

**PA13NA
PA13PA**

**13 SEER Split-System Air Conditioner
With R-410A Refrigerant
Single & Three Phase
1-1/2 To 5 Tons (018-060)**

Product Data



FEATURES AND BENEFITS

AVAILABLE SIZES:

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

CERTIFICATION:

All models are listed with UL, (U.S. and Canada), ARI, and CEC.

ELECTRICAL RANGE:

Units offered in single phase 208/230v are 018-060, three phase 208/230v in 036, 048 and 060, and three phase 460v in 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 hot condenser air up and away from adjacent patio areas and foliage. The base pan is designed for easy removal of water, dirt, and leaves.

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.

WARRANTY:

10 year limited warranty for parts and compressor on products registered within 90 days to original residential homeowner. Products not registered, installed commercially, or installed in multi-family applications carry the following warranty:

Single Phase - Limited 5-year compressor / 5-year parts
Three Phase - Limited 5-year compressor / 1-year parts

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SPECIFICATIONS

UNIT SIZE	018	024	030	036	042	048	060
SERIES	B	B	B	B	B	B	B
ELECTRICAL							
Unit Volts—Hertz—Phase	208/230—60—1			208/230—60—1	208/230—60—1	208/230—60—3	208/230—60—3
Operating Voltage Range*				187—253			
Compressor—Rated Load Amps	9.0	13.5	12.8	14.1	17.9	19.9	26.4
Locked Rotor Amps	48.0	58.3	64.0	77.0	112.0	109.0	134.0
Condenser Fan Motor— Full Load Amps	0.5	0.8	0.8	1.4	1.1	1.4	1.4
Min Unit Ampacity for Wire Sizing	11.7	17.6	16.8	17.6	23.5	26.2	34.4
Min Wire Size (60°/75° Copper) AWG**	14	12	12	12	10	8	12
Max Wire Length (60°/75°) ft (m)†	66 / 62 (20.1 / 18.9)	70 / 66 (21.3 / 20.1)	74 / 70 (22.6 / 21.3)	70 / 66 (21.3 / 20.1)	83 / 79 (25.3 / 24.1)	115 / 109 (35.1 / 33.2)	89 / 82 (27.1 / 25.0)
Max Branch Circuit Fuse Size†	20	30	25	30	40	25	50
COMPRESSOR AND REFRIGERANT							
Compressor—Manufacturer	Copeland						
Type	Scroll						
Temperature and Current Protection	Internal Line Break						
R—410A Refrigerant— Amount Lb (kg) @ 15 ft (4.6 m)	3.15 (1.43)	3.15 (1.43)	3.63 (1.65)	4.67 (2.12)	6.20 (2.82)	7.95 (3.62)	8.00 (3.64)
Refrigerant Tubes (In. OD) ‡‡ Rated Vapor and Liquid	7/8 and 3/8						
CONDENSER COIL AND FAN							
Coil Face Area (Sq Ft)	8.4	8.4	9.8	12.60	17.3	21.63	15.14
Fan Motor—HP, Type, and RPM	1/12 PSC and 1100	1/10 PSC and 1100		1/4 PSC and 1100	1/5 PSC and 1100	1/4 PSC and 1100	
Volts—Hertz—Phase	208/230—60—1						
Condenser Airflow (CFM)	1700	2000	2000	2500	3000	3400	3400
OPTIONAL EQUIPMENT							
Cycle Protector	KSACY0101AAA						
Start Assist— PTC Type	KAACS0201PTC				N/A	KAACS0201PTC	N/A
Start Assist—Capacitor/Relay Type	KSASHS1501AAA	KSASHS1701AAA	KSASHS1501AAA	N/A	KSASHS1501AAA	N/A	N/A
MotorMaster® Control	KSALA0601AAA						
Ball Bearing Fan Motor (RCD)	HC32GE234	HC34GE239	HC40GE226	HC38GE219	HC40GE226		
Low— Pressure Switch	KAALP0401PUR						
High— Pressure Switch	KAAHI0501PUR						
Compressor Sound Hood	KSASH1801COP				KSASH0601COP		KSASH2101COP
Time— Delay Relay	KAATD0101TDR						
Low— Ambient Pressure Switch Kit	KSALA0301410						
Winter Start Control	KAAW/S0101AAA						
Evaporator Freeze Thermostat	KAAFT0101AAA						
Compressor Crankcase Heater	KAAACH1401AAA				KAAACH1201AAA		
Liquid Line Solenoid Valve††	KAALS0201LLS						
TXV (Hard Shutoff)††	KSATX0201PUR		KSATX0301PUR		KSATX0401PUR		KSATX0501PUR
Standard Thermostat, Manual Changeover, Non— Programmable, °F/°C, 1—Stage Heat, 1— Stage Cool	TSTATPPBAC01						
Thermostat, Auto Changeover, 7—Day Programmable, °F/°C, 1—Stage Heat, 1—Stage Cool	TSTATPPAC01						
Outdoor Sensor	TSTATXXSEN01—B						
Liquid Line Filter Drier	KH43LG073				KH43LG074		
Backplate for Standard Thermostat	TSTATXXBBP01						
Backplate for Programmable Thermostat	TSTATXXBP01						

N/A — Not applicable in this application.

* Permissible limits of the voltage range at which unit will operate satisfactorily. Operation outside these limits may result in unit failure.

† Time—Delay Fuse or circuit breaker.

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

** If wire is applied at ambient greater than 30° C, consult Table 310—16 of the NEC (ANSI/NFPA 70). The ampacity of nonmetallic—sheathed cable (NM), trade name ROMEX, shall be that of 60° C conductors, per the NEC (ANSI/NFPA 70) Article 336—26.

†† Do not use hard shutoff TXV with liquid 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.

DIMENSIONS

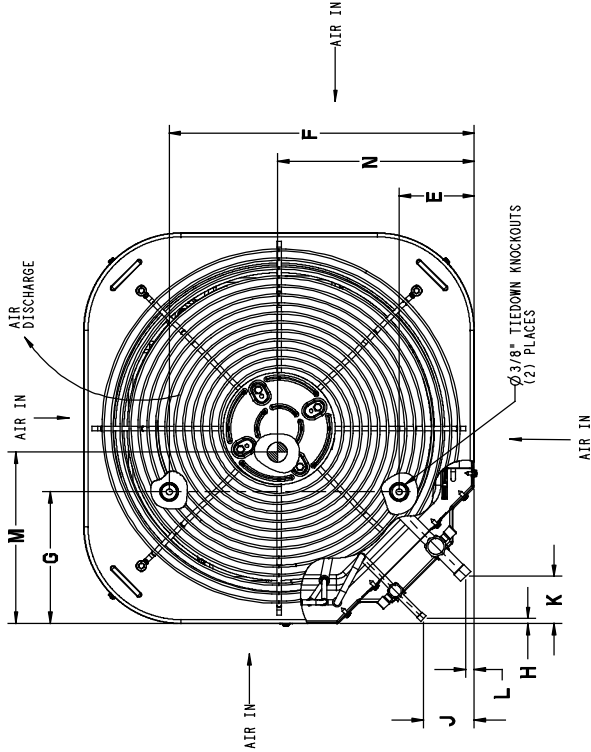
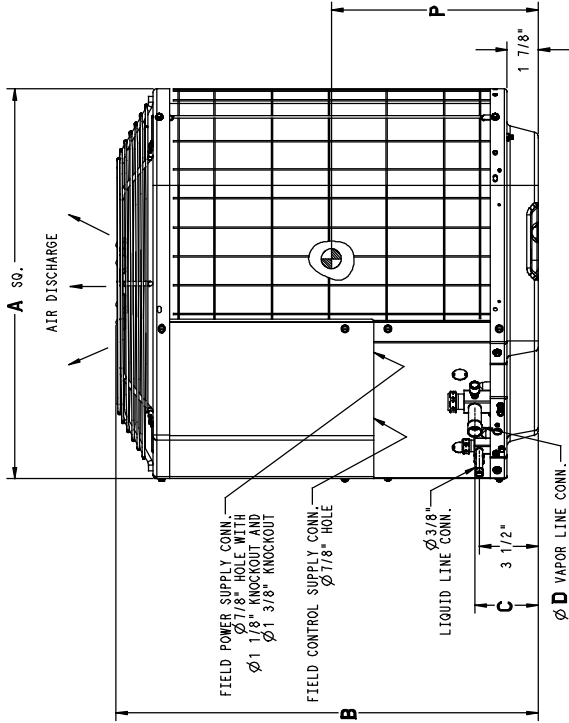
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UNIT	SERIES	ELECTRICAL CHARACTERISTICS		A	B	C	D	E	F	G	H	J	K	L	M	N	P	OPERATING WEIGHT	SHIPPING WEIGHT	SHIPPING DIMENSIONS (L x W x H)	
PA13MA018	B	X	0	0	23 1/8"	24 13/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	5/16"	3"	2 13/16"	1/2"	12"	11 3/4"	11 7/8"	104#	120#	24 1/8" X 24 1/8" X 27 3/16"
PA13MA024	B	X	0	0	23 1/8"	24 13/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	5/16"	3"	2 13/16"	1/2"	12"	11 3/4"	11 7/8"	107#	123#	24 1/8" X 24 1/8" X 27 3/16"
PA13MA030	B	X	0	0	23 1/8"	28 7/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	5/16"	3"	2 13/16"	1/2"	12"	11 3/4"	12 1/2"	110#	126#	24 1/8" X 24 1/8" X 30 5/8"
PA13MA036	B	X	0	0	23 1/8"	35 3/16"	3 7/8"	7/8"	4 7/16"	18 1/16"	7 13/16"	5/16"	3"	2 13/16"	1/2"	12"	11 3/4"	13 3/4"	122#	139#	24 1/8" X 24 1/8" X 37 7/16"
PA13MA042	B	X	0	0	31 3/16"	31 13/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	5/16"	3"	2 15/16"	5/8"	16"	15 1/2"	13 3/4"	164#	187#	32 3/16" X 32 3/16" X 34"
PA13MA048	B	X	0	0	31 3/16"	38 5/8"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	5/16"	3"	2 15/16"	5/8"	16"	15 1/2"	15 1/2"	181#	206#	32 3/16" X 32 3/16" X 40 13/16"
PA13MA060	B	X	0	0	31 3/16"	28 7/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	5/16"	3"	2 15/16"	5/8"	16"	15 1/2"	12 3/4"	190#	216#	32 3/16" X 32 3/16" X 30 5/8"
PA13PA036	B	0	0	X	23 1/8"	35 3/16"	3 7/8"	7/8"	4 7/16"	18 1/16"	7 13/16"	5/16"	3"	2 13/16"	1/2"	12"	11 3/4"	13 3/4"	122#	139#	24 1/8" X 24 1/8" X 37 7/16"
PA13PA048	B	0	0	X	31 3/16"	38 5/8"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	5/16"	3"	2 15/16"	5/8"	16"	15 1/2"	15 1/2"	181#	206#	32 3/16" X 32 3/16" X 40 13/16"
PA13PA060	B	0	0	X	31 3/16"	28 7/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	5/16"	3"	2 15/16"	5/8"	16"	15 1/2"	12 3/4"	190#	216#	32 3/16" X 32 3/16" X 30 5/8"

X = YES
0 = NO

NOTES:

1. ALLOW 30" CLEARANCE TO SERVICE SIDE OF UNIT.
48" ABOVE UNIT, 8" ON ONE SIDE, 12" ON REMAINING SIDE, AND 24" BETWEEN UNITS FOR PROPER AIRFLOW.
2. MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING MODE IS 55°F. MAX. 125°F.
3. SERIES DESIGNATION IS THE 14TH POSITION OF THE UNIT MODEL NUMBER.
4. CENTER OF GRAVITY



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

VAPOR LINE SIZING AND COOLING CAPACITY LOSS

LONG LINE APPLICATION: An application is considered "Long line" when the total equivalent tubing length exceeds 80 ft. (24.38 m) or when there is more than 20 ft. (6.09 m) vertical separation between indoor and outdoor units. These applications require additional accessories and system modifications for reliable system operation. The maximum allowable total equivalent length is up to 250 ft. (76.2 m). The maximum vertical separation is 200 ft.

(60.96 m) when outdoor unit is above indoor unit, and up to 80 ft. (24.38 m) when the outdoor unit is below the indoor unit. Refer to Accessory Usage Guideline below for required accessories. See Longline Application Guideline for required piping and system modifications. Also, refer to the table below for the vapor tube diameters based on the total length to minimize the cooling capacity loss.

Unit Nominal Size (Btuh)	Maximum Liquid Line Diameters (In. OD)	Vapor Line Diameters (In. OD)	Cooling Capacity Loss (%) Total Equivalent Line Length ft. (m)								
			Standard Application		Long Line Application Requires Accessories						
			26–50 (7.9–15.2)	51–80 (15.5–24.4)	81–100 (24.7–30.5)	101–125 (30.8–38.1)	126–150 (38.4–45.7)	151–175 (46.0–53.3)	176–200 (53.6–61.0)	201–225 (61.3–68.6)	226–250 (68.9–76.2)
18000 1 Stage R-410A AC	3/8	1/2	1	2	3	4	6	7	8	9	10
		5/8	0	0	1	1	1	2	2	3	3
24000 1 Stage R-410A AC	3/8	5/8	0	1	1	2	3	3	4	4	5
		3/4	0	0	0	0	1	1	1	1	1
		7/8	0	0	0	0	0	0	0	0	0
30000 1 Stage R-410A AC	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
36000 1 Stage R-410A AC	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
42000 1 Stage R-410A AC	3/8	3/4	0	1	2	2	3	4	4	5	6
		7/8	0	0	1	1	1	2	2	2	3
		1 1/8	0	0	0	0	0	0	0	0	0
48000 1 Stage R-410A AC	3/8	3/4	0	1	2	3	4	5	5	6	7
		7/8	0	0	1	1	2	2	2	3	3
		1 1/8	0	0	0	0	0	0	0	1	1
60000 1 Stage R-410A AC	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

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

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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–B	76	49.5	59.0	63.0	66.5	62.5	58.5	54.0
024–B	76	50.5	61.0	67.0	68.0	65.0	60.0	55.5
030–B	76	52.0	59.5	65.0	65.0	62.0	58.5	50.5
036–B	77	61.5	63.5	68.5	72.0	68.5	63.0	56.5
042–B	80	56.0	64.5	69.5	71.0	66.0	64.0	59.0
048–B	80	57.5	65.5	70.5	72.0	68.5	67.0	61.5
060–B	80	59.5	69.5	72.5	73.5	71.0	68.0	63.5

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

METERING DEVICE

UNIT SIZE – SERIES	INDOOOR	REQUIRED SUBCOOLING °F (°C)
018	TXV*	1Q(5.6)
024		
030		
036		
042		
048		
060		

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

ACCESSORY USAGE GUIDELINE

ACCESSORY	REQUIRED FOR LOW AMBIENT COOLING APPLICATIONS (Below 55°F / 22.8°C)	REQUIRED FOR LONG LINE APPLICATIONS* (Over 80 Ft./24.4 m)	REQUIRED FOR SEA COAST APPLICATIONS (Within 2 miles/3.2 km)
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 Shut-Off TXV	Yes	Yes	Yes
Liquid Line Solenoid Valve	No	See Long-Line Application Guideline	No
Low Ambient Kit (Pressure Switch)	Yes	No	No
Support Feet	Recommended	No	Recommended
Winter Start Control	Yes	No	No

* For tubing line sets between 80 and 200 ft. (24.4 and 76.2 m) and/or 20 ft. (6.1 m) vertical differential, refer to Residential Split-System Longline Application Guideline.

† Required for Low Ambient Controller (full modulation feature) and MotorMaster® Control only.

Accessory Description and Usage (Listed Alphabetically)

1. 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.

2. 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.

3. 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.

4. Cycle Protector

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

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. Low Ambient Pressure Switch Kit

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

Suggested for all commercial applications.

7. Support Feet

Four stick-on plastic feet that raise the unit 4 in. above the mounting pad. This allows sand, dirt, and other debris to be flushed from the unit base, minimizing corrosion.

Usage Guideline:

Suggested in the following applications:

- Coastal installations.
- Windy areas or where debris is normally circulating.
- Rooftop installations.
- For improved sound ratings.

8. Thermostatic Expansion Valve (TXV)

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.

Kit includes valve, adapter tubes, and external equalizer tube. Hard shut off types are available.

NOTE: When using a hard shut off TXV with single phase reciprocating compressors, a Compressor Start Assist Capacitor and Relay is required.

Usage Guideline:

- Required to achieve ARI ratings in certain equipment combinations. Refer to combination ratings.
- Hard shut off TXV or LLS required in air conditioner long line applications.
- Required for use on all zoning systems.

9. Winter Start Control

This control is designed to alleviate nuisance opening of the low-pressure switch by bypassing it for the first 3 minutes of operation.

RATINGS AND PERFORMANCE

UNIT SIZE – SERIES	INDOOR MODEL	ARI STANDARD RATINGS					FURNACE MODEL
		COOLING					
		CAPACITY	FACTORY ENHANCE	SEER		EER	
STANDARD	TDR						
018–B	*CAP**1814A**	17,200	TXV		13.00	10.90	
	CAP**1814A**	17,200	TDR&TXV	14.00		12.00	PG8*EA024045
	CAP**2414A**	17,200	TDR&TXV	14.50		12.00	PG8*EA024045
	CAP**2414A**	17,200	TXV		13.00	11.00	
	CAP**2417A**	17,200	TXV		13.00	10.90	
	CNPF*2418A**	17,200	TXV		13.00	11.00	
	CNPH*2417A**	17,200	TDR&TXV	14.50		12.00	PG8*EA024045
	CNPH*2417A**	17,200	TXV		13.00	11.00	
	CNPV*1814A**	17,200	TDR&TXV	14.00		12.00	PG8*EA024045
	CNPV*1814A**	17,200	TXV		13.00	10.90	
	CNPV*2414A**	17,200	TDR&TXV	14.50		12.00	PG8*EA024045
	CNPV*2414A**	17,200	TXV		13.00	10.90	
	CNPV*2417A**	17,200	TXV		13.00	11.00	
	CSPH*2412A**	17,200	TDR&TXV	14.50		12.00	PG8*EA024045
	CSPH*2412A**	17,200	TXV		13.00	11.00	
	FF1ENP018	17,200	TDR&TXV	13.00		10.90	
	FF1ENP024	17,200	TDR&TXV	13.00		10.90	
	PF4MNA018	17,200	TDR&TXV	13.00		10.90	
	PF4MNA019	17,200	TDR&TXV	14.00		12.00	
	PF4MNA024	17,200	TDR&TXV	13.00		10.90	
	PF4MNA025	17,200	TDR&TXV	14.50		12.00	
024–B	*CAP**2414A**	23,000	TXV		13.00	11.00	
	CAP**2414A**	23,000	TDR&TXV	14.00		12.00	PG8*EA024045
	CAP**2417A**	23,000	TXV		13.00	11.00	
	CAP**3014A**	23,000	TDR&TXV	14.00		12.00	PG8*EA024045
	CAP**3014A**	23,000	TXV		13.00	11.00	
	CAP**3017A**	23,000	TXV		13.00	11.00	
	CNPF*2418A**	23,000	TXV		13.00	11.00	
	CNPH*2417A**	23,000	TDR&TXV	14.00		11.50	PG8*EA024045
	CNPH*2417A**	23,000	TXV		13.00	11.00	
	CNPH*3017A**	23,000	TDR&TXV	14.00		12.00	PG8*EA024045
	CNPH*3017A**	23,000	TXV		13.00	11.00	
	CNPV*2414A**	23,000	TDR&TXV	13.50		11.50	PG8*EA024045
	CNPV*2414A**	23,000	TXV		13.00	11.00	
	CNPV*2417A**	23,000	TXV		13.00	11.00	
	CNPV*3014A**	23,000	TDR&TXV	14.00		12.00	PG8*EA024045
	CNPV*3014A**	23,000	TXV		13.00	11.00	
	CNPV*3017A**	23,000	TXV		13.00	11.00	
	CSPH*2412A**	23,000	TDR&TXV	14.00		12.00	PG8*EA024045
	CSPH*2412A**	23,000	TXV		13.00	11.00	
	CSPH*3012A**	23,000	TDR&TXV	14.00		12.00	PG8*EA024045
	CSPH*3012A**	23,000	TXV		13.00	11.00	
	FF1ENP024	23,000	TDR&TXV	13.00		10.90	
	FF1ENP030	23,000	TDR&TXV	13.00		10.90	
	PF4MNA024	23,000	TDR&TXV	13.00		11.00	
	PF4MNA025	23,000	TDR&TXV	13.50		11.50	
	PF4MNA030	23,000	TDR&TXV	13.00		11.00	
	PF4MNA031	23,000	TDR&TXV	14.00		12.00	
030–B	*CAP**3014A**	27,200	TXV		13.00	10.80	
	CAP**3017A**	27,200	TDR&TXV	13.50		11.50	PG8*EA048070
	CAP**3017A**	27,200	TXV		13.00	10.80	
	CAP**3614A**	27,200	TXV		13.00	10.80	
	CAP**3617A**	27,200	TDR&TXV	13.50		11.50	PG8*EA048070
	CAP**3617A**	27,200	TXV		13.00	10.80	
	CAP**3621A**	27,200	TDR&TXV	14.00		12.00	PG8*EA048090
	CAP**3621A**	27,200	TXV		13.00	10.80	
	CNPF*3618A**	27,200	TXV		13.00	10.80	
	CNPH*3017A**	27,200	TDR&TXV	13.50		11.50	PG8*EA048070
	CNPH*3017A**	27,200	TDR&TXV	13.50		11.50	PG8*EA048090
	CNPH*3017A**	27,200	TXV		13.00	10.80	
	CNPH*3617A**	27,200	TDR&TXV	13.50		11.50	PG8*EA048070
	CNPH*3617A**	27,200	TDR&TXV	14.00		11.50	PG8*EA048090
	CNPH*3617A**	27,200	TXV		13.00	10.80	
	CNPV*3014A**	27,200	TXV		13.00	10.80	
	CNPV*3017A**	27,200	TDR&TXV	13.50		11.50	PG8*EA048070
	CNPV*3017A**	27,200	TXV		13.00	10.80	
	CNPV*3617A**	27,200	TDR&TXV	13.50		11.50	PG8*EA048070
	CNPV*3617A**	27,200	TXV		13.00	10.80	
	CNPV*3621A**	27,200	TDR&TXV	14.00		11.50	PG8*EA048090
	CNPV*3621A**	27,200	TXV		13.00	10.80	
	CSPH*3012A**	27,200	TDR&TXV	13.50		11.50	PG8*EA048070
	CSPH*3012A**	27,200	TDR&TXV	13.50		11.50	PG8*EA048090
	CSPH*3012A**	27,200	TXV		13.00	10.80	
	CSPH*3612A**	27,200	TDR&TXV	13.50		11.50	PG8*EA048070
	CSPH*3612A**	27,200	TDR&TXV	14.00		12.00	PG8*EA048090
	CSPH*3612A**	27,200	TXV		13.00	10.80	
	FF1ENP030	27,200	TDR&TXV	13.00		10.80	

See notes on page 9

PA13NA / PA13PA

RATINGS AND PERFORMANCE CONTINUED

UNIT SIZE – SERIES	INDOOR MODEL	ARI STANDARD RATINGS					FURNACE MODEL
		COOLING					
		CAPACITY	FACTORY ENHANCE	SEER		EER	
STANDARD	TDR						
030 – B	FF1ENP036	27,200	TDR&TXV	13.00		11.00	
	PF4MNA030	27,200	TDR&TXV	13.00		10.80	
	PF4MNA031	27,200	TDR&TXV	13.50		11.50	
	PF4MNA036	27,200	TDR&TXV	13.00		10.80	
	PF4MNA037	27,200	TDR&TXV	13.50		11.00	
036 – B	*CAP**4821A**	34,000	TXV		13.00	11.00	
	CAP**4221A**	33,400	TDR&TXV	13.50		11.50	PG8*EA048090
	CAP**4221A**	33,400	TDR&TXV	13.50		11.50	PG8*EA060110
	CAP**4224A**	33,400	TDR&TXV	13.50		11.50	PG8*EA060135
	CAP**4817A**	34,000	TXV		13.00	11.00	
	CAP**4821A**	34,000	TDR&TXV	13.50		11.50	PG8*EA048090
	CAP**4821A**	34,000	TDR&TXV	14.00		12.00	PG8*EA060110
	CAP**4821A**	34,000	TXV		13.00	11.00	
	CAP**4824A**	34,000	TDR&TXV	14.00		12.00	PG8*EA060135
	CAP**4824A**	34,000	TXV		13.00	11.00	
	CNPF*4818A**	33,400	TXV		13.00	11.00	
	CNPH*4221A**	33,400	TDR&TXV	13.50		11.50	PG8*EA048090
	CNPH*4221A**	33,400	TDR&TXV	13.50		11.50	PG8*EA060110
	CNPH*4221A**	33,400	TDR&TXV	13.50		11.50	PG8*EA060135
	CNPH*4221A**	33,000	TXV		13.00	11.00	
	CNPH*4821A**	34,000	TDR&TXV	13.50		11.50	PG8*EA048090
	CNPH*4821A**	34,000	TDR&TXV	14.00		12.00	PG8*EA060110
	CNPH*4821A**	34,000	TDR&TXV	14.00		12.00	PG8*EA060135
	CNPH*4821A**	34,000	TXV		13.00	11.00	
	CNPV*4221A**	33,400	TDR&TXV	13.50		11.50	PG8*EA048090
	CNPV*4221A**	33,400	TDR&TXV	13.50		11.50	PG8*EA060110
	CNPV*4221A**	33,000	TXV		13.00	11.00	
	CNPV*4821A**	34,000	TDR&TXV	14.00		11.50	PG8*EA048090
	CNPV*4821A**	34,000	TDR&TXV	14.00		12.00	PG8*EA060110
	CNPV*4821A**	34,000	TXV		13.00	11.00	
	CNPV*4824A**	34,000	TDR&TXV	14.00		12.00	PG8*EA060135
	CNPV*4824A**	34,000	TXV		13.00	11.00	
	CSPH*4212A**	33,400	TDR&TXV	14.00		11.50	PG8*EA048090
	CSPH*4212A**	33,400	TDR&TXV	14.00		12.00	PG8*EA060110
	CSPH*4212A**	33,400	TDR&TXV	13.50		11.50	PG8*EA060135
	CSPH*4212A**	33,000	TXV		13.00	11.00	
	CSPH*4812A**	34,000	TDR&TXV	14.00		12.00	PG8*EA048090
	CSPH*4812A**	34,000	TDR&TXV	14.00		12.00	PG8*EA060110
	CSPH*4812A**	34,000	TDR&TXV	14.00		12.00	PG8*EA060135
	CSPH*4812A**	34,000	TXV		13.00	11.00	
	PF4MNA042	33,000	TDR&TXV	13.00		10.90	
	PF4MNA043	33,000	TDR&TXV	13.00		11.00	
	PF4MNA048	34,000	TDR&TXV	13.00		11.00	
	PF4MNA049	34,000	TDR&TXV	13.00		11.00	
042 – B	*CAP**4221A**	39,500	TXV		13.00	11.00	
	CAP**4221A**	39,500	TDR&TXV	13.50		11.50	PG8*EA048090
	CAP**4221A**	39,500	TDR&TXV	13.50		11.50	PG8*EA060110
	CAP**4224A**	39,500	TDR&TXV	13.50		11.50	PG8*EA060135
	CAP**4224A**	39,500	TXV		13.00	11.00	
	CAP**4817A**	40,000	TXV		13.00	11.00	
	CAP**4821A**	40,000	TDR&TXV	14.00		12.00	PG8*EA048090
	CAP**4821A**	40,000	TDR&TXV	14.00		12.00	PG8*EA060110
	CAP**4821A**	40,000	TXV		13.00	11.00	
	CAP**4824A**	40,000	TDR&TXV	14.00		12.00	PG8*EA060135
	CAP**4824A**	40,000	TXV		13.00	11.00	
	CNPF*4818A**	40,000	TXV		13.00	11.00	
	CNPH*4221A**	39,000	TDR&TXV	13.50		11.50	PG8*EA048090
	CNPH*4221A**	39,000	TDR&TXV	13.50		11.50	PG8*EA060110
	CNPH*4221A**	39,000	TDR&TXV	13.50		11.50	PG8*EA060135
	CNPH*4221A**	39,500	TXV		13.00	11.00	
	CNPH*4821A**	40,000	TDR&TXV	14.00		12.00	PG8*EA048090
	CNPH*4821A**	40,000	TDR&TXV	14.50		12.00	PG8*EA060110
	CNPH*4821A**	40,000	TDR&TXV	14.00		12.00	PG8*EA060135
	CNPH*4821A**	40,000	TXV		13.00	11.00	
	CNPV*4221A**	39,000	TDR&TXV	13.50		11.50	PG8*EA048090
	CNPV*4221A**	39,000	TDR&TXV	13.50		11.50	PG8*EA060110
	CNPV*4221A**	39,500	TXV		13.00	11.00	
	CNPV*4821A**	40,000	TDR&TXV	14.00		12.00	PG8*EA048090
	CNPV*4821A**	40,000	TDR&TXV	14.50		12.00	PG8*EA060110
	CNPV*4821A**	40,000	TXV		13.00	11.00	
	CNPV*4824A**	40,000	TDR&TXV	14.00		12.00	PG8*EA060135
	CNPV*4824A**	40,000	TXV		13.00	11.00	
	CSPH*4212A**	40,000	TDR&TXV	14.00		12.00	PG8*EA048090
	CSPH*4212A**	40,000	TDR&TXV	14.00		12.00	PG8*EA060110
	CSPH*4212A**	40,000	TDR&TXV	14.00		12.00	PG8*EA060135
	CSPH*4212A**	40,000	TXV		13.00	11.00	
	CSPH*4812A**	40,000	TDR&TXV	14.00		12.00	PG8*EA048090

See notes on page 9

RATINGS AND PERFORMANCE CONTINUED

UNIT SIZE – SERIES	INDOOR MODEL	ARI STANDARD RATINGS					FURNACE MODEL
		COOLING					
		CAPACITY	FACTORY ENHANCE	SEER		EER	
STANDARD	TDR						
042–B	CSPH*4812A**	40,000	TDR&TXV	14.50		12.00	PG8*EA060110
	CSPH*4812A**	40,000	TDR&TXV	14.00		12.00	PG8*EA060135
	CSPH*4812A**	40,000	TXV		13.00	11.00	
	PF4MNA042	39,500	TDR&TXV	13.00		11.00	
	PF4MNA043	39,500	TDR&TXV	13.50		11.50	
	PF4MNA048	40,000	TDR&TXV	13.00		11.00	
	PF4MNA049	40,000	TDR&TXV	14.00		12.00	
048–B	*CAP**4821A**	46,000	TXV		13.00	11.00	
	CAP**4817A**	45,000	TXV		13.00	11.00	
	CAP**4821A**	45,000	TDR&TXV	13.50		11.00	PG8*EA048090
	CAP**4821A**	45,000	TDR&TXV	13.50		11.50	PG8*EA060110
	CAP**4824A**	45,000	TDR&TXV	13.50		11.50	PG8*EA060135
	CAP**4824A**	46,000	TXV		13.00	11.00	
	CAP**6021A**	46,000	TDR&TXV	13.50		11.50	PG8*EA048090
	CAP**6021A**	46,000	TDR&TXV	14.00		12.00	PG8*EA060110
	CAP**6021A**	46,500	TXV		13.00	11.00	
	CAP**6024A**	46,000	TDR&TXV	13.50		11.00	PG8*EA060135
	CAP**6024A**	46,500	TXV		13.00	11.00	
	CNPF*4818A**	45,000	TXV		13.00	11.00	
	CNPH*4821A**	45,000	TDR&TXV	13.50		11.50	PG8*EA048090
	CNPH*4821A**	45,000	TDR&TXV	13.50		11.50	PG8*EA060110
	CNPH*4821A**	45,000	TDR&TXV	13.50		11.50	PG8*EA060135
	CNPH*4821A**	46,000	TXV		13.00	11.00	
	CNPH*6024A**	46,000	TDR&TXV	13.50		11.50	PG8*EA048090
	CNPH*6024A**	46,000	TDR&TXV	14.00		12.00	PG8*EA060110
	CNPH*6024A**	46,000	TDR&TXV	13.50		11.50	PG8*EA060135
	CNPH*6024A**	46,500	TXV		13.00	11.00	
	CNPV*4821A**	45,000	TDR&TXV	13.50		11.50	PG8*EA048090
	CNPV*4821A**	45,000	TDR&TXV	13.50		11.50	PG8*EA060110
	CNPV*4821A**	46,000	TXV		13.00	11.00	
	CNPV*4824A**	45,000	TDR&TXV	13.50		11.00	PG8*EA060135
	CNPV*4824A**	46,000	TXV		13.00	11.00	
	CNPV*6024A**	46,000	TDR&TXV	13.50		11.50	PG8*EA060135
	CNPV*6024A**	46,500	TXV		13.00	11.00	
	CSPH*4812A**	45,000	TDR&TXV	13.50		11.50	PG8*EA048090
	CSPH*4812A**	45,000	TDR&TXV	13.50		11.50	PG8*EA060110
	CSPH*4812A**	45,000	TDR&TXV	13.50		11.50	PG8*EA060135
	CSPH*4812A**	45,000	TXV		13.00	11.00	
	CSPH*6012A**	46,000	TDR&TXV	13.50		11.00	PG8*EA048090
	CSPH*6012A**	46,000	TDR&TXV	14.00		12.00	PG8*EA060110
	CSPH*6012A**	46,000	TDR&TXV	13.50		11.50	PG8*EA060135
	CSPH*6012A**	46,000	TXV		13.00	11.00	
	PF4MNA048	46,000	TDR&TXV	13.00		11.00	
	PF4MNA049	46,000	TDR&TXV	13.50		11.50	
	PF4MNA060	46,500	TDR&TXV	13.00		11.00	
	PF4MNA061	46,500	TDR&TXV	14.00		11.50	
060–B	*CAP**6024A**	57,000	TXV		13.00	11.00	
	CAP**6021A**	56,000	TDR&TXV	13.50		11.50	PG8*EA060110
	CAP**6021A**	56,000	TXV		13.00	11.00	
	CAP**6024A**	56,000	TDR&TXV	13.50		11.50	PG8*EA060135
	CNPH*6024A**	56,000	TDR&TXV	13.50		11.50	PG8*EA060110
	CNPH*6024A**	56,000	TDR&TXV	13.50		11.00	PG8*EA060135
	CNPH*6024A**	57,000	TXV		13.00	11.00	
	CNPV*6024A**	56,000	TDR&TXV	13.50		11.00	PG8*EA060135
	CNPV*6024A**	57,000	TXV		13.00	11.00	
	CSPH*6012A**	56,000	TDR&TXV	13.50		11.00	PG8*EA048090
	CSPH*6012A**	56,000	TDR&TXV	13.50		11.50	PG8*EA060110
	CSPH*6012A**	56,000	TDR&TXV	13.50		11.50	PG8*EA060135
	CSPH*6012A**	57,000	TXV		13.00	11.00	
	PF4MNA060	57,000	TDR&TXV	13.00		10.80	
	PF4MNA061	57,000	TDR&TXV	13.50		11.50	

* Tested combination

† In most cases, only 1 method should be used to achieve TDR function. Using more than 1 method in a system may cause degradation in performance. Use either the accessory Time–Delay Relay KAATD0101TDR or a furnace equipped with TDR. Most Carrier furnaces are equipped with TDR.

EER — Energy Efficiency Ratio

SEER — Seasonal Energy Efficiency Ratio

TDR — Time–Delay Relay

TXV — Thermostatic Expansion Valve

NOTES:

1. Ratings are net values reflecting the effects of circulating fan motor heat. Supplemental electric heat is not included.
2. Tested outdoor/indoor combinations have been tested in accordance with DOE test procedures for central air conditioners. Ratings for other combinations are determined under DOE computer simulation procedures.
3. Determine actual CFM values obtainable for your system by referring to fan performance data in fan coil or furnace coil literature.
4. Do not apply with capillary tube coils as performance and reliability are significantly affected.

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)		Total Sys-tem KW**	Total Sys-tem KW**	
		Capacity MBtu/h Total	Sens†	Capacity MBtu/h Total	Sens†	Capacity MBtu/h Total	Sens†	Capacity MBtu/h Total	Sens†	Capacity MBtu/h Total	Sens†			
PA13NA018 – B Outdoor Section With CAPVP1814 Indoor Section														
525	72 (22.2)	20.35	10.09	19.43	9.75	18.46	9.40	17.51	9.07	16.49	8.72	1.98	1.98	
	67 (19.4)	18.72	12.43	17.86	12.08	16.95	11.72	16.04	11.37	15.07	11.00	2.00	2.00	
	62 (16.7)	17.21	14.74	16.41	14.38	15.59	14.00	14.75	13.61	13.92	13.92	2.02	2.02	
	57 (13.9)	16.70	16.70	16.05	16.05	15.37	15.37	14.67	14.67	13.92	13.92	2.02	2.02	
	72 (22.2)	20.73	10.59	19.69	10.22	18.69	9.87	17.72	9.54	16.67	9.18	2.00	2.00	
600	67 (19.4)	19.03	13.21	18.14	12.86	17.20	12.50	16.27	12.15	15.27	11.77	2.02	2.02	
	62 (16.7)	17.59	15.82	16.78	15.44	15.95	15.95	15.23	15.23	14.44	14.44	2.04	2.04	
	57 (13.9)	17.38	17.38	16.69	16.69	15.97	15.97	15.23	15.23	14.44	14.44	2.04	2.04	
	72 (22.2)	21.01	11.06	19.88	10.67	18.85	10.32	17.86	9.98	16.79	9.62	2.03	2.03	
	67 (19.4)	19.25	13.95	18.34	13.61	17.38	13.24	16.43	12.88	15.41	12.50	2.05	2.05	
675	62 (16.7)	17.94	17.79	17.20	17.20	16.44	16.44	15.67	15.67	14.84	14.84	2.06	2.06	
	57 (13.9)	17.92	17.92	17.20	17.20	16.44	16.44	15.67	15.67	14.84	14.84	2.06	2.06	

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*CAP**1814A**	1.00	1.00	
CAP**2414A**	1.00	0.99	
CAP**2417A**	1.00	1.00	
CNPF*2418A**	1.00	0.99	
CNPH*2417A**	1.00	0.99	
CNPV*1814A**	1.00	1.00	
CNPV*2414A**	1.00	1.00	
CNPV*2417A**	1.00	0.99	
CSPH*2412A**	1.00	0.99	
FF1ENP018	1.00	1.00	
FF1ENP024	1.00	1.00	
PF4MNA018	1.00	1.00	
PF4MNA019	1.00	0.91	
PF4MNA024	1.00	1.00	
PF4MNA025	1.00	0.91	
CAP**1814A**	1.00	0.91	PG8*EA024045
CAP**2414A**	1.00	0.91	PG8*EA024045
CNPH*2417A**	1.00	0.91	PG8*EA024045
CNPV*1814A**	1.00	0.91	PG8*EA024045
CNPV*2414A**	1.00	0.91	PG8*EA024045
CSPH*2412A**	1.00	0.91	PG8*EA024045

See notes on pg. 16

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)			
		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†		
PAT3NA024 – B Outdoor Section With CAPVP2414 Indoor Section																	
700	72 (22.2)	27.06	13.28	1.64	25.82	12.84	1.84	24.64	12.43	2.06	23.44	12.02	2.30	22.11	11.56	2.57	
	67 (19.4)	24.87	16.41	1.64	23.82	16.00	1.84	22.70	15.57	2.05	21.55	15.13	2.30	20.29	14.66	2.57	
	62 (16.7)	22.98	19.55	1.63	22.00	19.12	1.83	20.97	18.66	2.05	19.91	18.18	2.30	18.87	18.87	2.57	
	57 (13.9)	22.41	22.41	1.63	21.61	21.61	1.83	20.75	20.75	2.05	19.85	19.85	2.30	18.87	18.87	2.57	
800	72 (22.2)	27.49	13.93	1.68	26.14	13.46	1.88	24.93	13.05	2.10	23.69	12.64	2.34	22.33	12.18	2.60	
	67 (19.4)	25.24	17.44	1.68	24.15	17.03	1.87	23.00	16.60	2.09	21.83	16.16	2.33	20.54	15.69	2.60	
	62 (16.7)	23.44	20.97	1.67	22.46	20.51	1.87	21.49	21.49	2.09	20.55	20.55	2.33	19.52	19.52	2.60	
	57 (13.9)	23.25	23.25	1.67	22.40	22.40	1.87	21.49	21.49	2.09	20.55	20.55	2.33	19.52	19.52	2.60	
900	72 (22.2)	27.76	14.53	1.72	26.38	14.07	1.91	25.12	13.65	2.13	23.86	13.23	2.38	22.46	12.77	2.64	
	67 (19.4)	25.50	18.44	1.71	24.39	18.03	1.91	23.21	17.59	2.13	22.02	17.15	2.37	20.70	16.66	2.64	
	62 (16.7)	23.92	23.92	1.71	23.03	23.03	1.91	22.08	22.08	2.13	21.10	21.10	2.37	20.02	20.02	2.64	
	57 (13.9)	23.92	23.92	1.71	23.04	23.04	1.91	22.08	22.08	2.13	21.10	21.10	2.37	20.02	20.02	2.64	

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*CAP**2414A**	1.00	1.00	
CAP**2417A**	1.00	1.00	
CAP**3014A**	1.00	1.00	
CAP**3017A**	1.00	1.00	
CNPF*2418A**	1.00	1.00	
CNPH*2417A**	1.00	1.00	
CNPH*3017A**	1.00	1.00	
CNPV*2414A**	1.00	1.00	
CNPV*2417A**	1.00	1.00	
CNPV*3014A**	1.00	1.00	
CNPV*3017A**	1.00	1.00	
CSPH*2412A**	1.00	1.00	
CSPH*3012A**	1.00	1.01	
FF1ENP024	1.00	1.01	
FF1ENP030	1.00	1.01	
PF4MNA024	1.00	1.00	
PF4MNA025	1.00	0.96	
PF4MNA030	1.00	1.00	
PF4MNA031	1.00	0.92	
CAP**2414A**	1.00	0.92	PG8*EA024045
CAP**3014A**	1.00	0.92	PG8*EA024045
CNPH*2417A**	1.00	0.96	PG8*EA024045
CNPH*3017A**	1.00	0.92	PG8*EA024045
CNPV*2414A**	1.00	0.96	PG8*EA024045
CNPV*3014A**	1.00	0.92	PG8*EA024045
CSPH*2412A**	1.00	0.92	PG8*EA024045
CSPH*3012A**	1.00	0.92	PG8*EA024045

See notes on pg. 16

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)			
			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†	Total		Sens†				
CFM	EWB ° F (° C)		PA13NA030 – B Outdoor Section With CAPVP03014 Indoor Section																			
875	72 (22.2)		31.88	16.54	1.97		30.55	16.06	2.21		29.17	15.57	2.48		27.73	15.07	2.77		26.14	14.51	3.10	
	67 (19.4)		29.45	20.69	1.97		28.21	20.19	2.21		26.90	19.68	2.47		25.54	19.15	2.77		24.04	18.57	3.09	
	62 (16.7)		27.29	24.80	1.96		26.15	24.27	2.20		24.96	23.68	2.47		23.83	23.83	2.76		22.65	22.65	3.09	
	57 (13.9)		26.90	26.90	1.96		25.94	25.94	2.20		24.91	24.91	2.47		23.83	23.83	2.76		22.65	22.65	3.09	
	72 (22.2)		32.25	17.34	2.02		30.87	16.86	2.26		29.45	16.36	2.53		27.98	15.86	2.82		26.34	15.30	3.14	
1000	67 (19.4)		29.82	22.01	2.01		28.55	21.52	2.25		27.20	21.00	2.52		25.81	20.47	2.81		24.28	19.88	3.14	
	62 (16.7)		27.85	26.81	2.01		26.81	26.81	2.25		25.72	25.72	2.51		24.59	24.59	2.81		23.35	23.35	3.14	
	57 (13.9)		27.82	27.82	2.01		26.81	26.81	2.25		25.73	25.73	2.51		24.60	24.60	2.81		23.35	23.35	3.14	
	72 (22.2)		32.50	18.10	2.07		31.08	17.61	2.31		29.63	17.12	2.57		28.13	16.61	2.87		26.46	16.05	3.19	
	67 (19.4)		30.08	23.28	2.06		28.78	22.78	2.30		27.41	22.26	2.57		26.00	21.72	2.86		24.45	21.12	3.19	
1125	62 (16.7)		28.55	28.55	2.06		27.50	27.50	2.30		26.36	26.36	2.56		25.19	25.19	2.86		23.89	23.89	3.18	
	57 (13.9)		28.55	28.55	2.06		27.50	27.50	2.30		26.37	26.37	2.56		25.19	25.19	2.86		23.89	23.89	3.18	

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*CAP**3014A**	1.00	1.00	
CAP**3017A**	1.00	1.00	
CAP**3614A**	1.00	1.00	
CAP**3617A**	1.00	1.00	
CAP**3621A**	1.00	1.00	
CNPF*3618A**	1.00	1.00	
CNPH*3017A**	1.00	1.00	
CNPH*3617A**	1.00	1.00	
CNPV*3014A**	1.00	1.00	
CNPV*3017A**	1.00	1.00	
CNPV*3617A**	1.00	1.00	
CNPV*3621A**	1.00	1.00	
CSPH*3012A**	1.00	1.00	
CSPH*3612A**	1.00	1.00	
FF1ENP030	1.00	1.00	
FF1ENP036	1.00	0.98	
PF4MNA030	1.00	1.00	
PF4MNA031	1.00	0.94	
PF4MNA036	1.00	1.00	
PF4MNA037	1.00	0.98	
CAP**3017A**	1.00	0.94	PG8*EA048070
CAP**3617A**	1.00	0.94	PG8*EA048070
CNPH*3017A**	1.00	0.94	PG8*EA048070
CNPH*3617A**	1.00	0.94	PG8*EA048070
CNPV*3017A**	1.00	0.94	PG8*EA048070
CNPV*3617A**	1.00	0.94	PG8*EA048070
CSPH*3012A**	1.00	0.94	PG8*EA048070
CSPH*3612A**	1.00	0.94	PG8*EA048070
CAP**3621A**	1.00	0.90	PG8*EA048090
CNPH*3017A**	1.00	0.94	PG8*EA048090
CNPH*3617A**	1.00	0.94	PG8*EA048090
CNPV*3621A**	1.00	0.94	PG8*EA048090
CSPH*3012A**	1.00	0.94	PG8*EA048090
CSPH*3612A**	1.00	0.90	PG8*EA048090

See notes on pg. 16

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)		
		Capacity MBtuHt Total	Sens†	Total Sys-tem KW**	Capacity MBtuHt Total	Sens†	Total Sys-tem KW**	Capacity MBtuHt Total	Sens†	Total Sys-tem KW**	Capacity MBtuHt Total	Sens†	Total Sys-tem KW**	Capacity MBtuHt Total	Sens†	Total Sys-tem KW**
PA13NA036 – B Outdoor Section With CAPVP4821 Indoor Section																
1050	72 (22.2)	29.86	29.86	3.90	38.13	19.65	2.71	36.46	19.06	3.04	34.71	18.45	32.77	17.79	3.80	3.80
	67 (19.4)	36.66	25.23	2.41	35.22	24.67	2.71	33.64	24.05	3.03	31.99	23.42	30.17	22.72	3.79	3.79
	62 (16.7)	33.97	30.22	2.40	32.65	29.62	2.70	31.21	28.94	3.03	29.76	29.76	28.35	28.35	3.79	3.79
	57 (13.9)	33.42	33.42	2.40	32.30	32.30	2.70	31.07	31.07	3.03	29.78	29.78	28.35	28.35	3.79	3.79
	72 (22.2)	40.35	21.22	2.47	38.49	20.57	2.77	36.81	19.99	3.10	35.01	19.38	33.02	18.70	3.85	3.85
1200	67 (19.4)	37.10	26.78	2.47	35.62	26.22	2.76	34.00	25.60	3.09	32.31	24.96	30.45	24.26	3.85	3.85
	62 (16.7)	34.75	32.12	2.46	33.33	33.33	2.76	32.07	32.07	3.09	30.71	30.71	29.20	29.20	3.85	3.85
	57 (13.9)	34.54	34.54	2.46	33.37	33.37	2.76	32.07	32.07	3.09	30.71	30.71	29.20	29.20	3.85	3.85
	72 (22.2)	40.70	22.12	2.53	38.75	21.45	2.83	37.03	20.86	3.16	35.19	20.25	33.17	19.57	3.90	3.90
	67 (19.4)	37.49	28.29	2.52	35.90	27.69	2.82	34.25	27.07	3.15	32.53	26.42	30.65	25.71	3.90	3.90
1350	62 (16.7)	35.43	35.43	2.52	34.21	34.21	2.82	32.85	32.85	3.14	31.43	31.43	29.86	29.86	3.90	3.90
	57 (13.9)	35.43	35.43	2.52	34.21	34.21	2.82	32.85	32.85	3.14	31.43	31.43	29.86	29.86	3.90	3.90

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*CAP**4821A**	1.00	1.00	
CAP**4817A**	1.00	1.00	
CAP**4821A**	1.00	1.00	
CAP**4824A**	1.00	1.00	
CNPF*4818A**	0.98	0.98	
CNPH*4221A**	0.97	0.97	
CNPH*4821A**	1.00	1.00	
CNPV*4221A**	0.97	0.97	
CNPV*4821A**	1.00	1.00	
CNPV*4824A**	1.00	1.00	
CSPH*4212A**	0.97	0.97	
CSPH*4812A**	1.00	1.00	
PF4MNA042	0.97	0.98	
PF4MNA043	0.97	0.97	
PF4MNA048	1.00	1.00	
PF4MNA049	1.00	1.00	
CAP**4221A**	0.98	0.94	PG8*EA048090
CAP**4821A**	1.00	0.96	PG8*EA048090
CNPH*4221A**	0.98	0.94	PG8*EA048090
CNPH*4821A**	1.00	0.96	PG8*EA048090
CNPV*4221A**	0.98	0.94	PG8*EA048090
CNPV*4821A**	1.00	0.96	PG8*EA048090
CSPH*4212A**	0.98	0.94	PG8*EA048090
CSPH*4812A**	1.00	0.92	PG8*EA048090
CAP**4221A**	0.98	0.94	PG8*EA060110
CAP**4821A**	1.00	0.92	PG8*EA060110
CNPH*4221A**	0.98	0.94	PG8*EA060110
CNPH*4821A**	1.00	0.92	PG8*EA060110
CNPV*4221A**	0.98	0.94	PG8*EA060110
CNPV*4821A**	1.00	0.92	PG8*EA060110
CSPH*4212A**	0.98	0.94	PG8*EA060110
CSPH*4812A**	1.00	0.90	PG8*EA060110
CAP**4221A**	0.98	0.92	PG8*EA060135
CAP**4824A**	1.00	0.92	PG8*EA060135
CNPH*4221A**	0.98	0.94	PG8*EA060135
CNPH*4821A**	1.00	0.92	PG8*EA060135
CNPV*4824A**	1.00	0.92	PG8*EA060135

See notes on pg. 16

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)					
		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**	Capacity MBtu/h†	Total Sys-tem KW**						
PAT13NA042 – B Outdoor Section With CAPVP4221 Indoor Section																			
1225	72 (22.2)	46.73	23.07	2.89	44.70	22.34	3.20	3.18	42.56	21.57	3.54	3.92	40.30	20.78	3.92	37.86	19.94	4.34	
	67 (19.4)	42.85	28.38	2.87	40.97	27.64	3.18	3.18	38.98	26.86	3.52	3.91	36.89	26.05	3.91	34.65	25.19	4.33	
	62 (16.7)	39.35	33.67	2.86	37.65	32.90	3.17	3.17	35.87	32.09	3.51	3.90	34.03	31.22	3.90	32.16	32.16	4.32	
	57 (13.9)	38.30	38.30	2.85	36.91	36.91	3.17	3.17	35.44	35.44	3.51	3.90	33.88	33.88	3.90	32.18	32.18	4.32	
	72 (22.2)	47.42	24.09	2.96	45.31	23.35	3.27	3.27	43.09	22.57	3.61	3.99	40.75	21.77	3.99	38.23	20.92	4.40	
1400	67 (19.4)	43.52	30.05	2.94	41.57	29.29	3.25	3.25	39.50	28.50	3.59	3.97	37.35	27.69	3.97	35.04	26.83	4.39	
	62 (16.7)	40.18	35.98	2.93	38.46	35.17	3.24	3.24	36.65	36.65	3.58	3.96	35.04	35.04	3.96	33.24	33.24	4.39	
	57 (13.9)	39.77	39.77	2.92	38.29	38.29	3.23	3.23	36.71	36.71	3.58	3.96	35.04	35.04	3.96	33.24	33.24	4.39	
	72 (22.2)	47.94	25.07	3.02	45.76	24.32	3.33	3.33	43.48	23.54	3.67	4.05	41.08	22.73	4.05	38.49	21.87	4.47	
	67 (19.4)	44.03	31.67	3.01	42.02	30.91	3.31	3.31	39.90	30.12	3.66	4.04	37.70	29.30	4.04	35.34	28.42	4.46	
1575	62 (16.7)	40.98	40.58	2.99	39.39	39.39	3.30	3.30	37.73	37.73	3.65	4.03	35.97	35.97	4.03	34.07	34.07	4.45	
	57 (13.9)	40.96	40.96	2.99	39.40	39.40	3.30	3.30	37.74	37.74	3.65	4.03	35.98	35.98	4.03	34.07	34.07	4.45	

COOLING INDOOR MODEL		CAPACITY	POWER	FURNACE MODEL
*CAP**4221A**		1.00	1.00	
CAP**4224A**		1.00	1.00	
CAP**4817A**		1.01	1.01	
CAP**4821A**		1.01	1.01	
CAP**4824A**		1.01	1.01	
CNPF*4818A**		1.01	1.01	
CNPH*4221A**		1.00	1.00	
CNPH*4821A**		1.01	1.01	
CNPV*4221A**		1.00	1.00	
CNPV*4821A**		1.01	1.01	
CNPV*4824A**		1.01	1.01	
CSPH*4212A**		1.01	1.01	
CSPH*4812A**		1.01	1.01	
PF4MNA042		1.00	1.00	
PF4MNA043		1.00	0.96	
PF4MNA048		1.01	1.01	
PF4MNA049		1.01	0.93	
CAP**4221A**		1.00	0.96	PG8*EA048090
CAP**4821A**		1.01	0.93	PG8*EA048090
CNPH*4221A**		0.99	0.94	PG8*EA048090
CNPH*4821A**		1.01	0.93	PG8*EA048090
CNPV*4221A**		0.99	0.94	PG8*EA048090
CNPV*4821A**		1.01	0.93	PG8*EA048090
CSPH*4212A**		1.01	0.93	PG8*EA048090
CSPH*4812A**		1.01	0.93	PG8*EA048090
CAP**4221A**		1.00	0.96	PG8*EA060110
CAP**4821A**		1.01	0.93	PG8*EA060110
CNPH*4221A**		0.99	0.94	PG8*EA060110
CNPH*4821A**		1.01	0.93	PG8*EA060110
CNPV*4221A**		0.99	0.94	PG8*EA060110
CNPV*4821A**		1.01	0.93	PG8*EA060110
CSPH*4212A**		1.01	0.93	PG8*EA060110
CSPH*4812A**		1.01	0.93	PG8*EA060110
CAP**4224A**		1.00	0.96	PG8*EA060135
CAP**4824A**		1.01	0.93	PG8*EA060135
CNPH*4221A**		0.99	0.94	PG8*EA060135
CNPH*4821A**		1.01	0.93	PG8*EA060135
CNPV*4824A**		1.01	0.93	PG8*EA060135

See notes on pg. 16

DETAILED COOLING CAPACITIES# (CONT.)

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)															
		75 (23.9)				85 (29.4)				95 (35)							
		Capacity MBtuHt		Total Sys-tem KW**		Capacity MBtuHt		Total Sys-tem KW**		Capacity MBtuHt		Total Sys-tem KW**					
CFM	EWB ° F (° C)	Total	Sens†		Total	Sens†		Total	Sens†		Total	Sens†		Capacity MBtuHt	Total	115 (48.1)	Total Sys-tem KW**
1400	72 (22.2)	54.60	27.69	3.34	52.26	26.84	3.70	49.78	25.94	4.11	47.16	25.01	4.56	44.34	24.02	5.06	
	67 (19.4)	49.83	34.09	3.33	47.64	33.21	3.70	45.33	32.30	4.10	42.89	31.34	4.56	40.29	30.34	5.05	
	62 (16.7)	45.55	40.45	3.32	43.56	39.53	3.69	41.50	38.56	4.10	39.36	39.17	4.55	37.40	37.40	5.05	
	57 (13.9)	44.50	44.50	3.32	42.88	42.88	3.69	41.17	41.17	4.10	39.35	39.35	4.55	37.40	37.40	5.05	
	72 (22.2)	55.49	29.01	3.42	53.07	28.15	3.78	50.49	27.24	4.19	47.77	26.30	4.64	44.86	25.30	5.13	
1600	67 (19.4)	50.68	36.22	3.41	48.40	35.33	3.77	46.00	34.40	4.18	43.48	33.44	4.63	40.81	32.43	5.13	
	62 (16.7)	46.57	43.32	3.40	44.58	44.17	3.77	42.69	42.69	4.18	40.76	40.76	4.63	38.69	38.69	5.13	
	57 (13.9)	46.24	46.24	3.40	44.52	44.52	3.77	42.69	42.69	4.18	40.76	40.76	4.63	38.69	38.69	5.13	
	72 (22.2)	56.14	30.25	3.49	53.64	29.38	3.86	50.99	28.46	4.27	48.20	27.51	4.72	45.21	26.50	5.21	
	67 (19.4)	51.29	38.24	3.48	48.95	37.35	3.85	46.49	36.41	4.26	43.92	35.44	4.71	41.18	34.40	5.21	
1800	62 (16.7)	47.65	47.65	3.48	45.85	45.85	3.85	43.93	43.93	4.26	41.90	41.90	4.71	39.72	39.72	5.21	
	57 (13.9)	47.66	47.66	3.48	45.85	45.85	3.85	43.94	43.94	4.26	41.90	41.90	4.71	39.72	39.72	5.21	

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*CAP**4821A**	1.00	1.00	
CAP**4817A**	0.98	0.98	
CAP**4824A**	1.00	1.00	
CAP**6021A**	1.01	1.01	
CAP**6024A**	1.01	1.01	
CNPF*4818A**	0.98	0.98	
CNPH*4821A**	1.00	1.00	
CNPH*6024A**	1.01	1.01	
CNPV*4821A**	1.00	1.00	
CNPV*4824A**	1.00	1.00	
CNPV*6024A**	1.01	1.01	
CSPH*4812A**	0.98	0.98	
CSPH*6012A**	1.00	1.00	
PF4MNA048	1.00	1.00	
PF4MNA049	1.00	0.96	
PF4MNA060	1.01	1.01	
PF4MNA061	1.01	0.97	
CAP**4821A**	0.98	0.98	PG8*EA048090
CAP**6021A**	1.00	0.96	PG8*EA048090
CNPH*4821A**	0.98	0.94	PG8*EA048090
CNPH*6024A**	1.00	0.96	PG8*EA048090
CNPV*4821A**	0.98	0.94	PG8*EA048090
CSPH*4812A**	0.98	0.94	PG8*EA048090
CSPH*6012A**	1.00	1.00	PG8*EA048090
CAP**4821A**	0.98	0.94	PG8*EA060110
CAP**6021A**	1.00	0.92	PG8*EA060110
CNPH*4821A**	0.98	0.94	PG8*EA060110
CNPH*6024A**	1.00	0.92	PG8*EA060110
CNPV*4821A**	0.98	0.94	PG8*EA060110
CSPH*4812A**	0.98	0.94	PG8*EA060110
CSPH*6012A**	1.00	0.92	PG8*EA060110
CAP**4821A**	0.98	0.94	PG8*EA060135
CAP**6024A**	1.00	1.00	PG8*EA060135
CNPH*4821A**	0.98	0.94	PG8*EA060135
CNPH*6024A**	1.00	0.96	PG8*EA060135
CNPV*4824A**	0.98	0.98	PG8*EA060135
CNPV*6024A**	1.00	0.96	PG8*EA060135

See notes on pg. 16

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)		
		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†	
PA13NA060 – B Outdoor Section With CAPVP06024 Indoor Section																
1750	72 (22.2)	67.21	34.03	4.17	64.33	32.99	4.62	61.25	31.88	57.99	30.72	5.69	54.51	29.50	6.30	
	67 (19.4)	61.78	42.10	4.12	59.11	41.03	4.58	56.26	39.90	53.27	38.73	5.64	50.10	37.51	6.26	
	62 (16.7)	56.85	50.10	4.08	54.44	49.01	4.54	51.89	47.82	49.28	46.54	5.60	46.74	46.74	6.23	
	57 (13.9)	55.51	55.51	4.07	53.53	53.53	4.53	51.41	51.41	49.17	49.17	5.60	46.74	46.74	6.23	
2000	72 (22.2)	68.22	35.65	4.27	65.20	34.58	4.73	62.01	33.46	58.62	32.28	5.79	55.02	31.05	6.40	
	67 (19.4)	62.74	44.73	4.22	59.96	43.64	4.68	57.00	42.50	53.90	41.32	5.74	50.62	40.07	6.36	
	62 (16.7)	58.02	53.65	4.18	55.58	52.46	4.64	53.19	53.19	50.79	50.79	5.71	48.19	48.19	6.33	
	57 (13.9)	57.57	57.57	4.18	55.46	55.46	4.64	53.20	53.20	50.80	50.80	5.71	48.19	48.19	6.33	
2250	72 (22.2)	68.93	37.17	4.37	65.81	36.09	4.83	62.53	34.96	59.04	33.77	5.89	55.34	32.51	6.50	
	67 (19.4)	63.43	47.24	4.32	60.56	46.14	4.78	57.53	44.99	54.34	43.78	5.84	50.99	42.50	6.46	
	62 (16.7)	59.25	59.25	4.29	57.01	57.01	4.75	54.82	54.82	52.11	52.11	5.82	49.36	49.36	6.44	
	57 (13.9)	59.25	59.25	4.29	57.01	57.01	4.75	54.82	54.82	52.12	52.12	5.82	49.36	49.36	6.44	

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*CAP**6024A**	1.00	1.00	
CAP**6021A**	0.98	0.98	
CNP**6024A**	1.00	1.00	
CNPV**6024A**	1.00	1.00	
CSPH**6012A**	1.00	1.00	
PF4MNA060	1.00	1.02	
PF4MNA061	1.00	0.96	
CSPH**6012A**	0.98	0.98	PG8*EA048090
CAP**6021A**	0.98	0.94	PG8*EA060110
CNP**6024A**	0.98	0.94	PG8*EA060110
CSPH**6012A**	0.98	0.94	PG8*EA060110
CAP**6024A**	0.98	0.94	PG8*EA060135
CNP**6024A**	0.98	0.98	PG8*EA060135
CNPV**6024A**	0.98	0.98	PG8*EA060135
CSPH**6012A**	0.98	0.94	PG8*EA060135

Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per ARI standard 210/240–94. If additional tubing length and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

* Tested combination.

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

‡ Sensible capacities shown are based on 80° F (27° C) entering air at the indoor coil. For sensible capacities at other than 80° F (27° C), deduct 835 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).

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

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

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.

