.15	33.74	26.40	4.62		
1225	63 (17.2)H	42.23	30.12	29.20	3.01	38.16	28.26	3.36	35.97	27.30	3.74	33.68	26.29	4.16	31.23	25.22	4.61		
	62 (16.7)	41.36	36.82	35.88	3.02	37.42	34.91	3.37	35.33	33.87	3.75	33.17	32.70	4.16	31.09	31.09	4.61		
	57 (13.9)	39.50	39.50	38.01	3.04	36.44	36.44	3.38	34.77	34.77	3.75	32.98	32.98	4.16	31.05	31.05	4.61		
	72 (22.2)	51.53	26.95	25.98	2.88	46.35	25.01	3.29	43.62	24.01	3.72	40.76	22.98	4.17	37.05	21.90	4.65		
	67 (19.4)	46.66	33.31	32.35	2.98	42.00	31.37	3.36	39.54	30.39	3.76	36.95	29.35	4.19	34.21	28.25	4.66		
1400	63 (17.2)H	43.19	31.97	31.02	3.04	38.90	30.06	3.40	36.62	29.07	3.78	34.22	28.03	4.20	31.69	26.94	4.66		
	62 (16.7)	42.36	39.45	38.44	3.05	38.28	37.36	3.40	36.20	36.20	3.78	34.27	34.27	4.20	32.20	32.20	4.66		
	57 (13.9)	41.23	41.23	39.62	3.06	37.93	37.93	3.41	36.14	36.14	3.78	34.22	34.22	4.20	32.16	32.16	4.66		
	72 (22.2)	52.37	28.11	27.13	2.90	47.00	26.14	3.31	44.15	25.12	3.75	41.21	24.07	4.20	38.11	22.98	4.69		
	67 (19.4)	47.45	35.19	34.20	3.00	42.59	33.23	3.39	40.05	32.20	3.80	37.37	31.13	4.23	34.58	30.00	4.70		
1575	63 (17.2)H	43.93	33.72	32.75	3.07	39.46	31.77	3.43	37.10	30.75	3.82	34.64	29.68	4.24	32.04	28.54	4.70		
	62 (16.7)	43.23	41.84	40.82	3.07	39.23	39.23	3.43	37.32	37.32	3.82	35.29	35.29	4.24	33.12	33.12	4.70		
	57 (13.9)	42.69	42.69	40.98	3.08	39.18	39.18	3.44	37.28	37.28	3.82	35.25	35.25	4.24	33.08	33.08	4.70		

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)																	
		75 (23.9)			85 (29.4)			95 (65)			105 (40.6)			115 (46.1)			125 (51.7)		
		CFM	EWB ° F (° C)	Capacity Total	Capacity Sens#	Total Sys-tem KW**	Capacity Total	Capacity Sens#	Total Sys-tem KW**	Capacity Total	Capacity Sens#	Total Sys-tem KW**	Capacity Total	Capacity Sens#	Total Sys-tem KW**	Capacity Total	Capacity Sens#	Total Sys-tem KW**	
225BNA048 - B Outdoor Section With FX4DNF043 Indoor Section																			
	72 (22.2)	58.07	29.24	29.79	3.22	52.51	30.20	3.71	49.43	30.41	4.27	46.11	30.42	4.83	42.57	30.23	5.67		
	67 (19.4)	53.00	36.08	37.01	3.21	48.00	37.79	3.69	45.23	38.38	4.26	42.21	36.75	4.91	38.97	38.89	5.65		
1420	63 (17.2)H	49.29	34.76	35.64	3.19	44.69	36.36	3.68	42.13	36.89	4.24	39.35	37.20	4.89	36.34	37.26	5.64		
	62 (16.7)	48.39	42.71	43.99	3.19	43.97	45.08	3.68	41.55	45.90	4.24	39.34	45.23	4.89	36.61	36.61	5.64		
	57 (13.9)	46.84	46.84	45.13	3.19	43.29	43.29	3.67	41.27	41.27	4.24	39.04	39.04	4.89	36.56	36.56	5.64		
	72 (22.2)	59.07	30.58	31.18	3.25	53.24	31.63	3.74	50.06	31.90	4.31	46.62	31.95	4.96	42.99	31.81	5.70		
	67 (19.4)	53.94	38.22	39.25	3.24	48.73	40.13	3.73	45.85	40.80	4.29	42.74	41.25	4.95	39.40	41.46	5.69		
1600	63 (17.2)H	50.21	36.77	37.73	3.23	45.42	38.54	3.72	42.77	39.14	4.28	39.90	39.52	4.93	36.79	39.63	5.68		
	62 (16.7)	49.44	45.54	46.87	3.23	45.37	46.67	3.72	42.73	42.73	4.28	40.34	40.34	4.93	37.71	37.71	5.68		
	57 (13.9)	48.62	48.62	46.78	3.23	44.83	44.83	3.71	42.67	42.67	4.28	40.29	40.29	4.93	37.66	37.66	5.68		
	72 (22.2)	59.90	31.99	32.65	3.29	53.86	33.16	3.78	50.55	33.48	4.35	47.05	33.60	5.00	43.33	33.52	5.74		
	67 (19.4)	54.77	40.52	41.65	3.28	49.35	42.61	3.77	46.39	43.38	4.33	43.18	43.90	4.99	39.78	44.18	5.73		
1800	63 (17.2)H	51.02	38.91	39.95	3.28	46.06	40.85	3.75	43.32	41.54	4.32	40.36	41.97	4.97	37.19	42.14	5.72		
	62 (16.7)	50.90	47.27	48.40	3.26	46.31	46.31	3.75	44.01	44.01	4.32	41.48	41.48	4.98	38.71	38.71	5.73		
	57 (13.9)	50.29	50.29	48.34	3.26	46.25	46.25	3.75	43.96	43.96	4.32	41.43	41.43	4.98	38.67	38.67	5.73		

See note on pg. 16

# 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 Total	Capacity Sens†	Total Sys-tem KW**	Capacity Total	Capacity Sens†	Total Sys-tem KW**	Capacity Total	Capacity Sens†	Total Sys-tem KW**	Capacity Total	Capacity Sens†	Total Sys-tem KW**	Capacity Total	Capacity Sens†	Total Sys-tem KW**	
<b>225BNA060 – A Outdoor Section With FX4DNF061 Indoor Section</b>																			
	72 (22.2)	69.17	35.96	34.68	3.81	65.83	33.37	4.63	58.60	31.99	5.12	54.63	30.54	5.68	50.41	29.02	6.30		
	67 (19.4)	63.19	44.51	43.24	3.74	60.19	41.92	4.56	53.63	40.55	5.05	50.02	39.09	5.61	46.18	37.54	6.25		
<b>1750</b>	63 (17.2)†	58.86	42.93	41.67	3.69	56.08	40.35	4.51	50.02	38.98	5.00	46.68	37.53	5.56	43.12	35.99	6.21		
	62 (16.7)	57.71	52.83	51.53	3.68	55.03	50.14	4.50	49.23	48.59	4.99	46.32	46.32	5.56	43.40	43.40	6.21		
	57 (13.9)	55.78	55.78	53.67	3.66	53.67	51.40	4.49	48.93	48.93	4.99	46.26	46.26	5.56	43.34	43.34	6.21		
	72 (22.2)	70.36	37.71	36.42	3.89	66.90	35.07	4.71	59.35	33.67	5.20	55.24	32.20	5.75	50.87	30.86	6.38		
	67 (19.4)	64.35	47.38	46.09	3.82	61.20	44.75	4.64	54.36	43.33	5.13	50.63	41.84	5.69	46.66	40.25	6.32		
<b>2000</b>	63 (17.2)†	59.99	45.61	44.32	3.77	57.09	42.98	4.59	50.76	41.57	5.08	47.31	40.08	5.64	43.61	38.48	6.28		
	62 (16.7)	56.97	56.64	55.19	3.76	53.39	53.39	4.58	50.73	50.73	5.08	47.86	47.86	5.65	44.74	44.74	6.30		
	57 (13.9)	56.06	58.06	55.76	3.75	53.31	53.31	4.58	50.67	50.67	5.08	47.80	47.80	5.65	44.69	44.69	6.29		
	72 (22.2)	71.26	39.37	38.06	3.97	67.65	36.70	4.79	59.89	35.28	5.27	55.65	33.79	5.82	51.19	32.24	6.45		
	67 (19.4)	65.22	50.14	48.81	3.89	61.95	47.43	4.71	54.89	45.99	5.20	51.06	44.45	5.76	47.00	42.79	6.39		
<b>2250</b>	63 (17.2)†	60.84	48.17	46.84	3.84	57.83	46.84	4.66	51.31	44.03	5.15	47.75	42.48	5.71	43.99	40.82	6.35		
	62 (16.7)	60.05	60.05	57.56	3.84	57.56	54.95	4.67	52.14	52.14	5.16	49.11	49.11	5.73	45.81	45.81	6.38		
	57 (13.9)	59.92	59.92	57.48	3.84	57.48	54.88	4.67	52.08	52.08	5.16	49.05	49.05	5.73	45.76	45.76	6.38		

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 Total	Capacity Sens†	Total Sys-tem KW**	Capacity Total	Capacity Sens†	Total Sys-tem KW**	Capacity Total	Capacity Sens†	Total Sys-tem KW**	Capacity Total	Capacity Sens†	Total Sys-tem KW**	Capacity Total	Capacity Sens†	Total Sys-tem KW**	
<b>225BNA061 – A Outdoor Section With FX4DN(B)061 Indoor Section</b>																			
	72 (22.2)	67.41	34.75	33.45	3.24	63.92	32.09	4.25	58.21	30.64	4.87	51.85	29.08	5.58	47.29	27.48	6.39		
	67 (19.4)	61.41	42.78	41.51	3.23	58.31	40.18	4.23	51.44	38.76	4.85	47.09	37.03	5.55	43.40	35.59	6.38		
<b>1600</b>	63 (17.2)†	57.06	41.22	39.98	3.21	54.24	38.86	4.22	47.58	37.09	4.83	44.36	35.73	5.55	40.59	34.13	6.37		
	62 (16.7)	56.01	50.59	49.32	3.21	53.30	47.94	4.22	47.07	46.25	4.83	44.15	44.15	5.55	41.01	41.01	6.38		
	57 (13.9)	54.03	54.03	51.89	3.20	51.89	49.54	4.21	46.96	46.96	4.84	44.10	44.10	5.55	40.97	40.97	6.38		
	72 (22.2)	68.27	35.89	34.58	3.27	64.89	33.17	4.28	56.74	31.73	4.90	52.25	30.15	5.61	47.62	28.54	6.43		
	67 (19.4)	62.25	44.63	43.34	3.26	59.04	41.99	4.27	51.94	40.54	4.89	47.24	38.68	5.59	43.73	37.32	6.42		
<b>1750</b>	63 (17.2)†	57.89	42.95	41.68	3.25	54.95	40.35	4.25	48.43	38.90	4.88	44.79	37.36	5.59	40.91	35.72	6.41		
	62 (16.7)	56.91	53.05	51.71	3.24	54.11	50.18	4.25	48.17	48.17	4.88	45.13	45.13	5.59	41.87	41.87	6.42		
	57 (13.9)	55.57	55.57	53.30	3.24	53.30	50.83	4.25	48.05	48.05	4.87	45.10	45.10	5.59	41.82	41.82	6.42		
	72 (22.2)	69.42	37.71	36.37	3.33	65.65	34.96	4.34	57.41	33.51	4.96	52.76	31.87	5.68	48.01	30.25	6.49		
	67 (19.4)	63.34	47.60	46.28	3.32	59.99	44.88	4.33	52.60	43.39	4.95	48.44	41.76	5.66	44.15	40.05	6.49		
<b>2000</b>	63 (17.2)†	58.94	45.70	44.41	3.30	55.88	44.41	4.31	49.13	41.55	4.94	45.33	39.94	5.65	41.36	38.22	6.48		
	62 (16.7)	58.21	56.77	55.41	3.30	55.41	52.72	4.32	49.80	49.80	4.94	46.54	46.54	5.66	43.04	43.04	6.48		
	57 (13.9)	57.76	57.76	55.32	3.30	55.32	52.66	4.32	49.72	49.72	4.94	46.48	46.48	5.66	43.00	43.00	6.48		

† 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 Btu/h (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree below 80°F (27°C), or add 835 Btu/h (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 210/240-2010. 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)																								
		-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 Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	
65 (18.3)	CFM	525	5.13	4.72	1.02	7.34	6.75	1.07	9.76	8.90	1.12	12.54	11.13	1.18	15.15	13.78	1.24	18.08	18.08	1.32	21.28	21.28	1.41	24.15	24.15	1.48
		600	5.22	4.80	1.02	7.46	6.85	1.07	9.91	9.03	1.11	12.68	11.27	1.17	15.35	13.97	1.22	18.35	18.35	1.29	21.43	21.43	1.35	24.11	24.11	1.42
		675	5.30	4.87	1.02	7.55	6.94	1.07	10.04	9.15	1.11	12.80	11.37	1.16	15.51	14.12	1.20	18.56	18.56	1.27	21.37	21.37	1.31	23.93	23.93	1.37
70 (21.1)	CFM	525	4.84	4.45	1.07	7.04	6.47	1.12	9.43	8.60	1.18	12.28	10.90	1.24	14.86	13.52	1.31	17.74	17.74	1.38	20.89	20.89	1.48	23.84	23.84	1.55
		600	4.92	4.53	1.07	7.15	6.57	1.12	9.58	8.74	1.17	12.44	11.04	1.23	15.05	13.70	1.28	18.00	18.00	1.35	21.15	21.15	1.42	23.87	23.87	1.49
		675	4.99	4.59	1.07	7.25	6.66	1.12	9.71	8.85	1.16	12.56	11.16	1.21	15.21	13.84	1.26	18.21	18.21	1.33	21.20	21.20	1.39	23.75	23.75	1.45
75 (23.9)	CFM	525	4.50	4.14	1.11	6.70	6.16	1.17	9.09	8.29	1.23	11.98	10.64	1.30	14.56	13.25	1.37	17.39	17.39	1.45	20.50	20.50	1.55	23.52	23.52	1.63
		600	4.59	4.22	1.12	6.82	6.27	1.17	9.24	8.42	1.22	12.15	10.79	1.29	14.75	13.43	1.34	17.65	17.65	1.42	20.82	20.82	1.50	23.58	23.58	1.57
		675	4.66	4.29	1.12	6.92	6.36	1.17	9.36	8.54	1.22	12.29	10.91	1.27	14.91	13.57	1.33	17.86	17.86	1.39	20.95	20.95	1.46	23.53	23.53	1.52

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)																								
		-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 Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	
65 (18.3)	CFM	700	8.38	7.71	1.36	11.07	10.18	1.44	14.28	13.02	1.52	17.14	15.23	1.57	20.39	18.56	1.63	24.08	24.08	1.72	28.29	28.29	1.86	32.83	32.83	2.02
		800	8.52	7.83	1.36	11.24	10.33	1.44	14.45	13.17	1.50	17.34	15.40	1.54	20.64	18.79	1.60	24.41	24.41	1.68	28.68	28.68	1.81	32.90	32.90	1.94
		900	8.64	7.95	1.37	11.39	10.47	1.44	14.59	13.30	1.49	17.50	15.54	1.53	20.85	18.98	1.58	24.67	24.67	1.66	28.96	28.96	1.77	32.79	32.79	1.88
70 (21.1)	CFM	700	7.98	7.35	1.42	10.69	9.83	1.51	13.97	12.74	1.59	16.84	14.96	1.65	20.05	18.24	1.71	23.68	23.68	1.81	27.81	27.81	1.95	32.46	32.46	2.13
		800	8.12	7.47	1.43	10.86	9.98	1.51	14.15	12.90	1.58	17.04	15.13	1.63	20.30	18.47	1.68	24.00	24.00	1.74	28.21	28.21	1.90	32.56	32.56	2.04
		900	8.24	7.58	1.43	11.00	10.11	1.51	14.30	13.04	1.57	17.21	15.28	1.61	20.50	18.66	1.66	24.26	24.26	1.74	28.53	28.53	1.87	32.53	32.53	1.98
75 (23.9)	CFM	700	7.57	6.97	1.49	10.29	9.46	1.59	13.23	12.06	1.66	16.55	14.70	1.73	19.70	17.93	1.80	23.28	23.28	1.90	27.36	27.36	2.04	31.99	31.99	2.24
		800	7.71	7.09	1.50	10.46	9.61	1.58	13.44	12.26	1.65	16.74	14.87	1.71	19.94	18.15	1.77	23.59	23.59	1.86	27.76	27.76	1.99	32.27	32.27	2.15
		900	7.82	7.19	1.50	10.60	9.74	1.58	13.66	12.45	1.64	16.91	15.02	1.70	20.15	18.33	1.75	23.85	23.85	1.83	28.05	28.05	1.96	32.25	32.25	2.08

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)																								
		-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 Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	Capacity MBtuh	Total Sys. KWt	Integ*	
65 (18.3)	CFM	875	9.76	8.98	1.59	13.14	12.08	1.66	16.80	15.32	1.73	21.11	18.75	1.83	25.07	22.82	1.91	29.50	29.50	2.02	34.45	34.45	2.14	39.00	39.00	2.24
		1000	9.94	9.15	1.60	13.35	12.27	1.66	17.06	15.56	1.73	21.33	18.94	1.81	25.37	23.08	1.89	29.87	29.87	1.98	34.61	34.61	2.07	38.97	38.97	2.17
		1125	10.10	9.29	1.61	13.53	12.44	1.67	17.28	15.75	1.73	21.54	19.13	1.80	25.61	23.31	1.87	30.18	30.18	2.03	34.65	34.65	2.03	38.83	38.83	2.13
70 (21.1)	CFM	875	9.22	8.49	1.66	12.63	11.61	1.74	16.30	14.86	1.82	20.75	18.43	1.92	24.68	22.46	2.01	29.04	29.04	2.12	33.93	33.93	2.25	38.55	38.55	2.35
		1000	9.40	8.65	1.67	12.84	11.80	1.74	16.55	15.09	1.81	20.99	18.64	1.90	24.96	22.71	1.98	29.40	29.40	2.08	34.27	34.27	2.18	38.59	38.59	2.28
		1125	9.56	8.80	1.69	13.03	11.97	1.75	16.77	15.29	1.81	21.18	18.81	1.89	25.20	22.93	1.97	29.70	29.70	2.06	34.31	34.31	2.14	38.50	38.50	2.23
75 (23.9)	CFM	875	8.65	7.98	1.74	12.09	11.11	1.82	15.76	14.37	1.90	20.33	18.05	2.01	24.28	22.09	2.11	28.57	28.57	2.22	33.39	33.39	2.36	38.09	38.09	2.46
		1000	8.83	8.12	1.75	12.30	11.30	1.82	16.02	14.60	1.90	20.59	18.29	2.00	24.56	22.35	2.08	28.83	28.83	2.18	33.82	33.82	2.29	38.19	38.19	2.39
		1125	8.98	8.26	1.76	12.48	11.47	1.83	16.23	14.80	1.90	20.81	18.48	1.99	24.80	22.56	2.06	29.22	29.22	2.16	33.98	33.98	2.25	38.16	38.16	2.34

See note on pg. 19

# HEAT PUMP HEATING PERFORMANCE

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)																							
		-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 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†	Capacity MBtuh		Total Sys. KW†
65 (18.3)	CFM	Total	12.02	11.06	1.86	16.26	14.95	1.99	20.98	19.12	2.10	25.06	22.25	2.18	29.70	27.03	2.27	35.13	2.40	41.72	41.72	2.57	49.55	49.55	2.76
		Integ*	12.24	11.26	1.87	16.51	15.17	1.98	21.20	19.33	2.09	25.34	22.51	2.16	30.05	27.35	2.24	35.66	2.36	42.37	42.37	2.50	50.02	50.02	2.69
		Total	12.42	11.43	1.88	16.74	15.38	1.99	21.41	19.52	2.15	30.35	27.62	2.22	35.96	35.96	2.33	42.75	2.46	50.20	42.75	2.46	50.20	50.20	2.65
70 (21.1)	CFM	Total	11.39	10.48	1.95	15.69	14.42	2.08	20.56	18.74	2.20	24.66	21.91	2.29	29.23	26.60	2.38	34.55	2.51	40.96	40.96	2.68	48.73	48.73	2.87
		Integ*	11.59	10.67	1.96	15.94	14.64	2.08	20.80	18.96	2.19	24.92	22.13	2.27	29.56	26.90	2.35	35.00	2.47	41.59	41.59	2.62	49.25	49.25	2.80
		Total	11.78	10.84	1.97	16.15	14.84	2.08	21.01	19.15	2.19	25.14	22.33	2.26	29.85	27.16	2.33	35.36	2.44	42.06	42.06	2.57	49.49	49.49	2.76
75 (23.9)	CFM	Total	10.74	9.88	2.03	15.11	13.89	2.17	19.47	17.75	2.28	24.28	21.56	2.40	28.76	26.17	2.50	33.99	2.62	40.52	40.52	2.81	47.92	47.92	3.00
		Integ*	10.95	10.08	2.04	15.35	14.11	2.17	19.83	18.08	2.28	24.51	21.77	2.38	29.09	26.47	2.46	34.42	2.58	41.14	41.14	2.74	48.46	48.46	2.92
		Total	11.12	10.23	2.06	15.56	14.30	2.18	20.57	18.75	2.29	24.73	21.97	2.37	29.36	26.72	2.45	34.77	2.55	41.32	41.32	2.69	48.74	48.74	2.88

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)																							
		-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 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†	Capacity MBtuh		Total Sys. KW†
65 (18.3)	CFM	Total	15.59	14.35	2.29	20.20	18.56	2.45	25.92	23.63	2.65	30.84	27.39	2.83	36.17	32.92	3.00	42.10	3.16	48.79	48.79	3.32	56.67	56.67	3.45
		Integ*	15.85	14.58	2.30	20.53	18.87	2.46	26.26	23.95	2.65	31.19	27.70	2.82	36.63	33.33	2.97	42.66	3.12	49.49	49.49	3.26	57.34	57.34	3.36
		Total	16.10	14.81	2.31	20.82	19.13	2.47	26.55	24.21	2.66	31.50	27.98	2.82	37.01	33.68	2.96	43.12	3.10	50.13	50.13	3.21	57.72	57.72	3.30
70 (21.1)	CFM	Total	14.91	13.71	2.42	19.56	17.97	2.58	24.56	22.39	2.75	30.36	26.97	2.95	35.61	32.40	3.12	41.46	3.29	48.00	48.00	3.46	55.78	55.78	3.61
		Integ*	15.19	13.98	2.43	19.88	18.27	2.58	24.93	22.73	2.74	30.71	27.27	2.94	36.05	32.81	3.09	42.00	3.25	48.69	48.69	3.40	56.54	56.54	3.51
		Total	15.44	14.20	2.45	20.17	18.54	2.59	25.36	23.13	2.75	31.04	27.56	2.93	36.43	33.15	3.08	42.45	3.22	49.27	49.27	3.37	56.99	56.99	3.45
75 (23.9)	CFM	Total	14.21	13.08	2.57	18.88	17.35	2.71	23.85	21.74	2.87	29.87	26.53	3.08	35.07	31.91	3.25	40.82	3.43	47.26	47.26	3.61	54.86	54.86	3.79
		Integ*	14.48	13.32	2.58	19.21	17.65	2.71	24.24	22.10	2.87	30.24	26.86	3.06	35.49	32.30	3.22	41.35	3.38	47.91	47.91	3.55	55.73	55.73	3.68
		Total	14.73	13.55	2.59	19.49	17.91	2.72	24.58	22.41	2.87	30.53	27.11	3.06	35.86	32.63	3.21	41.79	3.36	48.46	48.46	3.51	56.22	56.22	3.62

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)																							
		-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 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†	Capacity MBtuh		Total Sys. KW†
65 (18.3)	CFM	Total	20.76	19.10	2.81	25.15	23.11	2.91	29.87	27.23	3.02	35.07	31.15	3.13	40.98	37.30	3.25	46.78	3.38	53.42	53.42	3.52	60.31	60.31	3.67
		Integ*	20.83	19.16	2.81	25.20	23.16	2.90	29.90	27.27	3.00	35.27	31.33	3.10	40.86	37.18	3.20	47.27	3.31	53.63	53.63	3.43	60.65	60.65	3.56
		Total	20.91	19.24	2.82	25.26	23.22	2.89	29.96	27.32	2.98	35.30	31.35	3.07	40.88	37.20	3.17	47.07	3.26	53.95	53.95	3.37	61.12	61.12	3.48
70 (21.1)	CFM	Total	20.52	18.88	2.95	24.93	22.91	3.05	29.60	26.99	3.17	34.74	30.86	3.29	40.32	36.69	3.41	46.50	3.55	52.76	52.76	3.69	59.42	59.42	3.84
		Integ*	20.58	18.94	2.94	24.98	22.95	3.04	29.64	27.02	3.14	34.79	30.90	3.25	40.60	36.95	3.36	46.40	3.48	53.01	53.01	3.60	59.87	59.87	3.73
		Total	20.66	19.01	2.95	25.04	23.01	3.03	29.69	27.07	3.13	34.84	30.94	3.22	40.67	37.01	3.32	46.55	3.42	53.27	53.27	3.53	60.29	60.29	3.64
75 (23.9)	CFM	Total	20.29	18.66	3.08	24.72	22.71	3.20	29.34	26.75	3.32	34.42	30.57	3.45	39.98	36.38	3.58	46.00	3.72	52.12	52.12	3.87	58.62	58.62	4.02
		Integ*	20.35	18.72	3.09	24.76	22.76	3.18	29.38	26.78	3.29	34.46	30.61	3.41	40.05	36.44	3.52	45.96	3.64	52.36	52.36	3.77	59.04	59.04	3.91
		Total	20.43	18.79	3.09	24.82	22.81	3.18	29.43	26.83	3.28	34.51	30.65	3.38	40.25	36.63	3.48	46.31	3.59	52.60	52.60	3.70	59.45	59.45	3.82

See note on pg. 19

# HEAT PUMP HEATING PERFORMANCE

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)																								
		-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 Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	
EDB ° F (° C)	CFM	1750	20.70	19.04	3.28	27.02	24.83	3.42	33.72	30.75	3.56	41.23	36.62	3.72	49.82	45.33	3.93	57.86	57.86	4.12	67.41	67.41	4.34	78.26	78.26	4.58
		2000	21.11	19.43	3.32	27.50	25.28	3.45	34.30	31.27	3.58	42.09	37.39	3.72	50.38	45.85	3.90	58.60	58.60	4.07	68.57	68.57	4.25	79.11	79.11	4.49
70 (21.1)	CFM	2250	21.49	19.77	3.37	27.92	25.66	3.49	34.77	31.71	3.60	43.47	38.61	3.77	50.91	46.33	3.90	59.23	59.23	4.06	69.29	69.29	4.21	79.67	79.67	4.43
		1750	19.65	18.07	3.42	26.01	23.91	3.57	32.79	29.90	3.72	40.18	35.69	3.88	49.10	44.68	4.11	57.00	57.00	4.30	66.31	66.31	4.55	77.15	77.15	4.78
75 (23.9)	CFM	2000	20.06	18.45	3.46	26.49	24.34	3.59	33.34	30.39	3.73	40.83	36.26	3.88	49.67	45.20	4.08	57.72	57.72	4.26	67.32	67.32	4.46	78.01	78.01	4.68
		2250	20.43	18.80	3.50	26.91	24.73	3.63	33.81	30.82	3.76	41.39	36.76	3.89	50.19	45.68	4.08	58.34	58.34	4.24	68.30	68.30	4.40	78.62	78.62	4.63
75 (23.9)	CFM	1750	18.54	17.06	3.56	24.96	22.94	3.72	31.79	28.98	3.88	39.14	34.76	4.06	48.41	44.05	4.30	56.16	56.16	4.50	65.21	65.21	4.76	76.04	76.04	4.99
		2000	18.95	17.44	3.60	25.43	23.37	3.75	32.33	29.47	3.90	39.76	35.31	4.05	49.00	44.59	4.27	56.88	56.88	4.45	66.27	66.27	4.66	76.93	76.93	4.89
2250	19.32	17.77	3.65	25.85	23.76	3.79	32.79	29.90	3.92	40.31	35.80	4.06	49.45	45.00	4.26	57.47	57.47	4.43	67.20	67.20	4.61	77.54	77.54	4.83		

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)																								
		-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 Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	Capacity MBtuh	Total Sys. KW†	Integ*	
EDB ° F (° C)	CFM	1600	22.25	20.47	3.02	28.49	26.18	3.20	34.05	31.05	3.37	40.36	35.84	3.55	47.55	43.27	3.77	55.86	55.86	4.04	65.60	65.60	4.39	76.29	76.29	4.72
		1750	22.47	20.67	3.02	28.69	26.36	3.20	34.27	31.24	3.35	40.64	36.09	3.53	47.93	43.61	3.74	56.31	56.31	3.99	66.14	66.14	4.33	77.38	77.38	4.70
65 (18.3)	CFM	2000	22.78	20.96	3.04	28.96	26.61	3.20	34.61	31.55	3.35	41.22	36.61	3.51	48.45	44.09	3.70	56.96	56.96	3.95	66.88	66.88	4.29	77.72	77.72	4.62
		1600	21.64	19.91	3.15	27.97	25.70	3.35	33.60	30.64	3.53	39.81	35.36	3.72	46.86	42.64	3.94	55.00	55.00	4.22	64.59	64.59	4.58	75.28	75.28	4.96
70 (21.1)	CFM	1750	21.85	20.10	3.16	28.24	25.95	3.35	33.81	30.83	3.51	40.09	35.61	3.69	47.23	42.98	3.91	55.47	55.47	4.17	65.15	65.15	4.52	75.93	75.93	4.87
		2000	22.16	20.39	3.18	28.55	26.24	3.36	34.16	31.15	3.50	40.50	35.97	3.67	47.75	43.45	3.87	56.10	56.10	4.13	65.86	65.86	4.47	76.69	76.69	4.82
75 (23.9)	CFM	1600	20.96	19.28	3.30	26.57	24.42	3.48	33.14	30.21	3.70	39.27	34.88	3.90	46.21	42.05	4.13	54.16	54.16	4.41	63.56	63.56	4.78	74.40	74.40	5.24
		1750	21.17	19.48	3.31	26.82	24.65	3.48	33.38	30.43	3.68	39.55	35.12	3.87	46.56	42.37	4.09	54.62	54.62	4.36	64.13	64.13	4.72	74.88	74.88	5.11
2000	21.49	19.77	3.33	27.21	25.00	3.49	33.69	30.72	3.67	39.95	35.48	3.85	47.05	42.82	4.05	55.25	55.25	4.31	64.85	64.85	4.67	75.64	75.64	5.03		

**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  
225BNA  
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.
- 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.

## SYSTEM DESIGN SUMMARY

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01-in. wc.
2. Minimum outdoor operating air temperature without low-ambient operation accessory is 55°F (12.8°C).
3. Maximum outdoor operating air temperature for cooling mode is 125°F (51.7°C).
4. Minimum outdoor operating air temperature for heating mode is -10°F (-23°C).
5. Maximum outdoor operating air temperature for heating mode is 66°F (18.9°C).
6. For reliable operation, unit should be level in all horizontal planes.
7. For interconnecting refrigerant tube lengths greater than 80 ft (23.4 m) and/or elevation differences between indoor and outdoor units greater than 20 ft (6.1 m), consult Residential Piping and Longline Guideline and Service Manual available from equipment distributor.
8. If any refrigerant tubing is buried, provide a 6 in. (152.4 mm) vertical rise to the valve connections at the unit. Refrigerant tubing lengths up to 36 in. (914.4 mm) may be buried without further consideration. Do not bury refrigerant lines longer than 36 in. (914.4 mm).
9. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
10. Do not apply capillary tube indoor coils to these units.
11. Factory-supplied filter drier must be installed.





