

**PH13NB  
PH13PB**

**13 SEER Split System Heat Pump  
with R-410A Refrigerant  
1.5 To 5 Nominal Tons**

## Product Data



**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.

### **FEATURES AND BENEFITS**

#### **AVAILABLE SIZES:**

Nominal sizes are available from 018 through 060 to meet the needs of residential and light commercial applications.

#### **PERFORMANCE:**

All models are verified for efficiency and capacity by AHRI.

#### **ELECTRICAL RANGE:**

All units are offered in 208/230-1, single phase, with 208/230-3 three phase offered in models 048 - 060.

#### **FAN MOTOR:**

The totally enclosed fan motor provides greater reliability under adverse conditions and dependable performance for many years. The permanent split capacitor type motor was designed for optimum efficiency. The motor was then qualified under extreme conditions to help ensure a long, reliable life.

#### **CABINET:**

A weather protective cabinet of prepainted steel is protected underneath by a galvanized coating and treated with a layer of zinc phosphate for a finish that will last for many years. All screws on cabinet exterior are coated for a long-lasting, rust-resistant, quality appearance.

#### **UNIT DESIGN:**

The copper tube, enhanced sine wave, aluminum fin coil is designed for optimum heat transfer. Vertical air discharge carries sound and condenser air up and away from adjacent patio areas and foliage. The base pan is designed for easy removal of water, dirt, and leaves.

#### **DEFROST CONTROL BOARD:**

Incorporates defrost relay, defrost timer, and low voltage terminations. The defrost control is a time/temperature initiation/termination control which includes three field-selectable time periods of 30, 60 and 90 minutes.

#### **COMPRESSOR:**

Each compressor is protected with internal temperature- and current-sensitive overloads. An internal pressure relief valve provides high pressure protection to the refrigerant system. For improved serviceability, all models are equipped with a compressor terminal plug.

#### **SERVICE VALVES:**

Both service valves are brass, front seating type with sweat connections. Valves are externally located so refrigerant tube connections can be made quickly and easily. Each valve has a service port for ease of checking operating refrigerant pressures.

#### **SERVICEABILITY:**

One access panel provides access to electrical controls. Removal of top gives access to fan motor, compressor, and condenser coil.

# SPECIFICATIONS

UNIT SIZE – SERIES (VOLTAGE)	018–A (N)	019–A (N)	024–A (N)	025–A (N)	030–A (N)	031–A (N)	036–B (N)	037–A (N)
<b>ELECTRICAL</b>								
Unit Volts—Phase—Hertz	208/230—1—60							
Operating Voltage Range	197—253							
Unit Ampacity for Wire Sizing (MCA)	11.8	11.8	16.8	17.7	21.1	20.8	20.6	20.4
Min Wire Size (60°C/75°C Copper) (AWG)*	14	14	14	14	12	12	12	12
Maximum Length (60°C/75°C) (Ft)†	66/62	66/62	46/44	46/44	57/54	57/54	60/57	60/57
Max Branch Circuit Fuse Size (Amps)‡	20	20	25	25	35	30	35	35
Compressor Rated Load Amps	9.0	9.0	12.8	13.5	16.0	16.0	15.6	15.4
Locked Rotor Amps	48.0	48.0	58.3	58.3	77.0	77.0	70.0	70.0
Fan Motor HP and RPM	1/12 & 1100	1/12 & 1100	1/10 & 1100	1/10 & 1100	1/5 & 1100	1/10 & 1100	1/5 & 1100	1/5 & 1100
Full Load Amps	0.5	0.5	0.77	0.75	1.1	0.75	1.1	1.1
<b>COMPRESSOR AND REFRIGERANT</b>								
Compressor Type	Scroll							
Refrigerant Charge lb (kg)	4.00 (1.81)	4.58 (2.08)	5.11 (2.33)	6.75 (3.06)	5.83 (2.64)	7.5 (3.40)	6.06 (2.75)	7.06 (3.45)
<b>REFRIGERANT TUBES</b>								
Rated Vapor***	5/8	5/8	3/4	5/8	3/4	3/4	7/8	3/4
Liquid	3/8							
<b>OUTDOOR COIL AND FAN</b>								
Coil Face Area (Sq Ft)	9.8	12.6	11.2	15.1	15.0	21.6	17.2	21.6
Rated Airflow (CFM)	1800	1700	2100	2614	3000	2614	3000	3365
<b>OPTIONAL EQUIPMENT</b>								
Time–Delay Relay	KAATD0101TDR							
Outdoor Thermostat	KHAOT0301FST							
Secondary Outdoor Thermostat	KHAOT0201SEC							
Cycle Protector	KSACY0101AAA							
Crankcase Heater	KAACH1401AAA							
Compressor Start Assist—Capacitor/Relay	KSAHS1501AAA							
Sound Hood	KSASH1801COP						KSASH0601COP	
TXV Kits (Hard Shutoff)	KSATX0201PUR						KSATX0301PUR	
Low–Ambient Pressure Switch††	KSALA0301410							
MotorMaster® Low–Ambient Controller‡‡	KSALA0601AAA							
Ball Bearing Fan Motor	HC32GE234		HC34GE239			HC40GE226		
Liquid Line Filter Drier (RCD)	KH43LZ073							
Evaporator Freeze Thermostat**	KAAF0101AAA							
Isolation Relay**	KHAIR0101AAA							
Liquid Solenoid Valve	KHALS0401LLS							

N/A – Not applicable in this application.

\* The ampacity of non–metallic (NM) sheathed cable shall be that of 60°C (140°F) conductors per NEC 2011, Article 336–26. If wire used is other than specified in chart, refer to applicable tables available in 2011 NEC. Copper wire must be used from disconnect to unit.

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

‡ Units may use fuses or circuit breakers (U.S. only).

\*\* Consult low–ambient control Installation Instructions for application.

†† Isolation relay required.

‡‡ Required accessories include fan motor with ball bearings, crankcase heater, compressor start assist, evaporator freeze stat, isolation relay, hard shut–off TXV or liquid line solenoid valve.

\*\*\* 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.

# SPECIFICATIONS CONTINUED

UNIT SIZE – SERIES (VOLTAGE)	042 – B (N)	043 – A (N)	048 – B (N) 048 – A (P)	049 – B (N)	060 – B (N) 060 – A (P)	061 – A (N)
<b>ELECTRICAL</b>						
Unit Volts—Phase—Hertz	208/230—1—60					
Operating Voltage Range	197—253					
Unit Ampacity for Wire Sizing (MCA)	23.9	25.7	28.7		34.8	34.1
Min Wire Size (60°C/75°C Copper) (AWG)*	12	12	10		8	8
Maximum Length (60°C/75°C) (Ft)†	52/50	52/50	69/66		89/84	89/84
Max Branch Circuit Fuse Size (Amps)‡	40	40	45		50	50
Compressor Rated Load Amps	18.0	19.9	21.8		26.7	26.3
Locked Rotor Amps	96.0	109.0	99.0		120.0	134.0
Fan Motor HP and RPM	1/4 & 1100	1/5 & 1100	1/4 & 1100		1/4 & 1100	1/4 & 1100
Full Load Amps	1.4	0.75	1.4		1.4	1.2
<b>COMPRESSOR AND REFRIGERANT</b>						
Compressor Type	Scroll					
Refrigerant Charge lb (kg)	6.75 (3.06)	7.93 (3.60)	7.72 (3.50)		9.40 (4.26)	11.0 (4.99)
<b>REFRIGERANT TUBES</b>						
Rated Vapor***	7/8			1 – 1/8		
Liquid	3/8					
<b>OUTDOOR COIL AND FAN</b>						
Coil Face Area (Sq Ft)	17.2	15.1	15.0		17.2	17.6
Rated Airflow (CFM)	3400	3000	3400		3400	4048
<b>OPTIONAL EQUIPMENT</b>						
Time – Delay Relay	KAATD0101TDR					
Outdoor Thermostat	KHAOT0301FST					
Secondary Outdoor Thermostat	KHAOT0201SEC					
Cycle Protector	KSACY0101AAA					
Crankcase Heater	KAACH1201AAA					
Compressor Start Assist—Capacitor/Relay	KSAHS1501AAA					KSAHS1701AAA
Sound Hood	KSASH0601COP	KSASH2101COP				
TXV Kits (Hard Shutoff)	KSATX0301PUR	KSATX0401PUR			KSATX0501PUR	
Low – Ambient Pressure Switch††	KSALA0301410					
MotorMaster® Low – Ambient Controller‡‡	KSALA0601AAA					
Ball Bearing Fan Motor	HC40GE226					HC40GE228
Liquid Line Filter Drier (RCD)	KH43LZ073		KH43LZ073	KH43LZ072	KH43LZ072	
Evaporator Freeze Thermostat**	KAAFT0101AAA					
Isolation Relay**	KHAIR0101AAA					
Liquid Solenoid Valve	KHALS0401LLS					

N/A – Not applicable in this application.

\* The ampacity of non-metallic (NM) sheathed cable shall be that of 60° C (140° F) conductors per NEC 2011, Article 336–26. If wire used is other than specified in chart, refer to applicable tables available in 2011 NEC. Copper wire must be used from disconnect to unit.

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‡ Units may use fuses or circuit breakers (U.S. only).

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†† Isolation relay required.

‡‡ Required accessories include fan motor with ball bearings, crankcase heater, compressor start assist, evaporator freeze stat, isolation relay, hard shut-off TXV or liquid line solenoid valve.

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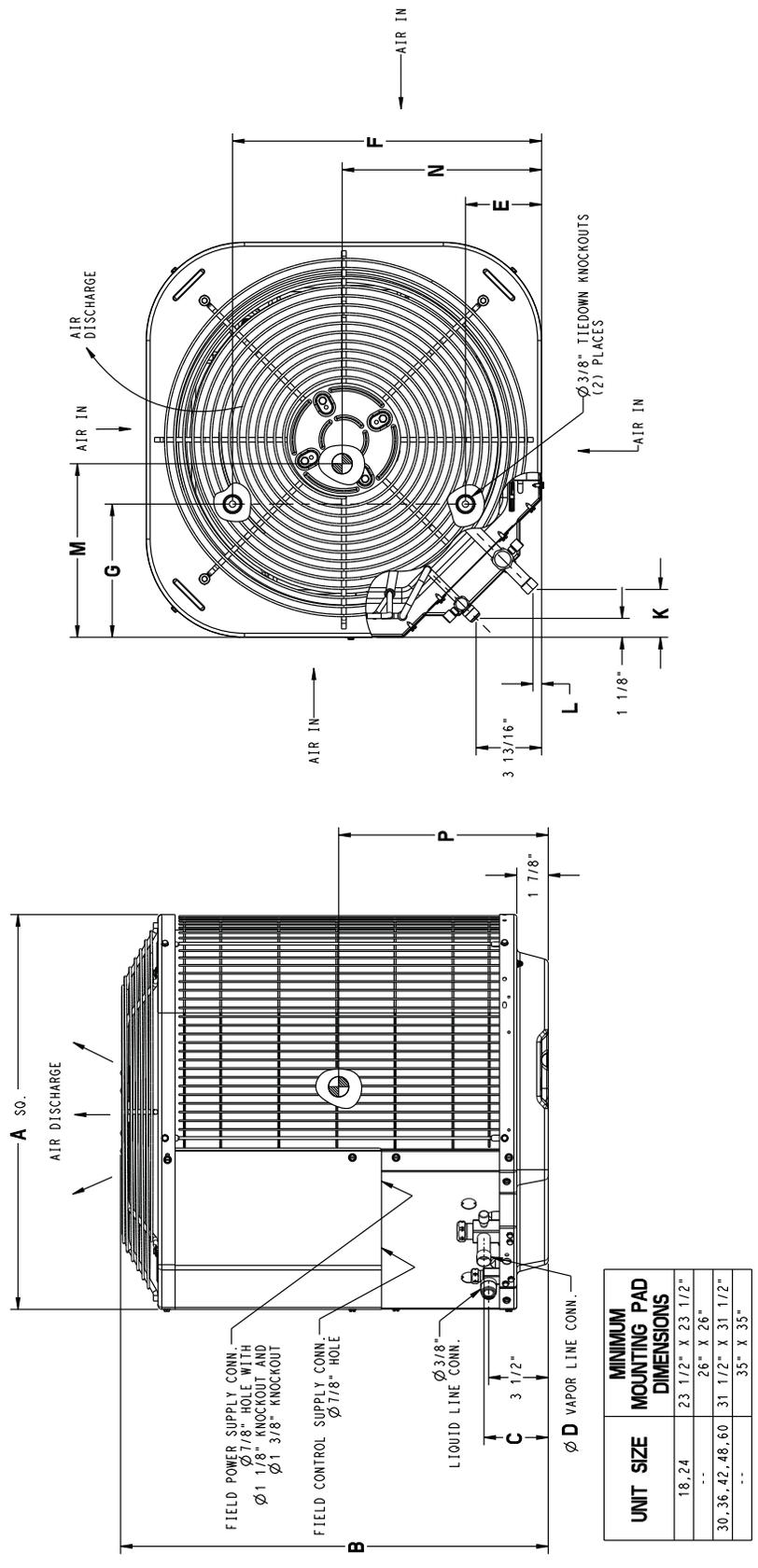
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**DIMENSIONS - ENGLISH**

UNIT	SERIES	ELECTRICAL CHARACTERISTICS	A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT(LBS)	SHIPPING WEIGHT(LBS)	SHIPPING DIMENSIONS (L x W x H)
PHI3NB018	A	X 0 0	23 1/8"	28 7/16"	3 3/4"	5/8"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	11 1/2"	10 1/2"	11 1/2"	119	137	24 1/8" X 24 1/8" X 30 5/8"
PHI3NB024	A	X 0 0	23 1/8"	31 13/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	11 1/2"	10 1/2"	12 1/2"	124	142	24 1/8" X 24 1/8" X 34"
PHI3NB030	A	X 0 0	31 3/16"	28 7/16"	3 3/4"	3/4"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	11 1/2"	149	170	32 3/16" X 32 3/16" X 30 5/8"
PHI3NB036	A,B	X 0 0	31 3/16"	31 13/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	12 1/2"	169	189	32 3/16" X 32 3/16" X 34"
PHI3NB042	A,B	X 0 0	31 3/16"	31 13/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	12 1/2"	180	200	32 3/16" X 32 3/16" X 34"
PHI3NB048	A,B	X 0 0	31 3/16"	28 7/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	11 1/2"	208	228	32 3/16" X 32 3/16" X 30 5/8"
PHI3NB060	A,B	X 0 0	31 3/16"	31 13/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	12 1/2"	224	248	32 3/16" X 32 3/16" X 34"
PHI3PB048	A	0 0 X	31 3/16"	28 7/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	11 1/2"	208	228	32 3/16" X 32 3/16" X 30 5/8"
PHI3PB060	A	0 0 X	31 3/16"	31 13/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	12 1/2"	228	252	32 3/16" X 32 3/16" X 34"

208-230-160	230-160	208/230-3-60	460-3-60
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X = YES  
O = NO



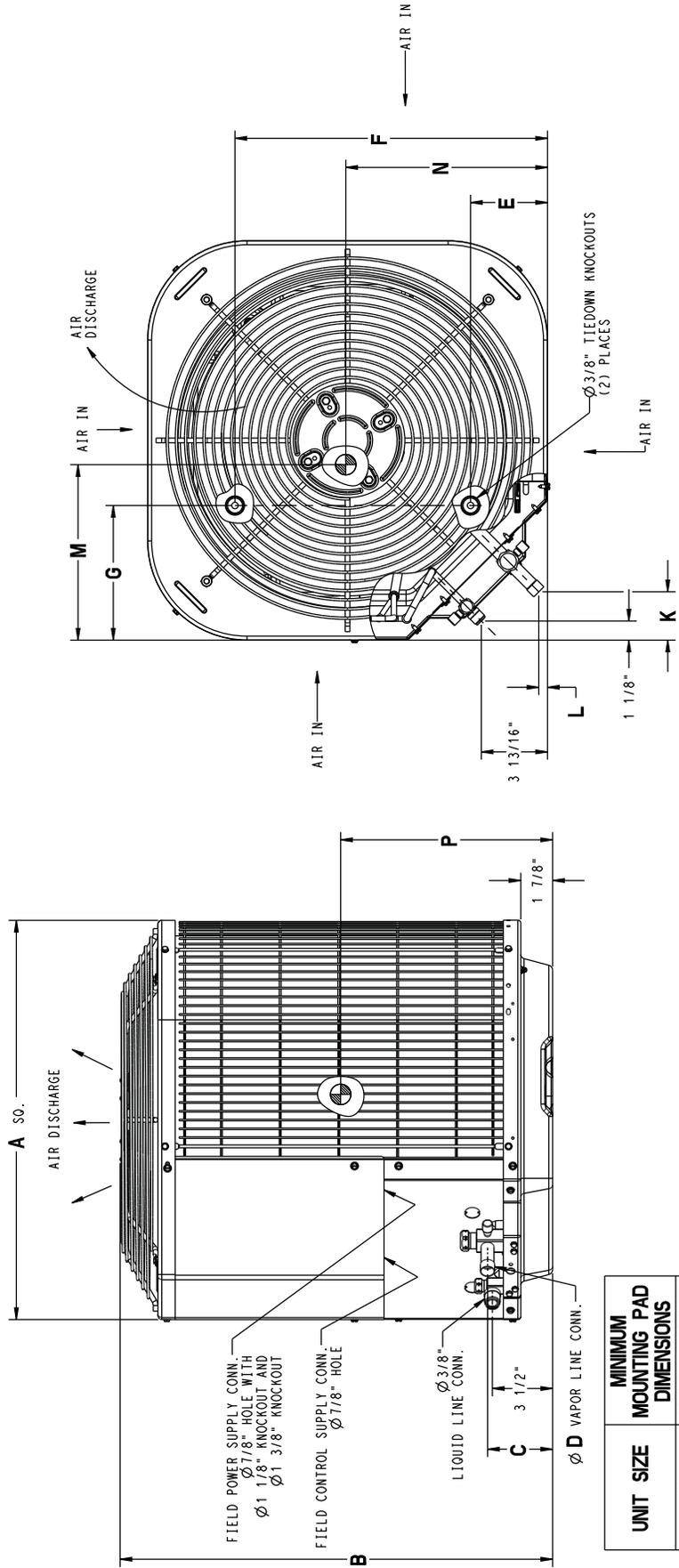
UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
18,24	23 1/2" X 23 1/2"
---	26" X 26"
30,36,42,48,60	31 1/2" X 31 1/2"
---	35" X 35"

# DIMENSIONS - ENGLISH CONTINUED

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)
PH13NB019	A	X 0 0 0	23 1/8"	35 3/16"	3 3/4"	5/8"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	11 1/2"	10 1/2"	13 1/2"	134	148	24 1/8" X 24 1/8" X 37 1/4"
PH13NB025	A	X 0 0 0	31 3/16"	28 7/16"	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"	151	171	32 1/4" X 32 1/4" X 30 3/8"
PH13NB031	A	X 0 0 0	31 3/16"	39 1/8"	3 3/4"	3/4"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	1/2"	15 5/8"	16 3/4"	17"	172	184	32 1/4" X 32 1/4" X 40 5/8"
PH13NB037	A	X 0 0 0	31 3/16"	39 1/8"	3 3/4"	3/4"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	1/2"	15 5/8"	16 3/4"	17"	181	203	32 1/4" X 32 1/4" X 40 5/8"
PH13NB043	A	X 0 0 0	31 3/16"	28 7/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	11 1/2"	208	228	32 1/4" X 32 1/4" X 30 3/8"
PH13NB061	A	X 0 0 0	35"	28 15/16"	3 7/8"	7/8"	6 9/16"	28 7/16"	9 1/8"	2 15/16"	5/8"	17"	16"	12"	250	282	37 1/8" X 37 1/8" X 30"

X = YES  
O = NO

208-230-160	230-160	208/230-360	460-360
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UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
19	23 1/2" X 23 1/2"
--	26" X 26"
25, 31, 37, 43	31 1/2" X 31 1/2"
61	35" X 35"

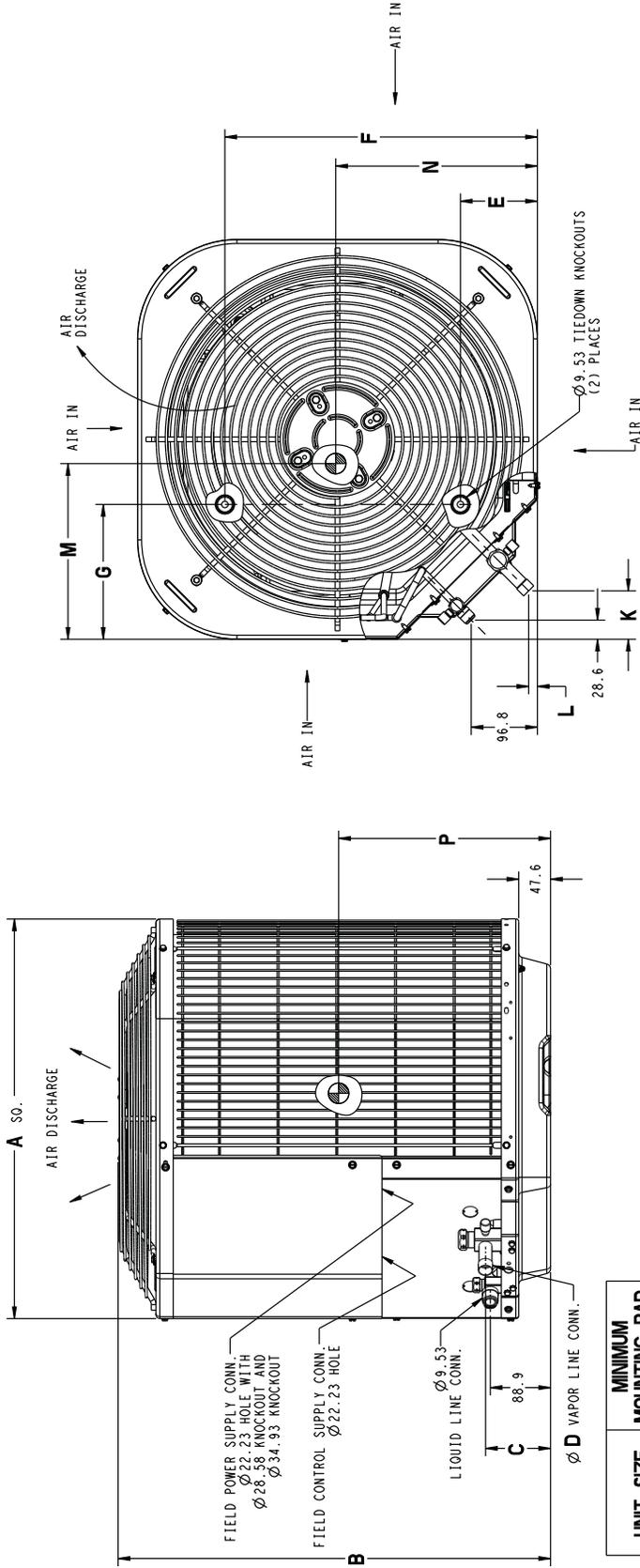
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**DIMENSIONS - SI**

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)
PH13NB018	A	X	0	0	587.4	722.3	95.2	15.9	112.7	458.8	71.4	12.7	292.1	266.7	292.1	54.1	62.3	612.8 X 612.8 X 777.9
PH13NB024	A	X	0	0	587.4	808.0	95.2	19.0	112.7	458.8	71.4	12.7	292.1	266.7	317.5	56.4	64.5	612.8 X 612.8 X 863.6
PH13NB030	A	X	0	0	792.2	722.3	95.2	166.7	627.1	627.1	74.6	15.9	381.0	381.0	292.1	76.7	77.3	817.6 X 817.6 X 777.9
PH13NB036	A,B	X	0	0	792.2	808.0	98.4	22.2	166.7	627.1	74.6	15.9	381.0	381.0	317.5	85.9	85.9	817.6 X 817.6 X 863.6
PH13NB042	A,B	X	0	0	792.2	808.0	98.4	22.2	166.7	627.1	74.6	15.9	381.0	381.0	317.5	81.8	90.7	817.6 X 817.6 X 863.6
PH13NB048	A,B	X	0	0	792.2	722.3	98.4	22.2	166.7	627.1	74.6	15.9	381.0	381.0	292.1	94.5	103.6	817.6 X 817.6 X 777.9
PH13NB060	A,B	X	0	0	792.2	808.0	98.4	22.2	166.7	627.1	74.6	15.9	381.0	381.0	317.5	101.8	112.7	817.6 X 817.6 X 863.6
PH13PB048	A	O	0	X	792.2	722.3	98.4	22.2	166.7	627.1	74.6	15.9	381.0	381.0	292.1	94.5	103.6	817.6 X 817.6 X 777.9
PH13PB060	A	O	0	X	792.2	808.0	98.4	22.2	166.7	627.1	74.6	15.9	381.0	381.0	317.5	101.8	112.7	817.6 X 817.6 X 863.6

208-230-160	230-160	208/230-3-60	460-3-60
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X = YES  
O = NO



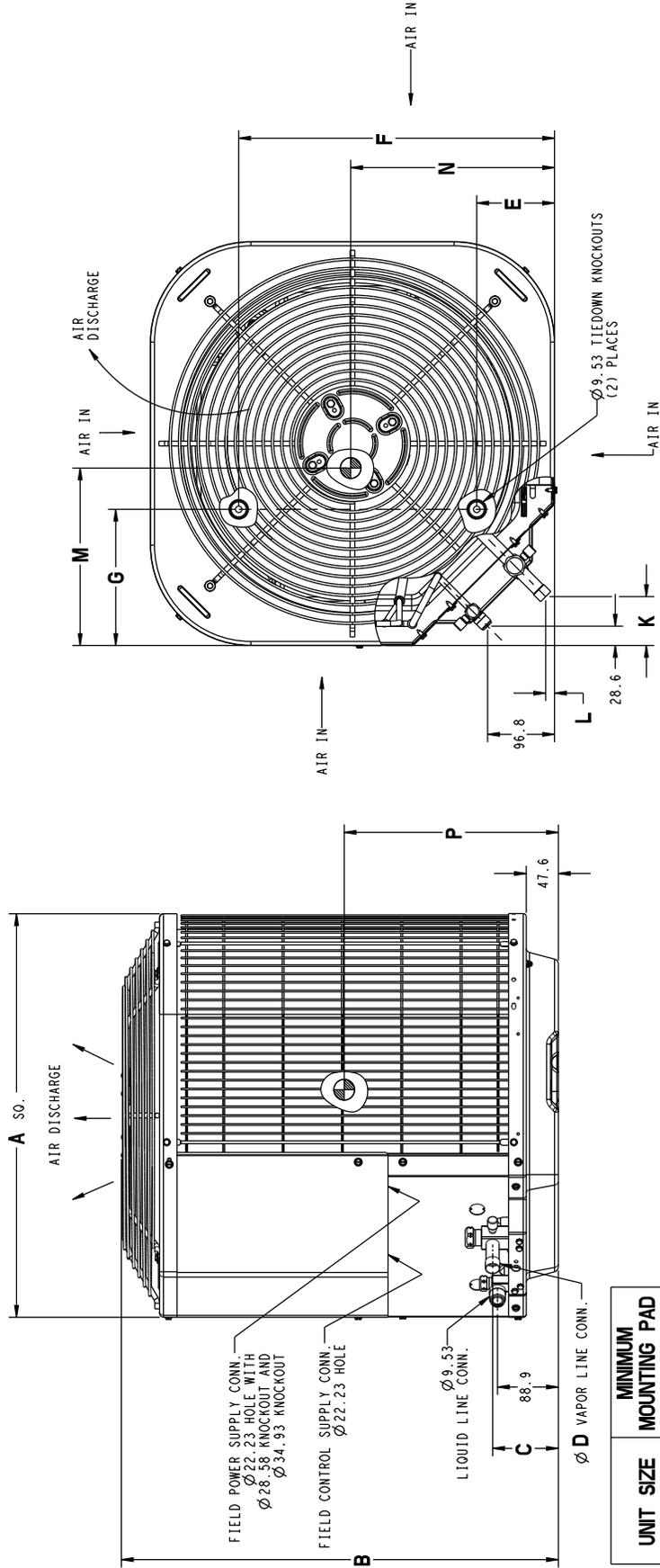
UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
18.24	596.9 X 596.9
---	660.4 X 660.4
30.36, 42.48, 60	800.1 X 800.1
---	889.0 X 889.0

# DIMENSIONS - SI CONTINUED

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)
PH13NB019	A	X 0 0 0	587.4	893.8	95.2	15.8	112.7	458.8	198.4	71.4	12.7	292.1	266.7	342.9	60.9	67.3	612.8 X 612.8 X 944.0
PH13NB025	A	X 0 0 0	792.2	722.3	95.2	15.8	166.7	627.1	231.8	71.4	12.7	396.8	425.4	368.3	68.6	77.7	817.9 X 817.9 X 771.3
PH13NB031	A	X 0 0 0	792.2	993.8	95.2	19.0	166.7	627.1	231.8	74.6	12.7	396.8	425.4	431.8	78.2	88.2	817.9 X 817.9 X 1030.5
PH13NB037	A	X 0 0 0	792.2	993.8	95.2	19.0	166.7	627.1	231.8	74.6	12.7	396.8	425.4	431.8	82.3	92.3	817.9 X 817.9 X 1030.5
PH13NB043	A	X 0 0 0	792.2	722.3	98.4	22.2	166.7	627.1	231.8	74.6	15.9	381.0	381.0	292.1	94.5	103.6	817.9 X 817.9 X 771.3
PH13NB061	A	X 0 0 0	889.0	735.0	98.4	22.2	166.7	722.3	231.8	74.6	15.9	431.8	406.4	304.8	113.6	128.2	943.1 X 943.1 X 761.6

X = YES  
O = NO

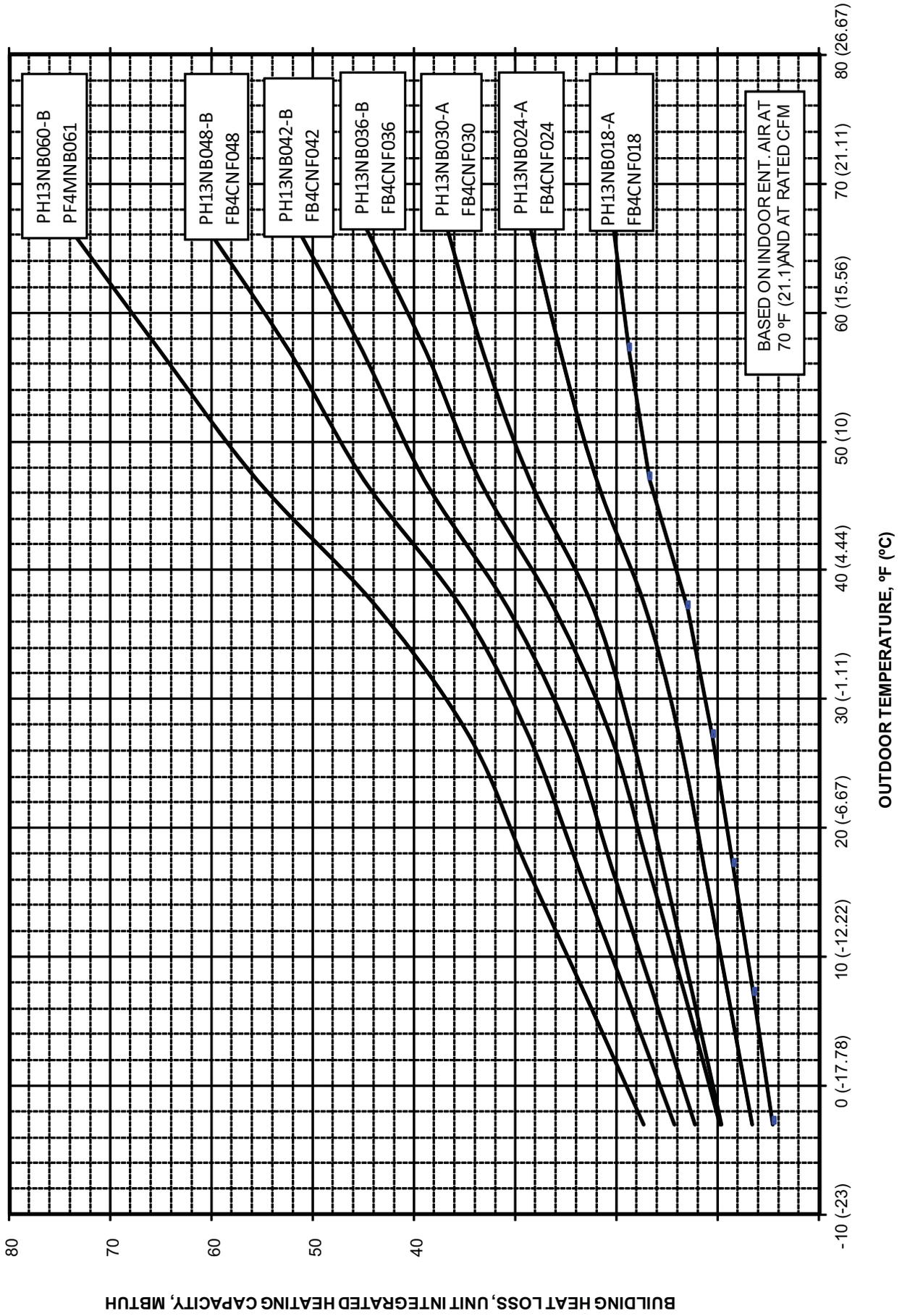
208-230-160	230-160	208/230-360	460-3-60
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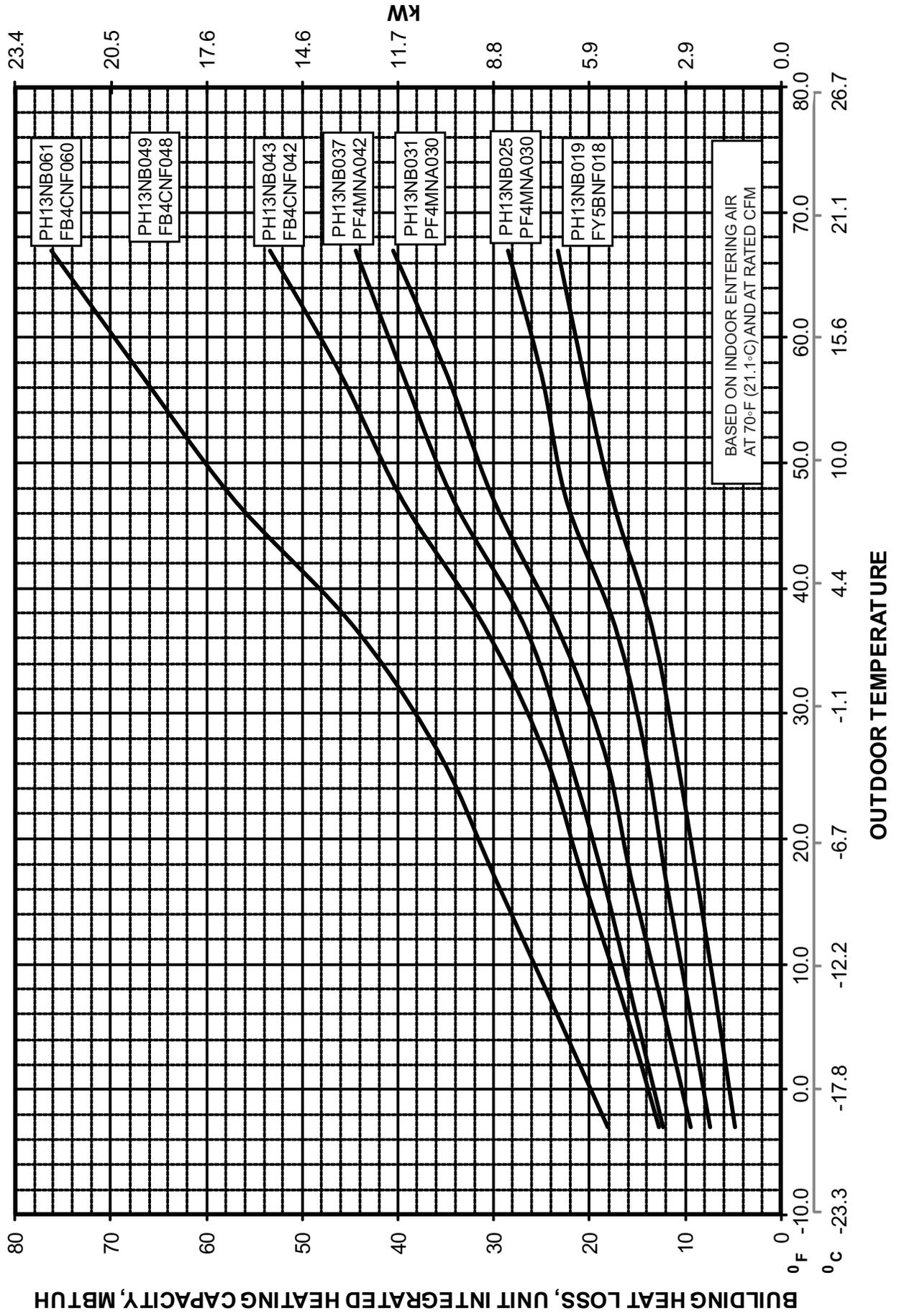
UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
19	596.9 X 596.9
--	660.4 X 660.4
25,31,37,43	800.1 X 800.1
61	889.0 X 889.0

PH13NB

BALANCE POINT WORKSHEET

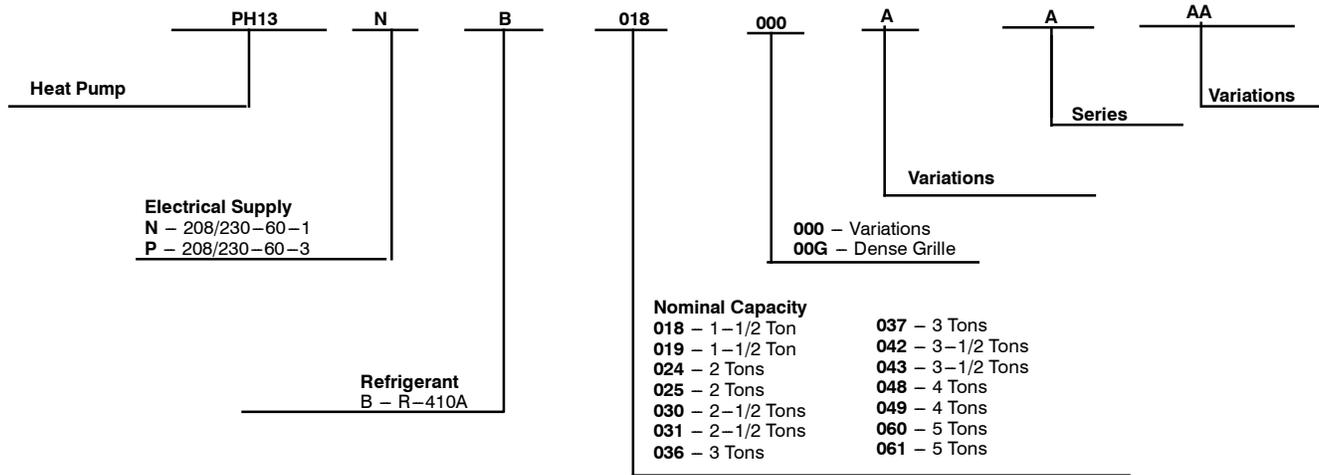


**BALANCE POINT WORKSHEET CONTINUED**



**PH13NB**

# PRODUCT NUMBER NOMENCLATURE



PH13NB



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.**

## 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 R-410A refrigerant:

Vapor Line Sizing and Cooling Capacity Losses - R-410A 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 / 19,000 1–Stage	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 / 25,000 1–Stage	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 / 31,000 1–Stage	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
36,000 / 37,000 1–Stage	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 / 43,000 1–Stage	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 / 49,000 1–Stage	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 / 61,000 1–Stage	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 R-410A® 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)
018, 019 HP with R-410A	3/8	250*	250*	250*	250*	250*	250*	250*
024, 025 HP with R-410A	3/8	250*	250*	250*	250*	250*	250*	250*
030, 031 HP with R-410A	3/8	250*	250*	250*	250*	250*	250*	250*
036, 037 HP with R-410A	3/8	250*	250*	250*	250*	250*	250*	250*
042, 043 HP with R-410A	3/8	250*	250*	250*	250*	250*	250*	150
048, 049 HP with R-410A	3/8	250*	250*	250*	250*	230	160	--
060, 061 HP with R-410A	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 R-410A® REFRIGERANT LONG LINE DESCRIPTION ft (m) Beyond these lengths, long line accessories are required

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

Note: See Long Line Guideline for details

PH13NB

## A-WEIGHTED SOUND POWER (dBA)

UNIT SIZE – SERIES	Standard Rating (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA without tone adjustment)						
		125	250	500	1000	2000	4000	8000
018–A	71	50.5	58.5	64.5	66.0	64.0	57.5	52.0
019–A	70	50.0	58.0	63.5	65.5	60.0	57.0	52.0
024–A	71	51.5	60.0	64.5	66.0	64.0	60.0	56.5
025–A	74	52.5	61.5	68.0	70.0	67.0	63.5	58.5
030–A	74	53.5	63.0	68.0	69.5	66.5	63.5	58.0
031–A	74	49.5	59.5	65.0	70.5	66.0	64.5	60.0
036–B	74	54.5	61.0	68.0	68.5	65.5	64.0	58.5
037–A	72	53.0	60.0	66.5	67.5	65.0	63.0	57.5
042–B	77	53.0	64.5	70.0	72.0	69.5	67.5	60.0
043–A								
048–B	78	58.0	66.0	71.5	73.0	71.5	68.0	61.0
049–A								
060–B	79	58.0	66.0	71.0	73.0	72.5	68.0	61.0
061–A	77	55.0	63.0	67.5	71.5	68.0	64.0	60.5

Note: Tested in accordance with AHRI standard 270–2008 (Not listed with AHRI)

## A-WEIGHTED SOUND POWER (dBA) WITH SOUND BLANKET

UNIT SIZE – SERIES	Standard Rating (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA without tone adjustment)						
		125	250	500	1000	2000	4000	8000
018–A	70	51.0	60.0	65.0	65.0	62.0	57.0	50.5
019–A	68	49.5	56.0	62.5	63.5	59.0	56.0	50.5
024–A	70	51.0	60.0	64.5	65.5	63.0	59.5	53.5
025–A	73	52.5	61.0	67.5	69.0	65.5	62.0	56.5
030–A	73	53.5	63.0	68.5	68.5	66.0	63.0	56.5
031–A	73	51.5	62.0	66.5	67.5	64.5	62.0	57.5
036–B	73	54.5	60.5	67.0	68.0	65.5	63.0	57.5
037–A	72	54.5	59.5	66.0	67.0	64.0	62.0	56.5
042–B	76	54.0	63.5	70.5	71.5	69.0	66.0	59.0
043–A								
048–B	78	59.0	66.0	72.0	73.0	71.5	67.5	60.5
049–A								
060–B	78	59.0	66.0	71.0	72.5	71.0	67.5	60.5
061–A	74	55.0	63.5	67.0	69.0	66.5	62.0	57.0

Note: Tested in accordance with AHRI standard 270–2008 (Not listed with AHRI)

## METERING DEVICE

UNIT SIZE (PHASE) – SERIES	OUTDOOR PISTON	REQUIRED TXV SUBCOOLING °F (°C)	INDOOR METERING DEVICE
018 (N)–A	42	13 (7.2)	49
019 (N)–A	42	11 (6.1)	49
024 (N)–A	49	13 (7.2)	57
025 (N)–A	42	11 (6.1)	57
030 (N)–A	55	9 (5.0)	67
031 (N)–A	55	10 (5.6)	70
036 (N)–B	57	14 (7.7)	70
037 (N)–A	57	10 (5.6)	73
042 (N)–B	63	15 (8.3)	76
043 (N)–A	65	13 (7.2)	78
048 (N)–B	65	17 (9.4)	80
048 (P)–A	65	13 (7.2)	82
049 (N)–A			
060 (N)–B			
060 (P)–A	76	18 (10.0)	TXV*
061 (N)–A	76	15 (8.3)	TXV*

\* TXV must be ordered separately when indoor coil is not equipped with a TXV. TXV must be hard–shutoff type.

## RECOMMENDED TUBE DIAMETERS

UNIT SIZE	LIQUID TUBE DIAMETER (In.)	VAPOR TUBE DIAMETER (In.)
018, 019	3/8	5/8
024, 025, 030, 031		3/4
036, 037, 042, 043, 048, 049		7/8
060, 061		1–1/8

\* For tube set over 80 ft / 24.38 m horizontal and/or 20 ft / 6.10 m vertical differential, consult Residential Split System Long Line Application Guidelines.

# 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 Payne database at: [www.MyPayneRatings.com](http://www.MyPayneRatings.com)

Model Number	Coil Model Number	Furnace Model Number	Cooling Capacity	EER	SEER	High Temp		HSPF	Low Temp	
						Capacity 47°F (8°C)	COP		Capacity 17°F (-8°C)	COP
PH13NB018****A	FB4CNF018		17,400	11.0	13.0	16,800	3.60	7.7	9,400	2.24
PH13NB019****A	TBA		TBA	11.0	13.0	TBA	TBA	TBA	TBA	TBA
PH13NB024****A	FB4CNF024		23,400	11.0	13.0	22,000	3.48	7.7	13,000	2.28
PH13NB025****A	TBA		TBA	11.0	13.0	TBA	TBA	TBA	TBA	TBA
PH13NB030****A	FB4CNF030		28,600	11.0	13.0	28,600	3.50	7.7	17,700	2.34
PH13NB031****A	TBA		TBA	11.0	13.0	TBA	TBA	TBA	TBA	TBA
PH13NB036****B	FB4CNF036		33,600	11.0	13.0	33,400	3.50	7.7	20,200	2.40
PH13NB037****A	TBA		TBA	11.0	13.0	TBA	TBA	TBA	TBA	TBA
PH13NB042****B	FB4CNF042		41,500	11.0	13.0	39,000	3.60	8.0	24,400	2.40
PH13NB043****A	TBA		TBA	11.0	13.0	TBA	TBA	TBA	TBA	TBA
PH13NB048****B	FB4CNF048		47,000	11.0	13.0	45,000	3.48	8.0	28,600	2.44
PH13PB048****A	FB4CNF048		47,000	11.0	13.0	45,000	3.58	8.0	28,200	2.50
PH13NB049****A	TBA		TBA	11.0	13.0	TBA	TBA	TBA	TBA	TBA
PH13NB060****B	PF4MNB061		57,500	11.0	13.0	55,000	3.64	8.0	35,400	2.56
PH13PB060****A	PF4MNB061		57,500	11.0	13.0	55,000	3.66	8.0	33,600	2.48
PH13NB061****A	TBA		TBA	11.0	13.0	TBA	TBA	TBA	TBA	TBA

PH13NB

\* 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 — 80°F (26.6°C) indoor db/67°F (19.4°C) indoor wb & 95°F (35°C) outdoor wb.

**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**	Total Sys. KW**	Capacity MBtuh	Total Sys. KW**	Total Sys. KW**	Capacity MBtuh	Total Sys. KW**	Total Sys. KW**	Capacity MBtuh	Total Sys. KW**	Total Sys. KW**	Capacity MBtuh	Total Sys. KW**	Total Sys. KW**	Capacity MBtuh	Total Sys. KW**	Total Sys. KW**
	57 (13.9)	16.65	1.22	1.22	15.93	1.37	1.37	14.83	1.52	1.52	13.70	1.70	1.70	12.53	1.90	1.90	11.26	2.13	2.13
	62 (16.7)	17.30	1.22	1.22	16.38	1.37	1.37	15.05	1.52	1.52	13.73	1.70	1.70	12.55	1.90	1.90	11.28	2.13	2.13
525	63 (17.2)†	17.87	1.22	1.22	16.71	1.38	1.38	15.42	1.53	1.53	13.80	1.70	1.70	12.20	1.89	1.89	10.90	2.11	2.11
	67 (19.4)	19.21	1.23	1.23	16.64	1.39	1.39	17.04	1.56	1.56	15.53	1.73	1.73	13.75	1.92	1.92	11.97	2.14	2.14
	72 (22.2)	21.16	1.25	1.25	20.17	1.41	1.41	19.02	1.59	1.59	17.68	1.79	1.79	16.09	1.99	1.99	14.07	2.19	2.19
	57 (13.9)	17.43	1.24	1.24	16.66	1.39	1.39	15.79	1.56	1.56	14.44	1.72	1.72	13.17	1.92	1.92	11.83	2.15	2.15
	62 (16.7)	17.78	1.24	1.24	16.83	1.39	1.39	15.81	1.56	1.56	14.46	1.72	1.72	13.20	1.92	1.92	11.85	2.15	2.15
600	63 (17.2)†	18.10	1.24	1.24	17.09	1.41	1.41	15.97	1.56	1.56	14.16	1.71	1.71	12.51	1.91	1.91	10.78	2.13	2.13
	67 (19.4)	19.65	1.25	1.25	18.59	1.41	1.41	17.40	1.58	1.58	16.09	1.77	1.77	14.10	1.94	1.94	12.26	2.16	2.16
	72 (22.2)	21.57	1.26	1.26	20.56	1.43	1.43	19.41	1.61	1.61	18.06	1.80	1.80	16.50	2.02	2.02	14.39	2.21	2.21
	57 (13.9)	18.11	1.25	1.25	17.28	1.41	1.41	16.38	1.58	1.58	15.09	1.75	1.75	13.73	1.94	1.94	12.32	2.17	2.17
	62 (16.7)	18.22	1.25	1.25	17.31	1.41	1.41	16.41	1.58	1.58	15.12	1.75	1.75	13.75	1.95	1.95	12.34	2.17	2.17
675	63 (17.2)†	18.46	1.25	1.25	17.39	1.41	1.41	16.24	1.58	1.58	14.48	1.73	1.73	12.78	1.93	1.93	11.09	2.15	2.15
	67 (19.4)	19.98	1.26	1.26	18.91	1.42	1.42	17.69	1.60	1.60	16.35	1.79	1.79	14.38	1.96	1.96	12.51	2.18	2.18
	72 (22.2)	21.88	1.28	1.28	20.86	1.44	1.44	19.69	1.62	1.62	18.34	1.82	1.82	16.73	2.04	2.04	14.63	2.23	2.23

PH13NB018\*\*\*A Outdoor Section With FB4CNF018 Indoor Section

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FB4CNF018	1.00	1.00	
FB4CNF024	1.00	1.00	
FF1ENP019	1.03	0.99	
FF1ENP025	1.03	0.97	
PF4MNA019	1.03	0.99	
PF4MNA025	1.03	0.97	
PF4MNB019	1.03	0.95	
PF4MNB025	1.03	0.97	
CAP**2414A**	1.03	0.97	PG8*EA024045
CNPH*2417A**	1.03	0.97	PG8*EA024045
CNPF*1814A**	1.03	0.98	PG8*EA024045
CNPF*2414A**	1.03	0.97	PG8*EA024045
CSPH*2412A**	1.03	0.97	PG8*EA024045
CAP**2414A**	1.02	0.96	PG8*VA036070
CNPF*1814A**	1.02	0.97	PG8*VA036070
CNPF*2414A**	1.03	0.97	PG8*VA036070
CSPH*2412A**	1.03	0.97	PG8*VA036070
CAP**2417A**	1.03	0.97	PG8*VA048090
CNPF*2417A**	1.03	0.97	PG8*VA048090
CNPF*2417A**	1.03	0.97	PG8*VA048090
CSPH*2412A**	1.03	0.97	PG8*VA048090
CAP**2417A**	1.03	0.97	PG96VA*42060B***
CNPH*2417A**	1.03	0.97	PG96VA*42060B***
CNPF*2417A**	1.03	0.97	PG96VA*42060B***
CSPH*2412A**	1.03	0.97	PG96VA*42060B***
CAP**2417A**	1.03	0.97	PG96VA*48080B***
CNPH*2417A**	1.03	0.97	PG96VA*48080B***
CNPF*2417A**	1.03	0.97	PG96VA*48080B***
CSPH*2412A**	1.03	0.97	PG96VA*48080B***
CAP**2412A**	1.03	0.97	PG96VA*60080C***
CNPH*2412A**	1.03	0.97	PG96VA*60100C***
CSPH*2412A**	1.03	0.97	PG96VA*66120D***

See notes on pg. 20

# DETAILED COOLING CAPACITIES\* (CONT.)

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†	Total	Sens†	Total	Sens†	Total	
PH13NB024***A Outdoor Section With FB4CNF024 Indoor Section																			
	57 (13.9)	22.27	22.27	1.62	21.36	20.01	20.01	2.01	18.55	18.55	2.25	17.03	17.03	2.51	15.40	15.40	2.81		
	62 (16.7)	23.17	20.79	1.63	22.02	20.58	19.52	2.03	18.58	18.58	2.25	17.06	17.06	2.51	15.42	15.42	2.81		
700	63 (17.2)†	23.65	16.96	1.63	22.45	21.09	18.82	2.05	18.66	14.86	2.25	16.76	13.96	2.50	14.55	13.00	2.79		
	67 (19.4)	25.82	17.65	1.66	24.33	22.96	16.57	2.09	15.84	14.94	2.55	16.89	14.94	2.55	16.55	14.01	2.83		
	72 (22.2)	28.04	14.27	1.70	26.88	25.54	13.37	2.14	23.99	12.83	2.40	22.07	12.12	2.68	19.47	11.20	2.82		
	57 (13.9)	23.24	23.24	1.65	22.28	21.18	21.18	2.08	19.52	19.52	2.29	17.86	17.86	2.55	16.14	16.14	2.85		
800	62 (16.7)	23.74	22.26	1.66	22.55	21.23	21.23	2.08	19.55	19.55	2.29	17.89	17.89	2.55	16.17	16.17	2.85		
	63 (17.2)†	24.17	18.01	1.67	22.92	21.53	16.86	2.08	19.35	15.93	2.29	17.13	14.97	2.54	14.90	13.98	2.82		
	67 (19.4)	26.14	18.72	1.69	24.87	23.40	17.68	2.13	21.78	17.03	2.37	19.36	16.08	2.59	16.93	15.10	2.87		
	72 (22.2)	28.50	14.87	1.73	27.33	24.48	14.41	2.19	24.43	13.49	2.43	22.48	12.81	2.71	19.90	11.92	2.87		
900	57 (13.9)	24.05	24.05	1.69	23.03	21.91	21.91	2.12	20.37	20.37	2.34	18.61	18.61	2.60	16.76	16.76	2.89		
	62 (16.7)	24.25	23.56	1.69	23.07	21.94	21.94	2.12	20.40	20.40	2.34	18.64	18.64	2.60	16.81	16.81	2.89		
	63 (17.2)†	24.60	19.04	1.69	23.29	21.88	17.87	2.12	19.70	16.93	2.32	17.49	15.95	2.57	15.23	14.83	2.85		
	67 (19.4)	26.54	19.73	1.72	25.26	23.76	18.77	2.16	22.10	18.10	2.41	19.74	17.16	2.63	17.27	16.11	2.80		
72 (22.2)	28.85	15.42	1.76	27.68	26.31	14.61	2.20	24.75	14.11	2.46	22.87	13.52	2.74	20.25	12.62	3.01			

INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CAP**2417A**	1.03	0.96	PG95XA*42060B***
CAP**3017A**	1.03	0.96	PG95XA*42060B***
CNPH*2417A**	1.03	0.98	PG95XA*42060B***
CNPH*3017A**	1.03	0.96	PG95XA*42060B***
CNPV*2417A**	1.03	0.98	PG95XA*42060B***
CNPV*3017A**	1.03	0.96	PG95XA*42060B***
CSPH*2412A**	1.03	0.96	PG95XA*42060B***
CSPH*3012A**	1.03	0.96	PG95XA*42060B***
CAP**2417A**	1.03	0.96	PG96VA*42060B***
CAP**3017A**	1.02	0.97	PG96VA*42060B***
CNPH*2417A**	1.03	0.96	PG96VA*42060B***
CNPH*3017A**	1.02	0.97	PG96VA*42060B***
CNPV*2417A**	1.03	0.96	PG96VA*42060B***
CNPV*3017A**	1.03	0.96	PG96VA*42060B***
CSPH*2412A**	1.03	0.98	PG96VA*42060B***
CSPH*3012A**	1.03	0.96	PG96VA*42060B***
CAP**2417A**	1.03	0.96	PG96VA*48080B***
CAP**3017A**	1.03	0.96	PG96VA*48080B***
CNPH*2417A**	1.03	0.96	PG96VA*48080B***
CNPH*3012A**	1.03	0.96	PG96VA*48080B***
CNPV*2417A**	1.03	0.96	PG96VA*48080B***
CNPV*3017A**	1.03	0.96	PG96VA*48080B***
CSPH*2412A**	1.03	0.96	PG96VA*48080B***
CSPH*3012A**	1.03	0.96	PG96VA*48080B***
CAP**2417A**	1.03	0.96	PG96VA*60100C***
CAP**3012A**	1.03	0.96	PG96VA*60100C***
CNPH*2412A**	1.03	0.96	PG96VA*66120D***
CNPH*3012A**	1.03	0.96	PG96VA*66120D***
CNPV*2412A**	1.03	0.96	PG96VA*66120D***
CNPV*3012A**	1.03	0.96	PG96VA*66120D***

INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FB4CNF024	1.00	1.00	
FB4CNF030	1.03	0.98	
FF1ENP025	1.03	0.98	
FF1ENP031	1.00	1.00	
PF4MNA025	1.03	0.98	
PF4MNA031	1.03	0.96	
PF4MNB025	1.03	0.96	
PF4MNB031	1.03	0.98	
CAP**2414A**	1.03	0.98	PG8*EA024045
CAP**3014A**	1.03	0.96	PG8*EA024045
CNPH*2417A**	1.03	0.98	PG8*EA024045
CNPH*3017A**	1.03	0.96	PG8*EA024045
CNPV*2414A**	1.03	0.98	PG8*EA024045
CNPV*3014A**	1.03	0.96	PG8*EA024045
CSPH*2412A**	1.03	0.96	PG8*EA024045
CSPH*3012A**	1.03	0.96	PG8*EA024045
CAP**2414A**	1.03	0.96	PG8*VA036070
CAP**3014A**	1.03	0.96	PG8*VA036070
CNPH*2414A**	1.03	0.96	PG8*VA036070
CNPH*3014A**	1.03	0.96	PG8*VA036070
CNPV*2414A**	1.03	0.96	PG8*VA036070
CNPV*3014A**	1.03	0.96	PG8*VA036070
CSPH*2412A**	1.03	0.96	PG8*VA036070
CSPH*3012A**	1.03	0.96	PG8*VA036070
CAP**2417A**	1.03	0.96	PG8*VA048090
CAP**3017A**	1.03	0.96	PG8*VA048090
CNPH*2417A**	1.03	0.96	PG8*VA048090
CNPH*3017A**	1.03	0.94	PG8*VA048090
CNPV*2417A**	1.03	0.96	PG8*VA048090
CNPV*3017A**	1.03	0.94	PG8*VA048090
CSPH*2412A**	1.03	0.96	PG8*VA048090
CSPH*3012A**	1.03	0.94	PG8*VA048090
CAP**2412A**	1.03	0.96	PG8*VA060110
CAP**3012A**	1.03	0.96	PG8*VA060110
CNPH*2412A**	1.03	0.96	PG8*VA06110
CNPH*3012A**	1.03	0.96	PG8*VA06135
CNPV*2412A**	1.03	0.96	PG8*VA06135
CNPV*3012A**	1.03	0.96	PG8*VA06135

See notes on pg. 20



DETAILED COOLING CAPACITIES\* (CONT.)

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)																							
		75 (23.9)				85 (29.4)				95 (35)				105 (40.6)				115 (46.1)				125 (51.7)			
		CFM	EWB ° F (° C)	Capacity MBtuh		Total Sys. KW**	Capacity MBtuh	Total Sys. KW**		Capacity MBtuh	Total Sys. KW**														
Total	Sens†			Total	Sens†			Total	Sens†		Total	Sens†													
PH13NB030***A Outdoor Section With FB4CNF030 Indoor Section																									
	57 (13.9)	27.18	27.18	26.03	2.02	26.03	26.03	2.24	24.78	24.78	2.50	23.39	23.39	2.79	21.45	21.45	2.99	19.49	19.49	3.42					
	62 (16.7)	28.44	24.01	26.96	2.04	26.96	22.59	2.25	25.36	22.59	2.51	23.65	23.65	2.79	21.48	21.48	3.07	19.54	19.54	3.42					
875	63 (17.2)†	29.05	19.61	27.50	2.04	27.50	18.95	2.26	25.87	18.25	2.52	24.07	17.50	2.80	21.55	16.47	3.07	18.91	15.40	3.40					
	67 (19.4)	31.49	20.43	29.83	2.07	29.83	19.77	2.30	28.06	19.07	2.55	26.17	18.34	2.85	24.14	17.56	3.17	21.41	16.53	3.49					
	72 (22.2)	34.80	16.82	33.02	2.11	33.02	16.06	2.34	31.22	15.43	2.60	29.22	14.74	2.91	28.97	13.94	3.25	20.83	13.15	3.63					
	57 (13.9)	28.38	28.38	27.13	2.07	27.13	27.13	2.29	25.81	25.81	2.55	24.36	24.36	2.85	22.72	22.72	3.17	20.47	20.47	3.49					
1000	62 (16.7)	29.14	25.72	27.59	2.08	27.59	24.98	2.30	25.98	24.14	2.55	24.40	24.40	2.85	22.76	22.76	3.17	20.51	20.51	3.49					
	63 (17.2)†	29.71	20.82	28.09	2.08	28.09	20.14	2.30	26.36	19.42	2.56	24.52	18.67	2.85	22.11	17.68	3.13	19.33	16.54	3.45					
	67 (19.4)	32.16	21.66	30.48	2.11	30.48	21.06	2.34	28.60	20.33	2.60	26.61	19.58	2.89	24.55	18.80	3.22	21.98	17.83	3.56					
	72 (22.2)	35.21	17.30	33.61	2.15	33.61	16.78	2.38	31.78	16.17	2.65	29.75	15.50	2.95	27.51	14.76	3.29	25.00	13.90	3.68					
	57 (13.9)	29.98	29.98	28.07	2.12	28.07	28.07	2.34	26.66	26.66	2.60	25.15	25.15	2.90	23.48	23.48	3.23	21.30	21.30	3.56					
	62 (16.7)	29.75	27.27	28.15	2.12	28.15	28.15	2.34	26.70	26.70	2.60	25.18	25.18	2.90	23.51	23.51	3.23	21.34	21.34	3.56					
1125	63 (17.2)†	30.21	21.97	28.53	2.12	28.53	21.28	2.35	26.75	20.55	2.60	24.84	19.77	2.89	22.76	18.90	3.20	19.71	17.60	3.50					
	67 (19.4)	32.87	22.83	30.96	2.15	30.96	22.26	2.38	29.01	21.55	2.64	26.97	20.78	2.94	24.86	19.98	3.27	22.48	19.05	3.63					
	72 (22.2)	35.66	17.95	34.05	2.19	34.05	17.45	2.42	32.19	16.87	2.69	30.14	16.21	2.99	27.89	15.49	3.33	25.30	14.64	3.72					

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CNPV*3621A**	1.05	1.00	PG8*VA060110	CNPV*3621A**	1.05	1.00	PG96VA*60080C***
CSPH*3012A**	1.05	1.00	PG8*VA060110	CSPH*3012A**	1.05	1.00	PG96VA*60080C***
CSPH*3612A**	1.05	0.99	PG8*VA060110	CSPH*3612A**	1.05	0.99	PG96VA*60080C***
CAP**3621A**	1.05	1.00	PG8*VA060110	CAP**3621A**	1.05	1.00	PG96VA*60100C***
CNPV*3617A**	1.05	1.00	PG8*VA060110	CNPV*3617A**	1.05	1.00	PG96VA*60100C***
CSPH*3612A**	1.05	1.02	PG95XA*42060B***	CSPH*3612A**	1.05	1.02	PG96VA*60100C***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*60100C***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*60100C***
CSPH*3617A**	1.05	1.02	PG95XA*42060B***	CSPH*3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**	1.05	1.02	PG96VA*66120D***
CSPH*3017A**	1.05	1.02	PG95XA*42060B***	CSPH*3017A**	1.05	1.02	PG96VA*66120D***
CAP**3617A**	1.05	1.02	PG95XA*42060B***	CAP**3617A**	1.05	1.02	PG96VA*66120D***
CNPV*3017A**	1.05	1.02	PG95XA*42060B***	CNPV*3017A**			

# DETAILED COOLING CAPACITIES\* (CONT.)

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)																							
		75 (23.9)				85 (29.4)				95 (35)				105 (40.6)				115 (46.1)				125 (51.7)			
		CFM	EWB ° F (° C)	Capacity MBtuh		Total Sys. KW**	Capacity MBtuh	Total Sys. KW**		Capacity MBtuh	Total Sys. KW**														
				Total	Sens†				Total		Sens†			Total	Sens†			Total		Sens†		Total	Sens†		Total
	57 (13.9)	31.95	31.95	2.39	30.67	2.65	2.65	29.29	2.94	2.94	27.80	2.80	2.80	25.76	2.57	2.57	23.48	2.34	2.34						
	62 (16.7)	33.18	28.52	2.41	31.56	2.66	2.66	29.84	2.95	2.95	28.01	26.01	26.01	25.81	25.81	25.81	23.53	23.53	23.53						
1050	63 (17.2)†	33.87	23.22	2.42	32.19	2.67	2.67	30.39	2.96	2.96	28.45	26.94	26.94	25.81	25.81	25.81	23.53	23.53	23.53						
	67 (19.4)	36.88	24.14	2.44	34.92	2.71	2.71	32.98	3.00	3.00	30.94	29.94	29.94	28.72	28.72	28.72	26.84	26.84	26.84						
	72 (22.2)	40.08	19.42	2.48	38.56	2.75	2.75	36.71	3.04	3.04	34.58	32.58	32.58	32.09	32.09	32.09	29.53	29.53	29.53						
	57 (13.9)	33.27	33.27	2.45	31.91	2.71	2.71	30.46	3.00	3.00	28.89	28.89	28.89	27.12	27.12	27.12	24.64	24.64	24.64						
1200	62 (16.7)	33.98	30.51	2.46	32.31	2.72	2.72	30.54	3.00	3.00	28.93	28.93	28.93	27.16	27.16	27.16	24.68	24.68	24.68						
	63 (17.2)†	34.60	24.67	2.47	32.85	2.72	2.72	30.97	3.01	3.01	28.97	28.97	28.97	26.70	26.70	26.70	23.25	23.25	23.25						
	67 (19.4)	37.41	25.60	2.49	35.66	2.76	2.76	33.60	3.05	3.05	31.47	29.46	29.46	29.19	29.19	29.19	26.82	26.82	26.82						
	72 (22.2)	40.70	20.22	2.53	39.19	2.79	2.79	37.34	3.09	3.09	35.20	33.43	33.43	32.76	32.76	32.76	29.95	29.95	29.95						
1350	57 (13.9)	34.39	34.39	2.51	32.97	2.77	2.77	31.42	3.06	3.06	29.79	29.79	29.79	27.97	27.97	27.97	25.68	25.68	25.68						
	62 (16.7)	34.71	32.24	2.51	33.03	2.77	2.77	31.46	3.06	3.06	29.82	29.82	29.82	28.01	28.01	28.01	25.72	25.72	25.72						
	63 (17.2)†	35.21	26.05	2.52	33.35	2.77	2.77	31.40	3.06	3.06	29.36	29.36	29.36	27.07	27.07	27.07	23.69	23.69	23.69						
	67 (19.4)	37.95	28.97	2.54	36.17	2.81	2.81	34.08	3.10	3.10	31.88	29.88	29.88	29.55	29.55	29.55	26.98	26.98	26.98						
	72 (22.2)	41.12	20.88	2.57	39.64	2.84	2.84	37.79	3.14	3.14	35.64	33.64	33.64	33.18	33.18	33.18	30.35	30.35	30.35						

PH13NB038\*\*\*B Outdoor Section With FB4CNF036 Indoor Section

COOLING INDOOR MODEL		CAPACITY		POWER	FURNACE MODEL	
		Total	Sens†		Total	Sens†
*FB4CNF036	1.00	1.00		1.00	0.94	PG8*VA048090
FB4CNF042	1.02	1.02		1.02	0.94	PG8*VA048090
FF1ENP037	1.00	1.00		1.02	0.94	PG8*VA048090
PF4MNA037	1.02	1.03		1.03	0.93	PG8*VA048090
PF4MNA043	1.04	1.04		1.01	0.92	PG8*VA060110
PF4MNB037	1.05	1.05		1.01	0.93	PG8*VA060110
PF4MNB043	1.02	1.02		1.02	0.93	PG8*VA060110
CSPH*3612A**	1.05	1.05		1.01	0.95	PG8*VA060110
CSPH*4212A**	1.03	1.03		1.02	0.93	PG8*VA060110
CAP**3617A**	1.01	1.01		1.02	0.93	PG8*VA060110
CAP**4221A**	1.04	1.04		1.03	0.94	PG8*VA066135
CSPH*3612A**	1.04	1.04		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**4221A**	1.02	1.02		1.00	0.96	PG8*VA066135
CSPH*3612A**	1.02	1.02		1.00	0.96	PG8*VA066135
CAP**3621A**	1.02	1.02		1.00	0.96	PG8*VA066135

DETAILED COOLING CAPACITIES\* (CONT.)

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)																							
		75 (23.9)				85 (29.4)				95 (35)				105 (40.6)				115 (46.1)				125 (51.7)			
		CFM	EWB ° F (° C)	Capacity MBtuh		Total Sys. KW**	Capacity MBtuh	Total Sys. KW**		Capacity MBtuh	Total Sys. KW**														
Total	Sens†			Total	Sens†			Total	Sens†		Total	Sens†													
PH13NB042***B Outdoor Section With FB4CNF042 Indoor Section																									
57 (13.9)	39.37	39.37	37.75	3.01	3.75	36.03	36.03	3.69	3.34	36.03	36.03	3.69	3.34	34.20	34.20	4.07	3.58	31.58	31.58	4.44	28.93	28.93	4.89		
62 (16.7)	41.08	37.19	38.99	3.01	36.82	35.06	3.70	3.34	36.82	35.06	3.70	3.34	34.58	33.87	4.08	3.64	31.64	31.64	4.44	28.98	28.98	4.89			
63 (17.2)†	41.94	30.35	39.77	3.01	37.53	28.35	3.70	3.34	37.53	28.35	3.70	3.34	35.15	27.30	4.09	3.79	25.83	31.79	25.83	4.45	28.16	24.25	4.86		
67 (19.4)	45.43	31.55	43.16	2.98	40.70	29.62	3.72	3.34	40.70	29.62	3.72	3.34	38.18	28.58	4.12	3.57	27.48	35.48	27.48	4.56	31.83	26.05	4.88		
72 (22.2)	49.74	25.53	47.65	2.84	45.25	28.90	3.72	3.34	45.25	28.90	3.72	3.34	42.59	22.96	4.15	3.57	23.82	38.57	23.82	4.63	36.47	20.70	5.14		
57 (13.9)	41.05	39.30	39.30	3.05	39.30	37.49	3.75	3.34	39.30	37.49	3.75	3.34	35.56	33.40	4.14	3.57	33.40	33.40	4.57	30.39	30.39	4.88			
62 (16.7)	42.10	39.81	39.82	3.05	38.67	37.73	3.75	3.34	38.67	37.73	3.75	3.34	35.61	33.44	4.14	3.57	33.44	33.44	4.57	30.39	30.39	4.88			
63 (17.2)†	42.91	32.24	40.63	3.04	40.63	38.26	3.75	3.34	40.63	38.26	3.75	3.34	35.81	29.11	4.14	3.57	32.72	37.72	29.11	4.53	28.86	26.06	4.83		
67 (19.4)	46.38	33.45	44.09	3.02	44.09	32.65	3.77	3.34	44.09	32.65	3.77	3.34	38.83	30.53	4.18	3.57	29.42	36.08	29.42	4.62	32.97	28.16	5.09		
72 (22.2)	50.61	26.60	48.50	2.98	46.07	25.05	3.76	3.34	46.07	25.05	3.76	3.34	43.36	24.14	4.20	3.57	23.11	40.38	23.11	4.68	31.57	21.88	5.20		
57 (13.9)	42.49	42.49	40.64	3.09	40.64	38.70	3.80	3.44	40.64	38.70	3.80	3.44	36.67	36.67	4.20	3.57	34.47	34.47	4.64	31.57	31.57	5.07			
62 (16.7)	43.00	42.10	40.76	3.08	40.76	38.75	3.80	3.44	40.76	38.75	3.80	3.44	36.71	36.71	4.20	3.57	34.51	34.51	4.64	31.63	31.63	5.07			
63 (17.2)†	43.88	34.03	41.28	3.08	41.28	38.83	3.80	3.44	41.28	38.83	3.80	3.44	36.30	30.82	4.20	3.57	29.59	33.52	29.59	4.62	29.39	27.70	5.00		
67 (19.4)	47.08	35.20	44.76	3.05	44.76	42.12	3.82	3.44	44.76	42.12	3.82	3.44	39.37	32.39	4.23	3.57	31.23	38.51	31.23	4.68	33.42	29.94	5.16		
72 (22.2)	51.25	27.56	49.14	3.02	49.14	46.67	3.81	3.44	49.14	46.67	3.81	3.44	43.93	25.24	4.25	3.57	24.23	40.90	24.23	4.73	37.53	23.06	5.25		

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
FB4CNF042	1.00	1.00	PG8*EA048090	CAP**4821A**	1.01	0.99	PG8*EA060110												
FB4CNF048	1.00	1.00	PG8*EA048090	CNPV*4821A**	1.00	0.98	PG8*EA060110												
PF4MNA049	1.01	0.97	PG8*EA048090	CNPV*4221A**	1.00	0.98	PG8*EA060110												
PF4MNB043	1.01	0.99	PG8*EA048090	CNPV*4821A**	1.01	0.97	PG8*EA060110												
PF4MNB049	1.01	0.95	PG8*EA048090	CSPH*4212A**	1.01	0.97	PG8*EA060110												
CAP**4221A**	1.00	0.97	PG8*EA048090	CSPH*4812A**	1.01	0.97	PG8*EA060110												
CSPH*4812A**	1.01	0.97	PG8*EA048090	CAP**4224A**	1.00	0.96	PG8*EA06135												
CNPV*4221A**	1.00	0.97	PG8*EA048090	CNPV*4824A**	1.01	0.95	PG8*EA06135												
CNPV*4221A**	1.00	0.97	PG8*EA048090	CSPH*4812A**	1.01	0.95	PG8*EA06135												
CSPH*4812A**	1.01	0.97	PG8*EA048090	CAP**4221A**	1.01	0.99	PG95XA*60080C***												
CAP**4221A**	1.01	0.97	PG8*EA060110	CNPV*4821A**	1.01	0.97	PG95XA*60080C***												
CNPV*4221A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.01	0.97	PG95XA*60080C***												
CNPV*4221A**	1.00	0.97	PG8*EA060110	CSPH*4812A**	1.01	0.97	PG95XA*60080C***												
CSPH*4812A**	1.01	0.97	PG8*EA060110	CAP**4224A**	1.00	0.98	PG95XA*60080C***												
CAP**4224A**	1.01	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG95XA*60080C***												
CNPV*4821A**	1.00	0.97	PG8*EA060110	CNPV*4821A**	1.00	0.97	PG9												



**DETAILED COOLING CAPACITIES\* (CONT.)**

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†		
PH13NB060***B Outdoor Section With PF4MNB061 Indoor Section																				
	57 (13.9)	54.58	54.58	4.12	52.58	52.58	4.55	50.45	50.45	48.15	48.15	5.03	45.65	45.65	45.65	5.59	42.94	42.94	42.94	6.94
	62 (16.7)	56.76	49.61	4.15	54.22	48.41	4.57	51.54	47.15	48.72	45.76	5.05	45.74	45.74	45.74	5.61	43.00	43.00	43.00	6.95
1750	63 (17.2)†	57.87	40.98	4.16	55.26	39.22	4.59	52.48	38.00	49.52	36.74	5.06	46.35	35.39	35.39	5.61	42.96	42.96	33.96	6.94
	67 (19.4)	62.33	41.92	4.22	59.54	40.77	4.65	56.55	39.56	53.37	38.29	5.13	49.98	36.96	36.96	5.68	46.35	46.35	35.59	7.01
	72 (22.2)	68.43	34.03	4.31	65.38	32.89	4.75	62.12	31.69	58.67	30.43	5.23	54.98	29.12	29.12	5.78	51.05	51.05	27.72	7.10
	57 (13.9)	56.85	56.85	4.22	54.71	54.71	4.66	52.42	52.42	49.95	49.95	5.14	47.29	47.29	47.29	5.70	44.40	44.40	44.40	7.05
2000	62 (16.7)	58.04	53.16	4.24	55.42	51.86	4.67	52.69	50.40	50.02	50.02	5.15	47.35	47.35	47.35	5.70	44.46	44.46	44.46	7.05
	63 (17.2)†	59.05	42.86	4.25	56.31	41.66	4.68	53.41	40.43	50.32	39.13	5.16	47.03	37.74	37.74	5.70	43.53	43.53	36.27	7.03
	67 (19.4)	63.54	44.58	4.32	60.60	43.39	4.75	57.50	42.16	54.19	40.86	5.23	50.67	39.50	39.50	5.77	46.93	46.93	38.04	7.10
	72 (22.2)	69.69	35.64	4.41	66.51	34.48	4.84	63.12	33.26	59.52	31.98	5.33	55.70	30.85	30.85	5.87	51.64	51.64	29.23	7.19
	57 (13.9)	58.74	58.74	4.33	56.47	56.47	4.76	54.04	54.04	51.43	51.43	5.25	48.62	48.62	48.62	5.80	45.58	45.58	45.58	7.15
	62 (16.7)	59.14	56.29	4.33	56.56	56.56	4.76	54.11	54.11	51.50	51.50	5.25	48.68	48.68	48.68	5.80	45.63	45.63	45.63	7.15
2250	63 (17.2)†	59.92	45.20	4.34	57.09	43.99	4.77	54.08	42.73	50.91	41.39	5.24	47.54	39.96	39.96	5.79	43.96	43.96	38.42	7.12
	67 (19.4)	64.42	47.10	4.41	61.39	45.91	4.84	58.19	44.64	54.77	43.32	5.32	51.18	41.91	41.91	5.86	47.35	47.35	40.39	7.18
	72 (22.2)	70.64	37.16	4.50	67.35	35.98	4.93	63.84	34.74	60.14	33.44	5.42	56.21	32.09	32.09	5.96	52.04	52.04	30.66	7.28

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*PF4MNB061	1.00	1.00	
PF4MNA061	1.00	1.02	

\* Detailed cooling capacities are based on indoor and outdoor unit at the same elevation, per AHRI Standard 210/240-94, and connected by 25 ft of tubing. If other than 25 ft of tubing is used and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

† 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) 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).

When the required data falls between the published data, interpolation may be performed.

\*\* Unit kW is total of indoor and outdoor unit kilowatts.



# 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 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)	700	7.98	1.45	10.55	9.70	1.54	13.20	12.03	1.60	16.25	14.43	1.67	19.15	17.43	1.73	22.05	22.05	1.80	25.36	25.36	1.89	28.21	28.21	1.97	
	800	8.15	1.47	10.74	9.87	1.54	13.42	12.23	1.60	16.65	14.78	1.65	19.39	17.64	1.70	22.34	22.34	1.76	25.60	25.60	1.83	28.25	28.25	1.91	
	900	8.29	1.46	10.91	10.02	1.55	13.60	12.40	1.60	16.82	14.94	1.65	19.58	17.82	1.69	22.59	22.59	1.74	25.74	25.74	1.80	28.20	28.20	1.86	
70 (21.1)	700	7.54	1.51	10.14	9.31	1.61	12.78	11.66	1.67	15.64	13.89	1.74	18.85	17.15	1.82	21.72	21.72	1.89	24.99	24.99	1.98	27.87	27.87	2.07	
	800	7.71	1.52	10.32	9.49	1.61	13.00	11.85	1.67	15.96	14.18	1.73	19.08	17.36	1.79	22.00	22.00	1.85	25.27	25.27	1.93	27.95	27.95	2.00	
	900	7.85	1.53	10.49	9.64	1.62	13.19	12.03	1.67	16.26	14.44	1.72	19.29	17.55	1.78	22.24	22.24	1.83	25.44	25.44	1.89	27.94	27.94	1.96	
75 (23.9)	700	7.08	1.58	9.68	8.89	1.68	12.36	11.27	1.75	15.19	13.49	1.82	18.59	16.91	1.91	21.39	21.39	1.98	24.61	24.61	2.08	27.51	27.51	2.17	
	800	7.24	1.59	9.86	9.06	1.68	12.57	11.46	1.75	15.45	13.73	1.81	18.81	17.11	1.88	21.66	21.66	1.95	24.91	24.91	2.02	27.62	27.62	2.10	
	900	7.38	1.60	10.03	9.22	1.69	12.76	11.63	1.75	15.68	13.92	1.80	18.99	17.28	1.87	21.90	21.90	1.92	25.11	25.11	1.99	27.65	27.65	2.06	

PH13NB024\*\*\*A Outdoor Section With FB4CNF024 Indoor Section

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
CSPH*2412A**	0.99	0.99	PG95XA*42060B***
CSPH*3012A**	1.00	0.97	PG95XA*42060B***
CAP**2417A**	0.99	0.99	PG96VA*42060B***
CAP**3017A**	1.00	0.97	PG96VA*42060B***
CNPH*2417A**	0.99	0.99	PG96VA*42060B***
CNPH*3017A**	1.00	0.97	PG96VA*42060B***
CNPV*2417A**	0.99	0.99	PG96VA*42060B***
CNPV*3017A**	1.00	0.97	PG96VA*42060B***
CSPH*2412A**	0.99	0.99	PG96VA*42060B***
CSPH*3012A**	1.00	0.97	PG96VA*42060B***
CAP**2417A**	0.99	0.97	PG96VA*48080B***
CAP**3017A**	1.00	0.96	PG96VA*48080B***
CNPH*2417A**	0.99	0.97	PG96VA*48080B***
CNPH*3017A**	1.00	0.96	PG96VA*48080B***
CNPV*2417A**	0.99	0.96	PG96VA*48080B***
CNPV*3017A**	1.00	0.96	PG96VA*48080B***
CSPH*2412A**	0.99	0.97	PG96VA*48080B***
CSPH*3012A**	1.00	0.96	PG96VA*48080B***
CAP**2417A**	0.99	0.96	PG96VA*60100C***
CAP**3017A**	1.00	0.95	PG96VA*60100C***
CNPH*2412A**	0.99	0.99	PG96VA*66120D***
CNPH*3012A**	1.00	0.96	PG96VA*66120D***

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FB4CNF024	1.00	1.00	
FB4CNF030	1.00	0.96	
FF1ENP025	1.01	0.99	
FF1ENP031	1.01	0.98	
PF4MNA025	1.01	0.99	
PF4MNA031	1.01	0.96	
PF4MNB025	1.01	0.96	
PF4MNB031	1.01	0.96	
CAP**2414A**	1.00	0.98	PG8*EA024045
CAP**3014A**	1.00	0.97	PG8*EA024045
CNPH*2417A**	1.00	0.98	PG8*EA024045
CNPH*3017A**	1.00	0.96	PG8*EA024045
CNPV*2414A**	1.00	0.98	PG8*EA024045
CNPV*3014A**	1.00	0.97	PG8*EA024045
CSPH*2412A**	1.00	0.98	PG8*EA024045
CSPH*3012A**	1.00	0.96	PG8*EA024045
CAP**2414A**	0.99	0.99	PG8*VA036070
CAP**3014A**	0.99	0.97	PG8*VA036070
CNPV*2414A**	0.99	0.97	PG8*VA036070
CNPV*3014A**	0.99	0.97	PG8*VA036070
CSPH*2412A**	1.00	0.98	PG8*VA036070
CSPH*3012A**	1.00	0.97	PG8*VA036070
CAP**2417A**	0.99	0.97	PG8*VA048090
CAP**3017A**	0.99	0.96	PG8*VA048090
CNPH*2417A**	0.99	0.96	PG8*VA048090
CNPH*3017A**	0.99	0.96	PG8*VA048090
CNPV*2417A**	0.99	0.96	PG8*VA048090
CNPV*3017A**	0.99	0.96	PG8*VA048090
CSPH*2412A**	1.00	0.97	PG8*VA048090
CSPH*3012A**	1.00	0.96	PG8*VA048090
CAP**2412A**	1.00	0.98	PG8*VA060110
CAP**3012A**	1.00	0.96	PG8*VA060110
CNPH*2412A**	1.00	0.98	PG8*VA060110
CNPH*3012A**	1.00	0.96	PG8*VA060110
CNPV*2412A**	1.00	0.98	PG8*VA060110
CNPV*3012A**	1.00	0.96	PG8*VA060110
CSPH*2412A**	1.00	0.96	PG95XA*42060B***
CSPH*3012A**	0.99	0.98	PG95XA*42060B***
CAP**2417A**	1.00	0.97	PG95XA*42060B***
CAP**3017A**	1.00	0.98	PG95XA*42060B***
CNPH*2417A**	0.99	0.98	PG95XA*42060B***
CNPH*3017A**	1.00	0.97	PG95XA*42060B***
CNPV*2417A**	0.99	0.98	PG95XA*42060B***
CNPV*3017A**	1.00	0.97	PG95XA*42060B***

See notes on pg. 27



# 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)		
		EDB °F (°C)	CFM	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	
Total	Integ			Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total
65 (18.3)	1050	12.79	11.77	16.58	15.24	2.26	20.53	18.72	2.35	24.72	21.96	2.46	29.59	26.93	2.60	33.44	33.44	2.71	37.48	37.48	2.84	41.96	41.96	3.04	
	1200	13.08	12.04	16.92	15.55	2.28	20.91	19.07	2.36	25.18	22.36	2.46	29.99	27.29	2.58	33.84	33.84	2.68	38.05	38.05	2.80	42.68	42.68	2.97	
	1350	13.35	12.26	17.22	15.83	2.30	21.25	19.37	2.37	25.56	22.70	2.46	30.31	27.58	2.58	34.23	34.23	2.66	38.53	38.53	2.77	43.26	43.26	2.93	
70 (21.1)	1050	11.97	11.01	15.80	14.52	2.36	19.79	18.04	2.46	24.01	21.32	2.57	29.06	26.45	2.72	32.95	32.95	2.83	36.89	36.89	2.97	41.27	41.27	3.17	
	1200	12.30	11.31	16.16	14.85	2.38	20.20	18.42	2.47	24.46	21.72	2.56	29.49	26.84	2.70	33.40	33.40	2.80	37.45	37.45	2.92	41.97	41.97	3.10	
	1350	12.56	11.55	16.46	15.13	2.40	20.53	18.72	2.48	24.83	22.06	2.57	29.84	27.16	2.69	33.76	33.76	2.78	37.92	37.92	2.89	42.56	42.56	3.06	
75 (23.9)	1050	11.18	10.29	15.04	13.83	2.47	19.07	17.39	2.57	23.26	20.66	2.68	27.74	25.24	2.81	32.46	32.46	2.92	36.32	36.32	3.10	40.58	40.58	3.31	
	1200	11.45	10.53	15.37	14.13	2.48	19.45	17.73	2.57	23.71	21.06	2.67	28.43	25.87	2.79	32.89	32.89	2.96	36.86	36.86	3.05	41.27	41.27	3.24	
	1350	11.71	10.78	15.67	14.40	2.51	19.78	18.04	2.59	24.08	21.39	2.68	29.29	26.66	2.81	33.26	33.26	2.90	37.31	37.31	3.02	41.84	41.84	3.19	

PH13NB036\*\*\*B Outdoor Section With FB4CNF036 Indoor Section

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FB4CNF036	1.00	1.00	PG8*VA060110	CAP**4221A**	0.98	0.95	PG8*VA060110	CAP**4221A**	0.98	0.95	PG8*VA060110	CAP**4221A**	0.98	0.95	PG8*VA060110	CSPH*4212A**	1.00	0.96	PG96VA*48080B***	CSPH*4212A**	1.00	0.96	PG96VA*48080B***
FB4CNF042	1.00	0.93	PG8*VA060110	CNPV*3621A**	0.99	0.96	PG8*VA060110	CNPV*3621A**	0.99	0.96	PG8*VA060110	CNPV*3621A**	0.99	0.96	PG8*VA060110	CNPV*3617A**	0.99	0.95	PG96VA*60100C***	CNPV*3617A**	0.99	0.95	PG96VA*60100C***
FFIENP037	0.98	0.99	PG8*VA060110	CNPV*4221A**	0.99	0.97	PG96VA*60100C***	CNPV*4221A**	0.99	0.97	PG96VA*60100C***												
PF4MNA037	1.00	0.97	PG8*VA060110	CNPV*4221A**	0.99	0.96	PG96VA*60100C***	CNPV*4221A**	0.99	0.96	PG96VA*60100C***												
PF4MNA043	1.00	0.96	PG8*VA060110	CSPH*3612A**	0.99	0.95	PG8*VA060110	CSPH*3612A**	0.99	0.95	PG8*VA060110	CSPH*3612A**	0.99	0.95	PG8*VA060110	CSPH*3617A**	0.99	0.98	PG96VA*48080B***	CSPH*3617A**	0.99	0.98	PG96VA*48080B***
PF4MNB037	1.00	0.93	PG8*VA060110	CSPH*4212A**	0.99	0.94	PG96VA*42060B***	CSPH*4212A**	0.99	0.94	PG96VA*42060B***												
PF4MNB043	1.00	0.93	PG8*VA060110	CAP**4224A**	0.98	0.94	PG8*VA066135	CAP**4224A**	0.98	0.94	PG8*VA066135	CAP**4224A**	0.98	0.94	PG8*VA066135	CAP**4221A**	0.99	0.95	PG96VA*60100C***	CAP**4221A**	0.99	0.95	PG96VA*60100C***
CSPH*3612A**	1.01	0.99	PG8*EA024045	CSPH*3612A**	0.99	0.94	PG96VA*60100C***	CSPH*3612A**	0.99	0.94	PG96VA*60100C***												
C38*EA024A**	1.01	0.98	PG8*EA024045	CSPH*4212A**	0.99	0.96	PG8*EA048070	CSPH*4212A**	0.99	0.96	PG8*EA048070	CSPH*4212A**	0.99	0.96	PG8*EA048070	CSPH*4212A**	0.99	0.96	PG96VA*60100C***	CSPH*4212A**	0.99	0.96	PG96VA*60100C***
CAP**3617A**	0.99	0.99	PG8*EA048070	CAP**3617A**	0.99	0.99	PG96VA*60100C***	CAP**3617A**	0.99	0.99	PG96VA*60100C***												
CNPV*3617A**	0.99	0.99	PG8*EA048070	CNPV*3617A**	0.99	0.99	PG96VA*60100C***	CNPV*3617A**	0.99	0.99	PG96VA*60100C***												
CNPV*4217A**	0.99	0.97	PG8*EA048070	CNPV*4217A**	0.99	0.97	PG96VA*60100C***	CNPV*4217A**	0.99	0.97	PG96VA*60100C***												
CSPH*3612A**	1.00	0.97	PG8*EA048070	CSPH*3612A**	1.00	0.97	PG96VA*60100C***	CSPH*3612A**	1.00	0.97	PG96VA*60100C***												
CSPH*4212A**	1.01	0.96	PG8*EA048070	CSPH*4212A**	1.01	0.96	PG96VA*60100C***	CSPH*4212A**	1.01	0.96	PG96VA*60100C***												
CAP**3621A**	0.99	0.95	PG8*EA048090	CAP**3621A**	0.99	0.95	PG96VA*60100C***	CAP**3621A**	0.99	0.95	PG96VA*60100C***												
CAP**4221A**	0.99	0.94	PG8*EA048090	CAP**4221A**	0.99	0.94	PG96VA*60100C***	CAP**4221A**	0.99	0.94	PG96VA*60100C***												
CNPV*4221A**	0.99	0.94	PG8*EA048090	CNPV*4221A**	0.99	0.94	PG96VA*60100C***	CNPV*4221A**	0.99	0.94	PG96VA*60100C***												
CNPV*3621A**	0.98	0.96	PG8*EA048090	CNPV*3621A**	0.98	0.96	PG96VA*60100C***	CNPV*3621A**	0.98	0.96	PG96VA*60100C***												
CNPV*4221A**	0.99	0.94	PG8*EA048090	CNPV*4221A**	0.99	0.94	PG96VA*60100C***	CNPV*4221A**	0.99	0.94	PG96VA*60100C***												
CNPV*3621A**	0.98	0.96	PG8*EA048090	CNPV*3621A**	0.98	0.96	PG96VA*60100C***	CNPV*3621A**	0.98	0.96	PG96VA*60100C***												
CNPV*4221A**	0.99	0.94	PG8*EA048090	CNPV*4221A**	0.99	0.94	PG96VA*60100C***	CNPV*4221A**	0.99	0.94	PG96VA*60100C***												
CNPV*3621A**	0.98	0.96	PG8*EA048090	CNPV*3621A**	0.98	0.96	PG96VA*60100C***	CNPV*3621A**	0.98	0.96	PG96VA*60100C***												
CNPV*4221A**	0.99	0.94	PG8*EA048090	CNPV*4221A**	0.99	0.94	PG96VA*60100C***	CNPV*4221A**	0.99	0.94	PG96VA*60100C***												
CNPV*3621A**	0.98	0.96	PG8*EA048090	CNPV*3621A**	0.98	0.96	PG96VA*60100C***	CNPV*3621A**	0.98	0.96	PG96VA*60100C***												
CNPV*4221A**	0.99	0.94	PG8*EA048090	CNPV*4221A**	0.99	0.94	PG96VA*60100C***	CNPV*4221A**	0.99	0.94	PG96VA*60100C***												
CNPV*3621A**	0.98	0.96	PG8*EA048090	CNPV*3621A**	0.98	0.96	PG96VA*60100C***	CNPV*3621A**	0.98	0.96	PG96VA*60100C***												
CNPV*4221A**	0.99	0.94	PG8*EA048090	CNPV*4221A**	0.99	0.94	PG96VA*60100C***	CNPV*4221A**	0.99	0.94	PG96VA*60100C***												
CNPV*3621A**	0.98	0.96	PG8*EA048090	CNPV*3621A**	0.98	0.96	PG96VA*60100C***	CNPV*3621A**	0.98	0.96	PG96VA*60100C***												
CNPV*4221A**	0.99	0.94	PG8																				

# 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	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt	Capacity MBtuh		Total Sys. KWt
EDB ° F (° C)	CFM	Total	Integ	Total	Integ	Total	Integ	Total	Integ	Total	Integ	Total	Integ	Total	Integ	Total	Integ	Total	Integ	Total	Integ	Total	Integ	Total	
65 (18.3)	1225	15.60	14.35	2.64	20.17	18.54	2.75	24.73	22.55	2.85	29.47	26.17	2.95	34.77	31.64	3.05	39.07	36.07	3.08	43.89	40.89	3.10	49.14	46.14	3.09
	1400	15.96	14.69	2.66	20.52	18.86	2.76	25.15	22.93	2.85	29.96	26.61	2.94	35.16	32.00	3.03	39.57	36.57	3.05	44.52	41.52	3.05	49.61	46.61	3.01
	1525	16.17	14.87	2.68	20.75	19.07	2.77	25.41	23.17	2.86	30.27	26.89	2.94	35.42	32.23	3.02	39.87	36.87	3.04	44.90	41.90	3.03	49.76	46.76	2.97
	1225	14.87	13.68	2.80	19.40	17.83	2.88	23.98	21.87	2.97	28.70	25.49	3.06	34.24	31.16	3.17	38.52	35.52	3.21	43.24	40.24	3.23	48.43	45.43	3.23
	1400	15.18	13.97	2.82	19.76	18.16	2.90	24.40	22.25	2.98	29.18	25.91	3.06	34.67	31.55	3.15	39.00	36.00	3.17	43.85	40.85	3.18	48.95	45.95	3.15
70 (21.1)	1525	15.33	14.10	2.84	20.00	18.37	2.91	24.66	22.49	2.99	29.49	26.19	3.06	34.94	31.79	3.14	39.30	36.30	3.16	44.23	41.23	3.16	49.17	46.17	3.11
	1225	14.04	12.91	2.96	18.60	17.10	3.03	23.21	21.16	3.11	27.91	24.79	3.19	32.98	30.01	3.28	38.00	35.00	3.34	42.60	39.60	3.37	47.73	44.73	3.38
75 (23.9)	1400	14.34	13.20	2.99	18.96	17.42	3.04	23.61	21.53	3.11	28.39	25.21	3.18	34.12	31.05	3.28	38.46	35.46	3.30	43.19	40.19	3.31	48.30	45.30	3.29
	1525	14.55	13.38	3.01	19.19	17.63	3.05	23.88	21.77	3.12	28.69	25.48	3.18	34.39	31.29	3.27	38.75	35.75	3.29	43.56	40.56	3.29	48.57	45.57	3.25

PH13NB042\*\*\*B Outdoor Section With FB4CNF042 Indoor Section

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FB4CNF042	1.00	1.00	PG8*VA060110	CSPH*4212A**	0.99	0.99	PG8*VA060110	CSPH*4212A**	0.99	1.02	PG96VA*60100C***
FB4CNF048	1.00	0.99	PG8*VA060110	CSPH*4812A**	1.00	0.99	PG8*VA060110	CAP**4824A**	0.99	0.99	PG96VA*60100C***
PF4MNA043	1.01	1.01	PG8*VA066135	CAP**4224A**	0.97	1.00	PG8*VA066135	CNPV*4824A**	0.99	1.03	PG96VA*60100C***
PF4MNA049	1.01	0.97	PG8*VA066135	CAP**4824A**	0.99	0.98	PG8*VA066135	CNPV*4824A**	0.99	0.98	PG96VA*60100C***
PF4MNB043	1.00	0.99	PG8*VA066135	CNPV*4824A**	0.99	0.98	PG8*VA066135	CNPV*4212A**	0.99	1.03	PG96VA*60100C***
PF4MNB049	1.00	0.95	PG8*VA066135	CSPH*4212A**	0.99	0.98	PG8*VA066135	CNPV*4824A**	0.99	0.98	PG96VA*60100C***
CAP**4221A**	0.99	1.01	PG8*VA066135	CSPH*4812A**	0.99	0.97	PG8*VA066135	CNPV*4212A**	0.99	0.99	PG96VA*60100C***
CAP**4821A**	0.99	0.98	PG8*EA048090	CNPV*4812A**	1.01	1.01	PG95XA*60080C***	CSPH*4212A**	0.99	0.99	PG96VA*60100C***
PG8*EA048090	0.99	1.02	PG8*EA048090	CAP**4221A**	0.99	1.01	PG95XA*60080C***	CAP**4224A**	0.99	1.02	PG96VA*66120D***
PG8*EA048090	1.00	0.99	PG8*EA048090	CAP**4821A**	1.00	0.99	PG95XA*60080C***	CAP**4824A**	0.99	0.99	PG96VA*66120D***
CNPV*4221A**	1.00	1.02	PG8*EA048090	CNPV*4212A**	0.99	1.02	PG95XA*60080C***	CNPV*4824A**	0.99	0.98	PG96VA*66120D***
CNPV*4821A**	1.00	0.99	PG8*EA048090	CNPV*4821A**	1.00	0.99	PG95XA*60080C***	CSPH*4212A**	0.99	0.99	PG96VA*66120D***
CSPH*4212A**	1.00	0.98	PG8*EA048090	CNPV*4212A**	0.99	1.02	PG95XA*60080C***	CSPH*4812A**	1.00	0.99	PG96VA*66120D***
CSPH*4812A**	1.00	0.98	PG8*EA048090	CNPV*4812A**	1.00	0.99	PG95XA*60080C***	CSPH*4212A**	0.99	0.99	PG96VA*66120D***
CAP**4221A**	0.99	1.00	PG8*EA060110	CNPV*4812A**	1.00	0.99	PG95XA*60080C***	CNPV*4212A**	0.99	0.99	PG96VA*66120D***
CAP**4821A**	0.99	0.98	PG8*EA060110	CSPH*4812A**	1.00	0.99	PG95XA*60080C***	CNPV*4812A**	1.00	0.99	PG96VA*66120D***
PG8*EA060110	0.99	0.98	PG8*EA060110	CSPH*4212A**	1.00	0.99	PG95XA*60080C***	CSPH*4812A**	1.00	0.99	PG96VA*66120D***
PG8*EA060110	0.99	0.97	PG8*EA060110	CAP**4224A**	0.99	1.00	PG95XA*60080C***	CAP**4824A**	0.99	0.99	PG96VA*66120D***
CSPH*4212A**	0.99	1.01	PG8*EA060110	CAP**4824A**	0.99	0.98	PG95XA*60080C***	CSPH*4212A**	0.99	0.99	PG96VA*66120D***
CSPH*4812A**	0.99	0.97	PG8*EA060110	CSPH*4212A**	0.99	0.98	PG95XA*60080C***	CSPH*4812A**	0.99	0.99	PG96VA*66120D***
PG8*EA060110	0.99	0.98	PG8*EA060110	CAP**4224A**	0.99	1.00	PG95XA*60080C***	CAP**4824A**	0.99	0.99	PG96VA*66120D***
PG8*EA060110	0.99	0.97	PG8*EA060110	CSPH*4212A**	0.99	0.98	PG95XA*60080C***	CSPH*4812A**	0.99	0.99	PG96VA*66120D***
CSPH*4212A**	0.99	1.01	PG8*EA060110	CAP**4224A**	0.99	0.98	PG95XA*60080C***	CAP**4824A**	0.99	0.99	PG96VA*66120D***
CSPH*4812A**	0.99	0.98	PG8*EA060110	CSPH*4212A**	0.99	0.98	PG95XA*60080C***	CSPH*4812A**	0.99	0.99	PG96VA*66120D***
PG8*EA060110	0.99	0.98	PG8*EA060110	CAP**4224A**	0.99	1.00	PG95XA*60080C***	CAP**4824A**	0.99	0.99	PG96VA*66120D***
PG8*EA060110	0.99	0.98	PG8*EA060110	CSPH*4212A**	0.99	0.98	PG95XA*60080C***	CSPH*4812A**	0.99	0.99	PG96VA*66120D***
CSPH*4212A**	0.99	1.01	PG8*EA060110	CAP**4224A**	0.99	0.98	PG95XA*60080C***	CAP**4824A**	0.99	0.99	PG96VA*66120D***
CSPH*4812A**	0.99	0.99	PG8*EA060110	CSPH*4212A**	0.99	0.98	PG95XA*60080C***	CSPH*4812A**	0.99	0.99	PG96VA*66120D***
PG8*EA060110	0.99	0.98	PG8*EA060110	CAP**4224A**	0.99	1.00	PG95XA*60080C***	CAP**4824A**	0.99	0.99	PG96VA*66120D***
PG8*EA060110	0.99	0.98	PG8*EA060110	CSPH*4212A**	0.99	0.98	PG95XA*60080C***	CSPH*4812A**	0.99	0.99	PG96VA*66120D***
CSPH*4212A**	0.99	1.01	PG8*EA060110	CAP**4224A**	0.99	0.98	PG95XA*60080C***	CAP**4824A**	0.99	0.99	PG96VA*66120D***
CSPH*4812A**	0.99	0.99	PG8*EA060110	CSPH*4212A**	0.99	0.98	PG95XA*60080C***	CSPH*4812A**	0.99	0.99	PG96VA*66120D***
PG8*EA060110	0.99	0.98	PG8*EA060110	CAP**4224A**	0.99	1.00	PG95XA*60080C***	CAP**4824A**	0.99	0.99	PG96VA*66120D***
PG8*EA060110	0.99	0.98	PG8*EA060110	CSPH*4212A**	0.99	0.98	PG95XA*60080C***	CSPH*4812A**	0.99	0.99	PG96VA*66120D***

See notes on pg. 27



PH13NB

# 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 Sys. KWt	Capacity MBtuh	Total Sys. KWt	Capacity MBtuh	Total Sys. KWt	Capacity MBtuh	Total Sys. KWt	Capacity MBtuh	Total Sys. KWt	Capacity MBtuh	Total Sys. KWt	Capacity MBtuh	Total Sys. KWt	Capacity MBtuh	Total Sys. KWt								
65 (18.3)	1400	18.42	16.95	3.14	23.65	21.74	3.21	28.90	26.35	3.28	35.25	31.31	3.40	40.02	36.42	3.48	45.07	45.07	3.56	50.81	50.81	3.66	57.16	57.16	3.81
	1600	18.80	17.30	3.19	24.10	22.15	3.24	29.38	26.79	3.30	35.74	31.74	3.40	40.52	36.87	3.46	45.69	45.69	3.53	51.59	51.59	3.61	58.17	58.17	3.72
	1800	19.15	17.61	3.24	24.47	22.49	3.28	29.81	27.18	3.33	36.14	32.10	3.41	40.97	37.28	3.46	46.22	46.22	3.52	52.24	52.24	3.59	58.97	58.97	3.66
70 (21.1)	1400	17.61	16.20	3.27	22.86	21.00	3.34	28.11	25.63	3.42	33.56	29.80	3.50	39.44	35.89	3.63	44.40	44.40	3.71	50.01	50.01	3.82	56.20	56.20	3.97
	1600	17.99	16.55	3.31	23.30	21.41	3.37	28.60	26.08	3.43	34.24	30.41	3.51	39.94	36.35	3.61	45.00	45.00	3.68	50.76	50.76	3.77	57.15	57.15	3.90
	1800	18.34	16.87	3.36	23.68	21.76	3.41	29.03	26.47	3.46	35.39	31.43	3.55	40.40	36.76	3.61	45.52	45.52	3.67	51.40	51.40	3.74	58.01	58.01	3.83
75 (23.9)	1400	16.74	15.40	3.41	22.00	20.22	3.48	27.27	24.87	3.56	32.66	29.01	3.65	38.91	35.41	3.79	43.75	43.75	3.87	49.22	49.22	3.98	55.27	55.27	4.15
	1600	17.12	15.75	3.45	22.44	20.62	3.51	27.77	25.32	3.57	33.25	29.53	3.65	39.42	35.87	3.77	44.33	44.33	3.84	49.95	49.95	3.93	56.19	56.19	4.07
	1800	17.47	16.07	3.50	22.83	20.98	3.55	28.20	25.71	3.60	33.75	29.98	3.66	39.83	36.24	3.77	44.84	44.84	3.83	50.57	50.57	3.90	57.03	57.03	4.01

PH13NB048\*\*\*B Outdoor Section With FB4CNF048 Indoor Section

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL	HEATING INDOOR MODEL		CAPACITY		POWER		FURNACE MODEL	
				Model	Capacity	Model	Capacity	Model	Capacity	Model	Capacity
*FB4CNF048	1.00	1.00		CSPH*6012A**	0.99	0.96	PG8*VA066135	CAP**4821A**	1.00	1.00	PG8*VA066135
FB4CNF060	1.00	0.97		CAP**6021A**	1.00	0.98	PG95XA*60080C***	CNPV*4821A**	1.00	0.99	PG95XA*60080C***
PF4MNA049	1.02	0.99		CNPV*4821A**	1.00	0.99	PG95XA*60080C***	CSPH*4812A**	1.00	0.99	PG95XA*60080C***
PF4MNA061	1.01	0.95		CSPH*4812A**	1.00	0.99	PG95XA*60080C***	CAP**4821A**	1.00	0.97	PG95XA*60080C***
PF4MNB049	1.02	0.98		CAP**4821A**	1.00	0.99	PG95XA*60080C***	CNPV*6021A**	1.00	0.99	PG95XA*60100C***
PF4MNB061	1.00	0.93		CNPV*6021A**	1.00	0.98	PG95XA*60100C***	CSPH*4812A**	1.00	0.97	PG95XA*60100C***
CAP**4821A**	1.00	0.99	PG8*EA048090	CSPH*4812A**	1.00	0.98	PG95XA*60100C***	CNPV*4821A**	1.00	0.99	PG95XA*60100C***
CAP**6021A**	1.00	0.98	PG8*EA048090	CNPV*4821A**	1.00	0.98	PG95XA*60100C***	CSPH*6012A**	1.00	0.97	PG95XA*60100C***
CNPV*4821A**	1.00	0.99	PG8*EA048090	CSPH*6012A**	1.00	0.98	PG95XA*60100C***	CAP**4824A**	1.00	0.99	PG95XA*66120D***
CNPV*EA048090	1.00	0.99	PG8*EA048090	CAP**4824A**	1.00	0.98	PG95XA*66120D***	CNPV*6024A**	1.00	0.98	PG95XA*66120D***
CSPH*4812A**	1.00	0.98	PG8*EA048090	CNPV*6024A**	1.00	0.99	PG95XA*66120D***	CSPH*4812A**	1.00	0.98	PG95XA*66120D***
CSPH*6012A**	1.00	0.97	PG8*EA048090	CSPH*4812A**	1.00	0.99	PG95XA*66120D***	CNPV*4812A**	1.00	0.99	PG95XA*66120D***
CAP**4821A**	0.99	0.96	PG8*EA060110	CNPV*4812A**	1.00	0.98	PG95XA*66120D***	CSPH*6012A**	1.00	0.97	PG95XA*66120D***
CAP**6021A**	0.99	0.97	PG8*EA060110	CSPH*6012A**	1.00	0.98	PG95XA*66120D***	CAP**4821A**	0.99	0.99	PG96VA*60080C***
CNPV*4821A**	0.99	0.97	PG8*EA060110	CAP**4821A**	1.00	0.98	PG96VA*60080C***	CNPV*6024A**	1.00	0.98	PG96VA*60080C***
CNPV*EA060110	0.99	0.97	PG8*EA060110	CNPV*6024A**	1.00	0.98	PG96VA*60080C***	CSPH*4821A**	0.99	0.98	PG96VA*60080C***
CSPH*4812A**	0.99	0.97	PG8*EA060110	CSPH*4821A**	0.99	0.98	PG96VA*60080C***	CNPV*4812A**	0.99	0.98	PG96VA*60080C***
CSPH*6012A**	1.00	0.98	PG8*EA060110	CNPV*4812A**	1.00	0.98	PG96VA*60080C***	CSPH*4812A**	0.99	0.98	PG96VA*60080C***
CAP**4824A**	0.99	0.96	PG8*EA060135	CSPH*4812A**	0.99	0.98	PG96VA*60080C***	CAP**4821A**	0.99	0.99	PG96VA*60100C***
CAP**6024A**	1.00	0.97	PG8*EA060135	CNPV*4812A**	1.00	0.97	PG96VA*60100C***	CNPV*6021A**	1.00	0.98	PG96VA*60100C***
CNPV*6024A**	1.00	0.98	PG8*EA060135	CSPH*6012A**	1.00	0.98	PG96VA*60100C***	CSPH*6021A**	1.00	0.98	PG96VA*60100C***
CNPV*EA060135	1.00	0.97	PG8*EA060135	CNPV*6021A**	1.00	0.98	PG96VA*60100C***	CNPV*4821A**	0.99	0.98	PG96VA*60100C***
CSPH*6012A**	1.00	0.96	PG8*EA060135	CSPH*4812A**	0.99	0.98	PG96VA*60100C***	CSPH*4812A**	0.99	0.98	PG96VA*60100C***
CAP**4817A**	1.00	0.99	PG8*VA048090	CNPV*4812A**	1.00	0.99	PG96VA*60100C***	CAP**4824A**	1.00	0.98	PG96VA*66120D***
CAP**4812A**	1.00	0.99	PG8*VA048090	CSPH*4812A**	1.00	0.98	PG96VA*66120D***	CNPV*6024A**	1.00	0.98	PG96VA*66120D***
CSPH*4812A**	1.00	0.98	PG8*VA048090	CNPV*6024A**	1.00	0.99	PG96VA*66120D***	CSPH*4812A**	0.99	0.98	PG96VA*66120D***
CAP**4821A**	1.00	0.98	PG8*VA060110	CSPH*4812A**	0.99	0.98	PG96VA*66120D***	CNPV*4812A**	0.99	0.98	PG96VA*66120D***
CAP**6021A**	1.00	0.97	PG8*VA060110	CNPV*4812A**	1.00	0.98	PG96VA*66120D***	CSPH*6012A**	1.00	0.97	PG96VA*66120D***
CNPV*4821A**	0.99	0.98	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CAP**6024A**	1.00	0.98	PG96VA*66120D***
CNPV*EA060110	0.99	0.96	PG8*VA060110	CNPV*6024A**	1.00	0.98	PG96VA*66120D***	CNPV*6024A**	1.00	0.98	PG96VA*66120D***
CSPH*4812A**	0.99	0.96	PG8*VA060110	CSPH*4812A**	0.99	0.98	PG96VA*66120D***	CSPH*4812A**	0.99	0.98	PG96VA*66120D***
CSPH*6012A**	1.00	0.97	PG8*VA060110	CNPV*4812A**	1.00	0.98	PG96VA*66120D***	CSPH*6012A**	1.00	0.97	PG96VA*66120D***
CAP**4824A**	0.99	0.96	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CAP**4824A**	0.99	0.98	PG96VA*66120D***
CAP**6024A**	1.00	0.97	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CNPV*6024A**	1.00	0.98	PG96VA*66120D***
CNPV*6024A**	1.00	0.98	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CSPH*6024A**	1.00	0.98	PG96VA*66120D***
CNPV*EA060110	0.99	0.96	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CNPV*6024A**	1.00	0.98	PG96VA*66120D***
CSPH*4812A**	0.99	0.96	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CSPH*4812A**	0.99	0.98	PG96VA*66120D***
CSPH*6012A**	1.00	0.97	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CSPH*6012A**	1.00	0.97	PG96VA*66120D***
CAP**4821A**	1.00	0.99	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CAP**4821A**	1.00	0.99	PG96VA*66120D***
CAP**6021A**	1.00	0.98	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CAP**6021A**	1.00	0.98	PG96VA*66120D***
CNPV*4821A**	0.99	0.98	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CNPV*4821A**	0.99	0.98	PG96VA*66120D***
CNPV*EA060110	0.99	0.96	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CNPV*EA060110	0.99	0.96	PG96VA*66120D***
CSPH*4812A**	0.99	0.96	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CSPH*4812A**	0.99	0.98	PG96VA*66120D***
CSPH*6012A**	1.00	0.97	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CSPH*6012A**	1.00	0.97	PG96VA*66120D***
CAP**4824A**	0.99	0.96	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CAP**4824A**	0.99	0.98	PG96VA*66120D***
CAP**6024A**	1.00	0.97	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CAP**6024A**	1.00	0.97	PG96VA*66120D***
CNPV*6024A**	1.00	0.98	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CNPV*6024A**	1.00	0.98	PG96VA*66120D***
CNPV*EA060110	0.99	0.96	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CNPV*EA060110	0.99	0.96	PG96VA*66120D***
CSPH*4812A**	0.99	0.96	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CSPH*4812A**	0.99	0.98	PG96VA*66120D***
CSPH*6012A**	1.00	0.97	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CSPH*6012A**	1.00	0.97	PG96VA*66120D***
CAP**4821A**	1.00	0.99	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CAP**4821A**	1.00	0.99	PG96VA*66120D***
CAP**6021A**	1.00	0.98	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CAP**6021A**	1.00	0.98	PG96VA*66120D***
CNPV*4821A**	0.99	0.98	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CNPV*4821A**	0.99	0.98	PG96VA*66120D***
CNPV*EA060110	0.99	0.96	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CNPV*EA060110	0.99	0.96	PG96VA*66120D***
CSPH*4812A**	0.99	0.96	PG8*VA060110	CSPH*6012A**	1.00	0.98	PG96VA*66120D***	CSPH*4812A**	0.99	0.98	PG96VA*66120D***
CSPH*6012A**	1.00	0.97	PG8*VA060110	CNPV*6012A**	1.00	0.98	PG96VA*66120D***	CSPH*6012A**	1.00	0.97	PG96VA*66120D***
CAP**4824A**											

# HEAT PUMP HEATING PERFORMANCE (CONT.)

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 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†
65 (18.3)	1825	23.52	21.64	3.67	29.80	27.38	3.77	35.99	32.82	3.87	42.31	37.58	3.97	49.56	45.10	4.13	55.29	52.29	4.26	62.11	62.11	4.37	67.98	67.98	4.52
	2082	24.07	22.15	3.74	30.40	27.93	3.82	36.64	33.40	3.90	43.07	38.25	3.99	50.22	45.70	4.13	56.04	56.04	4.23	62.79	62.79	4.32	68.30	68.30	4.44
	2339	24.58	22.61	3.80	30.93	28.43	3.88	37.20	33.92	3.94	43.80	38.90	4.02	50.76	46.19	4.14	56.79	56.79	4.22	63.20	63.20	4.30	68.44	68.44	4.40
70 (21.1)	1825	22.29	20.50	3.82	28.67	26.35	3.92	34.96	31.88	4.03	41.23	36.62	4.14	48.89	44.49	4.32	54.50	54.50	4.45	61.26	61.26	4.56	67.08	67.08	4.71
	2082	22.83	21.01	3.88	29.27	26.90	3.97	35.61	32.46	4.06	41.96	37.27	4.15	49.53	45.07	4.31	55.23	55.23	4.42	61.98	61.98	4.50	67.46	67.46	4.63
	2339	23.32	21.46	3.95	29.81	27.39	4.03	36.18	32.98	4.11	42.61	37.85	4.18	50.06	45.55	4.32	55.95	55.95	4.41	62.43	62.43	4.48	67.63	67.63	4.58
75 (23.9)	1825	21.01	19.33	3.97	27.50	25.27	4.08	33.90	30.90	4.20	40.18	35.69	4.31	48.13	43.79	4.51	53.73	53.73	4.65	60.43	60.43	4.76	66.25	66.25	4.91
	2082	21.54	19.81	4.03	28.10	25.82	4.13	34.53	31.48	4.23	40.89	36.32	4.33	48.80	44.41	4.50	54.43	54.43	4.61	61.17	61.17	4.70	66.64	66.64	4.82
	2339	22.02	20.26	4.10	28.62	26.30	4.19	35.10	32.00	4.27	41.50	36.86	4.36	49.38	44.94	4.51	55.10	55.10	4.61	61.64	61.64	4.67	66.83	66.83	4.77

PH13NB669\*\*\*B Outdoor Section With PF4MINB061 Indoor Section

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*PF4MINB061	1.00	1.00	
PF4MINA061	1.00	1.01	

**NOTE:** When the required data fall 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

PH13NB

# GUIDE SPECIFICATIONS

## GENERAL

### System Description

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

### Quality Assurance

- Unit will be rated in accordance with the latest edition of AHRI Standard 210.
- 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 will be leak tested and pressure tested
- Unit constructed in ISO9001 approved facility.

### Delivery, Storage, and Handling

- Unit will be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

### Warranty (for inclusion by specifying engineer)

- U.S. and Canada only.

## PRODUCTS

### Equipment

- Factory assembled, single piece, air-cooled heat pump unit. Contained within the unit enclosure is all factory wiring, piping, controls, compressor, refrigerant charge (R-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 horizontally.

## SPLIT-SYSTEM HEAT PUMP

### PH13NB

### 1-1/2 TO 5 NOMINAL TONS

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

### Compressor

- Compressor will be a scroll-type, 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 front-seating shutoff valve with sweat connections, vapor-line front-seating shutoff valve with sweat connections, system charge of R-410A refrigerant, and compressor oil.
- Unit will be equipped with high-pressure switch, low pressure switch and filter drier for R-410A refrigerant.

### Operating Characteristics

- The capacity of the unit will meet or exceed \_\_\_\_\_ Btuh at a suction temperature of \_\_\_\_\_ °F/°C. The power consumption at full load will not exceed \_\_\_\_\_ kW.
- Combination of the unit and the evaporator or fan coil unit will have a total net cooling capacity of \_\_\_\_\_ Btuh or greater at conditions of \_\_\_\_\_ CFM entering air temperature at the evaporator at \_\_\_\_\_ °F/°C wet bulb and \_\_\_\_\_ °F/°C dry bulb, and air entering the unit at \_\_\_\_\_ °F/°C.
- The system will have a SEER of \_\_\_\_\_ Btuh/watt or greater at DOE conditions.

### Electrical Requirements

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

### Special Features

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

## SYSTEM DESIGN

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 is 115°F (46.1°C).
4. For reliable operation, unit should be level in all horizontal planes.
5. Maximum elevation of indoor coil above or below base of outdoor unit is: indoor coil above = 80 ft (24.38 m), indoor coil below = 200 ft (60.96).
6. For interconnecting refrigerant tube lengths greater than 80 ft (24.38 m) horizontal or 20 ft (6.10 m) vertical differential, consult Residential Split System Long-Line Application Guideline available from equipment distributor.
7. Crankcase heater required when interconnecting refrigerant tube length exceeds 80 ft (24.38 m).
8. If any refrigerant tubing is buried, provide a minimum 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.
9. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.

