



## TWELVE-PLUS™ HIGH EFFICIENCY PACKAGED AIR CONDITIONERS

Cooling Capacities: 23,500 to 47,000 BTUH  
SEER: 12.00 to 13.00

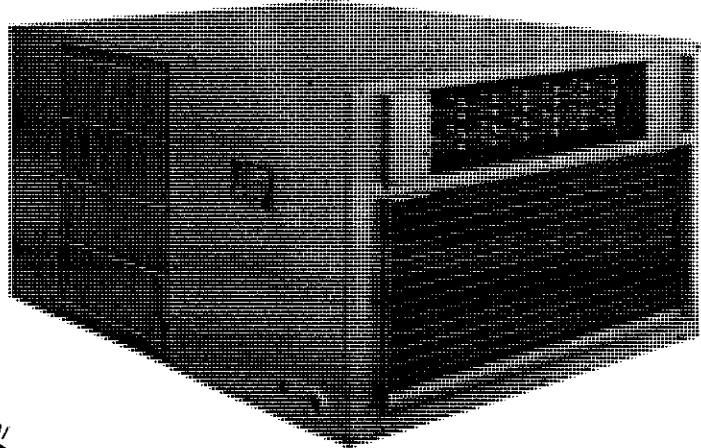
Refrigerant 22

### Cooling Efficiency Ratings

MODEL	PHASE	BTUH	SEER	SENSIBLE/TOTAL RATIO
P1224A2	1	23,500	13.0	72.4
P1230A1	1	30,000	12.0	72.0
P1236A1, P1236A1-B	1, 3	35,000	12.0	71.2
P1242A1	1	42,500	12.5	74.0
P1248A2, P1248A2-B	1, 3	47,000	12.0	73.0

Tested and Certified in accordance with ARI Standard 210/240-2003.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.



Basic model P1236 shown  
with Electric Heater Package



### Engineered Features

#### Optional Field Installed Electric Heat Strips:

With automatic limit and thermal cut-off.

- Field-installed heater package for all models.
- Features slide-in field assembly with various BTUH outputs.
- Permits stocking of only one unit.

#### Aluminum Finned Copper Coil:

Surfaces expel heat efficiently as required by system.

#### Electrical Components and Controls

Accessible for easier service.

#### 20 Gauge Zinc Coated Galvanneal Steel Cabinet:

Heavily insulated for sound absorption and more efficiency. Cleaned, rinsed, sealed and dried before the polyurethane primer is applied. The cabinet is handsomely finished with a baked on textured enamel which allows it to withstand 1000 hours of salt spray exposure.

#### High Pressure Switch:

Built-in with a lock out circuit that resets from the room thermostat.

#### High Efficiency Scroll Compressor:

**Energy Efficient** - The scroll compressor offers a smooth, continuous compression process with very few flow losses. In addition, it requires no valves and, therefore, eliminates all valve losses. Finally, unlike a piston, the scroll compressor's suction and discharge gas are separate. The net result is higher energy efficiency than piston technology.

**Volumetric Efficiency:** Scroll has no re-expansion volume, which increases compressor capacity in high compression ratio operating conditions.

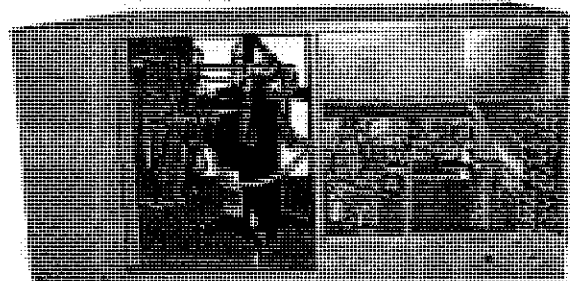
**Sound:** Scroll's low gas pulses, combined with the elimination of valves (and associated valve noise), result in a smooth and quiet compression process.

#### 5 Minute Compressor Time Delay:

Provides short cycle protection. There is a 5-minute delay on break that prevents short cycling and assures pressures are equalized before trying to restart the compressor.

#### Indoor Blower:

Features a variable speed (ECM) motor providing super high efficiency, low sound levels, and soft start capabilities. Motor is self adjusting to provide proper airflow at high static pressure for ducted installations without user adjustment or wiring changes.

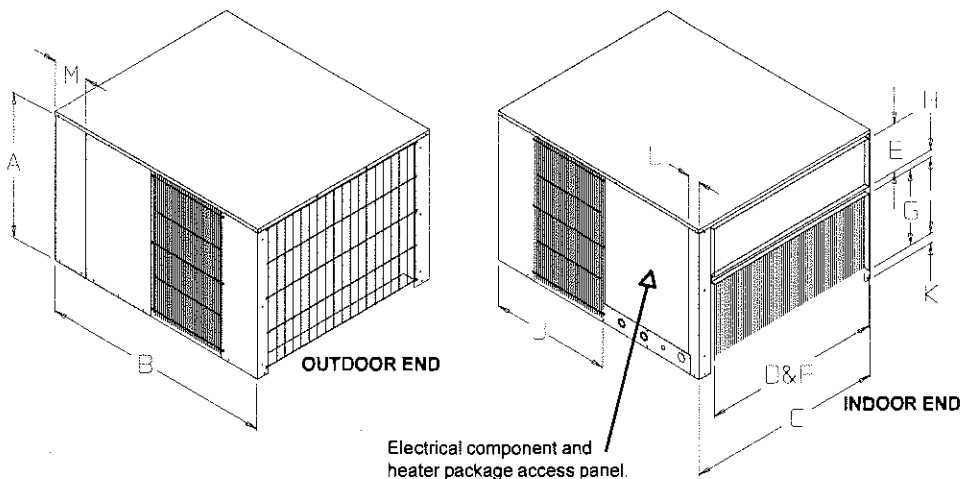


**NOTE:** All models have controls and electrical components on this side.

## Specifications

MODEL	P1224A2	P1230A1	P1236A1	P1236A1-B	P1242A1	P1248A2	P1248A2-B
Cooling Capacity BTUH	23,500	30,000	35,000	35,000	42,500	47,000	47,000
Heating Capacity BTUH	SEE ELECTRIC HEAT TABLE NO. 1 AND NO. 2						
Electric Rating - Volts & Phase - 60Hz - Ckt.A	230/208-1	230/208-1	230/208-1	230/208-3	230/208-1	230/208-1	230/208-3
Operating Voltage Range	197-253	197-253	197-253	187-253	197-253	197-253	187-253
Minimum Circuit Ampacity	15	22	25	19	30	34	23
Max. Fuse or HACR Circuit Breaker Size	20	30	40	25	45	50	35
Field Wire Supply **	10	10	8	10	8	6	8
<b>Compressor - Circuit A</b>							
Volts	230/208	230/208	230/208	230/208	230/208	230/208	230/208
Rated Load Amps	8.5/9.0	12.1/13.6	13.8/15.4	10.0/10.9	16.4/17.3	18.5/20.0	12.4/12.7
Branch Circuit Selection Current	10	13.6	16.0	10.9	18.0	21	12.8
Lock Rotor Amps - 230/208	54/54	72.5/72.5	88/88	77/77	104/104	137/137	91/91
<b>Fan Motor and Condenser</b>							
Fan Motor - HP-RPM	1/5 - 1090	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/3 - 825	1/3 - 825	1/3 - 825
Fan Motor - Amps	1.2	1.6	1.6	1.6	2.5	2.5	2.5
Fan - DIA./CFM	20"/1975	20"/2400	20"/2100	20"/2100	24"/2900	24"/2350	24"/2350
Face Area Sq. Ft./Rows/Fins per in.	5.04/2/13	5.04/4/13	5.04/4/13	5.04/4/13	7.70/4/12	7.70/4/12	7.70/4/12
<b>Motor and Evaporator</b>							
Blower Motor - HP-RPM	1/3 variable	1/2 variable	1/2 variable	1/2 variable	1/2 variable	1/2 variable	1/2 variable
Blower Motor - Amps	2.2	2.7	3.3	3.3	4.3	4.5	4.5
CFM Cooling w/Filter (Rated)	800@.10	1000@.15	1100@.15	1100@.15	1400@.20	1550@.20	1550@.20
Face Area Sq. Ft./Rows/Fins per in.	3.2/2/13	3.2/2/16	3.2/4/14	3.2/4/14	4.8/4/14	4.8/4/12	4.8/4/12
Refrigerant 22 - oz.	53	88	102	102	118	151	151
Shipping Weight - lbs.	300	330	340	340	410	430	430

\*\*75°C copper wire size, basic unit only.



MIS-1305

## Indoor Blower Performance CFM-Dry Coil With Filter

MODEL	RATED ESP	RATED CFM	MAX. ESP
P1224	.10	800	.50
P1230	.15	1000	.50
P1236	.15	1100	.50
P1242	.20	1400	.50
P1248	.20	1550	.50

ESP = External static pressure in inches

## Dimensions for All Models

MODEL	NOMINAL CABINET DIMENSIONS (INCHES)									DUCT OPENINGS (IN)				
	A	B	C	H	J	K	L	M	DISCHARGE		RETURN AIR			
									D	E	F	G	H	
P1224	24-1/4	48-3/16	38-1/8	7/8	26-1/8	2-1/8	9/16	9/16	33	6	33	14	7/8	
P1230														
P1236														
P1242	31-1/4	50	42	1-3/8	26	3	2-3/4	7-9/16	38	10	38	16	1-3/8	
P1248														

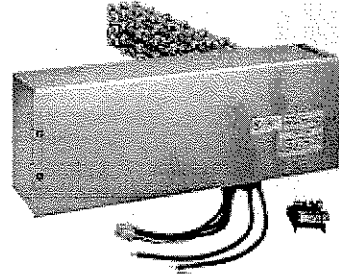
NOTE: For roof application, roof hoods & roof curbs are available. See the Bard Commercial Products - Complete Pricing and Products Guide, Form No. F1402 or S3002.

**Optional Field-Installed Heater Packages  
Are Only To Be Used With The Air  
Conditioning Models As Indicated Below  
Electric Heat Table No. 1**

Heater Package Model No.	Volts and Phase	P1224	P1230 P1236	P1236-B	P1242 P1248	P1248-B
EH3PC-A05	240/208-1	X	X			
EH3PB-A10			X			
EH3PC-A10		X				
EH3PC-A15			X			
EH3PB-B09	240/208-3			X		
EH3PB-B15				X		
EH5PB-A05	240/208-1				X	
EH5PB-A10					X	
EH5PB-A15					X	
EH5PB-B09	240/208-3					X
EH5PB-B15						X

**Optional Field-Installed  
Electric Heater Packages**

Optional field-installed electric heater packages are available for 5 through 15 KW capacities. The heater packages are UL listed to be field-installed into the basic unit. They feature pre-wired control circuit wiring with plug-in connector. Simply slide the heater into the unit, plug in the pretested control circuit and connect the separate high voltage circuit wiring.



**Optional Field-Installed Electric Heater Table  
Electric Heat Table No. 2**

HEATER PACKAGE MODEL NO.	HEATER PACKAGE VOLTS PHASE	HTR. KW & CAPACITY @ 240V		HEATER KW & CAPACITY @ 208 VOLTS		HEATER AMPS @ 240/208V	CIRCUIT B					
		KW	BTUH	KW	BTUH		HEATER INTERNAL FUSES	NUMBER FIELD CKTS.	MINIMUM CIRCUIT AMPACITY	MAX. OVER-CURRENT <sup>①</sup> PROTECTION	FIELD <sup>②</sup> POWER WIRING	GROUND WIRE <sup>③</sup> SIZE
EH3PC-A05	240/208-1	5	17,100	3.75	12,800	20.8/18.1		1	26/23	30/25	10/10	10
EH3PB-A10		10	34,100	7.5	26,000	41.6/36.2		1	53/46	60/50	6/8	10
EH3PC-A10		10	34,100	7.5	26,000	41.6/36.2		1	53/46	60/50	6/8	10
EH3PC-A15		15	51,200	11.25	38,400	62.5/54.1	30/60	1	79/68	80/70	4/4	8
EH3PB-B09	240/208-3	9	30,700	6.75	23,000	21.7/18.7		1	28/24	30/25	10/10	10
EH3PB-B15		15	51,200	11.25	38,400	36.2/31.2		1	46/39	50/40	8/8	10
EH5PB-A05	240/208-1	5	17,100	3.75	12,800	20.8/18.1		1	26/23	30/25	10/10	10
EH5PB-A10		10	34,100	7.5	26,000	41.6/36.2		1	53/46	60/50	6/6	10
EH5PB-A15		15	51,200	11.25	38,400	62.5/54.1	30/60	1	79/68	80/70	3/4	8
EH5PB-B09	240/208-3	9	30,700	6.75	23,000	21.7/18.7		1	28/24	30/25	10/10	10
EH5PB-B15		15	51,200	11.25	38,400	36.2/31.2		1	46/39	50/40	6/8	10

① Time delay fuses or "HACR Type" circuit breakers must be used for 60 and smaller sizes. Standard fuses or circuit breakers are suitable for sizes 70 and larger.

② Based on wire suitable for 75°C. Other wiring materials must be marked "Minimum Circuit Ampacity" or greater.

③ Based upon Table 250-95 of National Electrical Code latest edition.

④ A separate power supply must be provided for use with optional heater packages. See electrical data for basic air conditioning for Circuit A wiring specification requirements.

### Cooling Application Data --- Outdoor Temperature ①

Model	D.B./W.B.②	Cooling Capacity	Outdoor Temperature °F										
			75°	80°	85°	90°	95°	100°	105°	110°	115°	120°	125°
P1224	75/ 62	Total Cooling	25,000	23,700	22,500	21,400	20,400	19,500	18,800	18,000	17,400	16,800	16,300
		Sensible Cooling	19,200	18,500	17,900	17,300	16,900	16,500	16,200	16,000	15,800	15,700	15,700
	80/ 67	Total Cooling	26,600	25,800	25,000	24,200	23,500	22,700	22,100	21,400	20,900	20,300	19,800
		Sensible Cooling	18,600	18,100	17,700	17,300	17,000	16,800	16,600	16,500	16,400	16,400	16,500
	85/ 68	Total Cooling	31,700	30,200	28,700	27,400	26,000	24,900	23,900	22,800	22,000	21,100	20,400
		Sensible Cooling	19,100	18,400	17,800	17,200	16,700	16,300	15,900	15,500	15,100	14,800	14,600
P1230	75/ 62	Total Cooling	32,000	30,400	28,900	27,500	26,100	24,900	23,700	22,400	21,200	20,200	19,000
		Sensible Cooling	25,200	23,900	22,700	21,700	21,000	20,400	19,900	19,600	19,400	19,300	19,500
	80/ 67	Total Cooling	34,100	33,100	32,100	31,100	30,000	29,000	27,900	26,700	25,500	24,400	23,100
		Sensible Cooling	24,400	23,400	22,500	21,700	21,200	20,700	20,400	20,200	20,200	20,200	20,500
	85/ 68	Total Cooling	40,600	38,700	36,900	35,100	33,400	31,700	30,100	28,400	26,800	25,400	23,800
		Sensible Cooling	25,000	23,800	22,600	21,600	20,800	20,100	19,500	19,000	18,600	18,300	18,200
P1236	75/ 62	Total Cooling	37,800	35,700	33,900	32,100	30,500	29,000	27,700	26,300	25,100	24,000	23,000
		Sensible Cooling	28,600	27,400	26,300	25,300	24,600	23,900	23,400	23,100	22,900	22,800	22,800
	80/ 67	Total Cooling	40,300	38,900	37,600	36,300	35,000	33,800	32,600	31,400	30,200	29,100	28,000
		Sensible Cooling	27,700	26,800	26,000	25,300	24,800	24,300	24,000	23,800	23,800	23,800	24,000
	85/ 68	Total Cooling	48,000	45,500	43,200	41,000	38,900	37,000	35,200	33,400	31,800	30,300	28,800
		Sensible Cooling	28,400	27,200	26,100	25,200	24,400	23,500	22,900	22,300	21,900	21,500	21,300
P1242	75/ 62	Total Cooling	43,900	42,200	40,600	38,900	37,000	35,200	33,200	31,300	29,200	27,100	24,900
		Sensible Cooling	33,600	33,400	33,000	32,500	31,800	31,100	30,000	28,900	27,600	26,200	24,600
	80/ 67	Total Cooling	46,800	46,000	45,100	43,900	42,500	41,000	39,200	37,300	35,100	32,800	30,300
		Sensible Cooling	32,600	32,700	32,700	32,500	32,100	31,600	30,800	29,900	28,700	27,400	25,900
	85/ 68	Total Cooling	55,800	53,800	51,800	49,600	47,200	44,900	42,300	39,700	36,900	34,100	31,200
		Sensible Cooling	33,400	33,200	32,900	32,300	31,500	30,600	29,400	28,100	26,500	24,800	22,900
P1248	75/ 62	Total Cooling	48,500	46,500	44,500	42,700	40,900	39,400	38,000	36,700	35,500	34,300	33,300
		Sensible Cooling	36,700	35,600	34,500	33,400	32,400	31,400	30,400	29,400	28,600	27,600	26,700
	80/ 67	Total Cooling	51,800	50,600	49,400	48,200	47,000	45,900	44,800	43,700	42,700	41,600	40,600
		Sensible Cooling	35,600	34,900	34,100	33,400	32,700	31,900	31,200	30,400	29,700	28,900	28,100
	85/ 68	Total Cooling	61,700	59,200	56,700	54,400	52,200	50,200	48,300	46,500	44,900	43,200	41,800
		Sensible Cooling	36,500	35,400	34,300	33,200	32,100	30,900	29,800	28,500	27,400	26,100	24,900

① Below 65°F (18.3C) unit requires a factory or field-installed low ambient control.

② Return air temperature

#### CAPACITY MULTIPLIER FACTORS

% of Rated Airflow	-10	Rated	+10
Total Btuh	0.975	1.0	1.02
Sensible Btuh	0.950	1.0	1.05

### Optional Control Modules --- Field-Installed

Field Installed Part	Applicable To	Description
CMA-6	All Models	Low Ambient Control
CMA-16	All Models	Low Pressure Control, Auto Reset
CMA-18	All Models	Low Ambient Control & Low Pressure Control, Auto Reset



Bard Manufacturing Company, Inc.  
BRYAN, OHIO 43506

Since 1914 . . . Moving ahead,  
just as planned

Due to our continuous product improvement policy, all specifications subject to change without notice.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

Form No.  
S3331  
December, 2004

Supersedes S3331-603