



PA13-SERIES PACKAGED AIR CONDITIONERS

Cooling Capacities:

SEER:

GREEN REFRIGERANT R-410A



BACK (OUTDOOR AIRFLOW) END OF UNIT



FRONT (INDOOR AIRFLOW) END OF UNIT

Standard Engineered Features

Air Conditioner Compressor:

Reciprocating compressors with crankcase heaters are standard on 2, 2½ and 3-ton models. Scroll compressors are used on all other models and no crankcase heaters are required.

R-410A Refrigerant:

Designed with R-410A (HFC) non-ozone depleting refrigerant in compliance with the Montreal protocol and 2010 EPA requirements.

ECM Indoor Blower Motor:

Features a variable speed motor providing super-high efficiency, low sound levels and soft-start capabilities. The motor is self-adjusting to provide the proper airflow rate for a broad range of static pressure in ducted installations without user adjustment or wiring changes.

Aluminum Finned Copper Coils:

Grooved tubing and enhanced louvered fin for maximum heat transfer and energy efficiency.

Thermal Expansion Valves:

Models with reciprocating compressors have bleed TXV, models with scroll compressor have non-bleed TXV.

Discharge Muffler:

Standard on 2½ and 3-ton models.

Liquid Line Filter Drier:

Protects system against moisture.

Compressor Control Module:

Built-in off-delay timer adjustable from 30 seconds to 5 minutes. 2-minute on-delay if power interrupt. 120-second bypass for low pressure control, and both soft and manual lockouts for high and low pressure controls. Alarm output for alarm relay.

High & Low Pressure Switches are Auto-Reset

Built-in lockout circuit resets from the room thermostat. Provides commercial quality protection to the compressor.

Pre-Painted 20 Gauge Zinc Coated Steel Cabinet:

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 tests per ASTM B117-03.

Pre-Painted 16 Gauge Zinc Coated Unit Base:

The unit base is treated with the same paint coatings as the cabinet above, insuring years of service.

Top Discharge Outdoor Fan:

Efficiently moves air quietly for effective heat exchange.

Electrical Components and Controls:

Readily accessible for easier service.

Field Installed Accessories

Optional Field Installed Electric Heat Strips:

With automatic limit and thermal cutoff.

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

Optional Field Installed Low Ambient Control:

Cycles outdoor fan motor below 55°F outdoor temperature to maintain acceptable condensing pressure.



Cooling Capacities and Efficiency Ratings

MODELS	Phase	BTUH	SEER
PA13241-A	1	23,000	13.00
PA13301-A	1	29,000	13.00
PA13361-A, -B	1 and 3	34,000	13.00
PA13421-A, -B	1 and 3	43,500	13.00
PA13481-A, -B	1 and 3	46,500	13.00
PA13601-A, -B	1 and 3	55,500	13.00

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

General Specifications

Model	PA13241-A	PA13301-A	PA13361-A	PA13361-B	PA13421-A	PA13421-B	PA13481-A	PA13481-B	PA13601-A	PA13601-B
Electric Rating – 60 Hz – Circuit A	230/208-60-1	230/208-60-1	230/208-60-1	230/208-60-3	230/208-60-1	230/208-60-3	230/208-60-1	230/208-60-3	230/208-60-1	230/208-60-3
Operating Voltage Range	197 - 253	197 - 253	197 - 253	187 - 253	197 - 253	187 - 253	197 - 253	187 - 253	197 - 253	187 - 253
Minimum Circuit Ampacity ④	15	18	24	17	31	23	34	24	38	26
BCSC	9	11	15	10	21	15	22	14	26	16
Field Wire Size ③	12	10	8	12	10	10	8	10	8	10
Ground Wire Size	12	10	8	12	10	10	8	10	8	10
Delay Fuse – Max. ②	20	25	35	30	50	40	55	40	60	40
Total unit Amps – 230/208	10.8/11.8	13.3/14.8	16.4/18.4	12.0/13.3	16.2/18.1	14.1/15.4	23.0/24.7	16.9/18.0	25.3/28.9	17.7/19.9
Compressor – Circuit A										
Compressor Type	Recip.	Recip.	Recip.	Recip.	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Volts	230/208	230/208	230/208	230/208	230/208	230/208	230/208	230/208	230/208	230/208
Rated Load Amps	7.5/8.5	9.5/11	12/14	7.6/8.9	11.8/13.7	8.3/9.6	17/18.7	10.9/12	19.3/22.9	11.7/13.9
Lock Rotor Amps	48/48	57/57	74/74	75/75	115/115	115/115	117/117	83.1/83.1	134/134	110/110
Fan Motor and Condenser										
Fan Motor – HP/RPM	1/6 - 825	1/6 - 825	1/6 - 825	1/6 - 825	1/4 - 825	1/4 - 825	1/4 - 825	1/4 - 825	1/4 - 825	1/4 - 825
Fan Motor Amps	1.1	1.1	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
Fan – Dia./CFM	24"/2700	24"/2600	24"/2600	24"/	24"/3400	24"/3400	24"/3400	24"/3400	24"/3400	24"/3400
Motor and Evaporator										
Blower Motor – HP/RPM ①	1/3 - VS	1/2 - VS	1/2 - VS	1/2 - VS	1/2 - VS	1/2 - VS	3/4 - VS	3/4 - VS	3/4 - VS	3/4 - VS
Blower Motor – Amps	2.2	2.7	3.3	3.3	4.3	4.3	4.5	4.5	4.5	4.5
CFM Cooling & ESP					1400/.23	1400/.23	1500/.28	1500/.28	1700/.28	1700/.28
Charge (R-410 oz.)	75	85	120	120	160	160	160	160	160	160
Shipping Weight (pounds)	300	300	350	350						

① VS = Variable Speed Programmable Motor

② Maximum time delay fuse or HACR type circuit breaker for protection of field wiring devices.

③ Based on 75°C copper wire. All wiring must conform to the National Electrical Code and all local codes.

④ These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to National Electric Code (latest revision), Article 310 for power conductor sizing.

Indoor Blower Performance ①

MODEL	Rated ESP	MAX EXP	② Continuous Airflow	③ Rated Cooling CFM	④ Rated Heating CFM
PA1324	0.10	0.50	600	800	800
PA1330	0.15	0.50	750	1000	1000
PA1336	0.15	0.50	825	1100	1100
PA1342	0.20	0.50	925	1400	1400
PA1348	0.20	0.50	1025	1550	1550
PA1360	0.20	0.50	1150	1650	1650

① Motor will deliver consistent CFM through voltage supply range with no deterioration (197-253V for all 230/208V models).

② Continuous CFM is the total air being circulated during continuous (manual fan) mode.

③ Will occur automatically with a call for "Y" for cooling mode operation.

④ Will occur automatically with a call for "W1" for heating mode operation.

Optional Field Installed Electric Heater Packages

Optional field-installed electric heater packages are available for 5 through 20Kw capacities. The heater packages are UL listed to be field-installed into the basic unit. They feature prewired 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.



IMPORTANT: While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses and conductor wires in accordance with the National Electrical Code and all existing local codes.

Optional Field Installed Heater Packages Are Only To Be Used With The Models As Indicated Below

Heater Package Model	Volts & Phase	PA13241-A	PA13301-A	PA13361-A	PA13361-B	PA13421-A	PA13421-B	PA13481-A	PA13481-B	PA13601-A	PA13601-B
EHP313-A05	240/208-1	X	X	X							
EHP313-A10	240/208-1	X	X	X							
EHP313-A15	240/208-1		X	X							
EHP313-B09	240/208-3				X						
EHP313-B15	240/208-3				X						
EHP513-A05	240/208-1					X		X		X	
EHP513-A10	240/208-1					X		X		X	
EHP513-A15	240/208-1					X		X		X	
EHP513-B09	240/208-3						X		X		X
EHP513-B15	240/208-3						X		X		X

Optional Field Installed Electric Heater Table — 2 through 5 Ton

Heater Package Model No.	Unit Volts Phases	Htr. KW & Capacity @ 240 Volts		Htr. KW & Capacity @ 208 Volts		240/208V Htr. Amps	Heater Internal Circuit Breaker	Circuit B				
		KW	BTUH	KW	BTUH			No. Field Circuits	③ Min. Circuit Ampacity	① Max. Over Current Protection	② Field Power Wiring	② Ground Wire Size
EHP313-A05	240/208-1	5	17,100	3.75	12,800	20.8/18.1	30/60	1	26/23	30/25	10/10	10
EHP313-A10	240/208-1	10	34,100	7.50	26,000	41.6/36.2		1	53/46	60/50	6/8	10
EHP313-A15	240/208-1	15	51,200	11.25	38,400	62.5/54.1		1	79/68	80/70	4/4	8
EHP513-A05	240/208-1	5	17,100	3.75	12,800	20.8/18.1	30/60	1	26/23	30/25	10/10	10
EHP513-A10	240/208-1	10	34,100	7.50	26,000	41.6/36.2		1	53/46	60/50	6/8	10
EHP513-A15	240/208-1	15	51,200	11.25	38,400	62.5/54.1		1	79/68	80/70	4/4	8
EHP313-B09	240/208-3	9	30,700	6.75	23,000	21.7/18.7	None	1	28/24	30/25	10/10	10
EHP313-B15	240/208-3	15	51,200	11.25	38,400	36.2/31.2		1	46/39	50/40	8/8	10
EHP513-B09	240/208-3	9	30,700	6.75	23,000	21.7/18.7	None	1	28/24	30/25	10/10	10
EHP513-B15	240/208-3	15	51,200	11.25	38,400	36.2/31.2		1	46/39	50/40	8/8	10

① Maximum size of the time delay fuse or HACR circuit breaker for protection of field wiring devices.

② Based on wire suitable for 75°C. Other wiring materials must be rated for marked "Minimum Circuit Ampacity" or greater. Based on 75°C copper wire. All wiring must conform to the National Electric Code and all local codes.

③ These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electric Code (latest revision), Article 310 for power conductor sizing.

IMPORTANT: While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses and conductor wires in accordance with the National Electrical Code and all existing local codes.

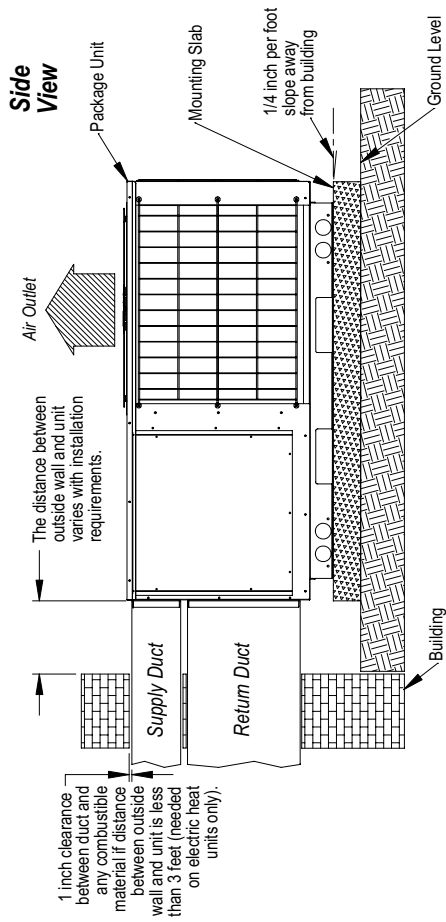
Cooling Application Data — Outdoor Temperature ①

Model	D.B.W.B.®	Cooling Capacity	Outdoor Temperature °F															
			55°F	60°F	65°F	70°F	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F	125°F	
PA13241	75/62	Total Cooling	30,100	29,000	27,900	26,750	25,650	24,550	23,500	22,400	21,300	20,100	18,850	17,650	16,450	15,200	14,050	
		Sensible Cooling	20,600	20,100	19,700	19,250	18,800	18,400	17,950	17,500	17,100	16,650	16,200	15,750	15,250	14,800	14,350	
		Total Cooling	31,900	30,750	29,650	28,500	27,400	26,300	25,200	24,100	23,000	21,800	20,600	19,400	18,200	17,000	15,850	
		Sensible Cooling	20,750	20,250	19,800	19,300	18,800	18,300	17,750	17,250	16,700	16,350	15,000	15,700	15,350	15,000	14,450	
		Total Cooling	35,600	34,350	33,150	31,950	30,750	29,600	28,450	27,300	26,150	24,650	23,200	21,750	20,250	18,800	17,400	
PA13301	85/72	Sensible Cooling	20,900	20,450	19,950	19,500	19,000	18,500	18,000	17,500	16,950	16,600	16,300	15,950	15,600	15,250	14,850	
		Total Cooling	38,150	36,700	35,300	33,900	32,500	31,100	29,700	28,300	26,850	25,450	24,000	22,550	21,100	19,700	18,250	
		Sensible Cooling	27,050	26,450	25,850	25,250	24,600	24,050	23,450	22,900	22,300	21,600	20,850	20,150	19,400	18,700	18,000	
		Total Cooling	40,400	38,950	37,550	36,100	34,700	33,300	31,850	30,450	29,000	27,600	26,200	24,800	23,400	22,000	20,600	
		Sensible Cooling	27,300	26,650	25,950	25,300	24,600	23,900	23,200	22,500	21,800	21,200	20,650	20,050	19,500	18,900	18,300	
PA13361	85/72	Total Cooling	45,050	43,550	42,000	40,450	38,900	37,400	35,950	34,450	32,950	31,200	29,500	27,750	26,050	24,300	22,650	
		Sensible Cooling	27,500	26,850	26,200	25,550	24,850	24,200	23,500	22,800	22,150	21,550	20,950	20,400	19,800	19,200	18,600	
		Total Cooling	43,200	41,700	40,200	38,700	37,150	35,750	34,350	32,900	31,500	29,600	27,750	25,850	23,950	22,100	20,350	
		Sensible Cooling	48,150	45,450	42,800	40,100	37,450	34,350	31,250	28,150	25,050	24,050	23,000	21,950	20,900	19,850	18,250	
		Total Cooling	45,750	44,250	42,700	41,200	39,700	38,300	36,850	35,450	34,000	32,150	30,300	28,400	26,550	24,700	22,950	
PA13421	80/67	Sensible Cooling	48,400	45,650	42,900	40,150	37,400	34,200	30,950	27,750	24,500	23,600	22,750	21,850	21,000	20,100	18,550	
		Total Cooling	51,050	49,400	47,800	46,150	44,500	43,050	41,550	40,100	38,600	36,350	34,100	31,850	29,550	27,300	25,250	
		Sensible Cooling	48,850	46,100	43,350	40,550	37,800	34,600	31,350	28,100	24,900	24,000	23,100	22,200	21,300	20,400	18,850	
		Total Cooling	53,950	52,250	50,500	48,800	47,100	45,400	43,700	42,000	40,300	38,500	36,750	34,950	33,150	31,400	29,650	
		Sensible Cooling	39,250	38,500	37,800	37,100	36,400	35,750	35,150	34,550	33,950	32,800	31,650	30,500	29,300	28,150	27,150	
PA13481	80/67	Total Cooling	57,100	55,400	53,700	52,000	50,300	48,600	46,900	45,200	43,500	41,800	40,150	38,450	36,800	35,100	32,550	
		Sensible Cooling	39,600	38,800	38,000	37,150	36,350	35,550	34,800	34,000	33,200	32,250	31,300	30,400	29,450	28,500	27,600	
		Total Cooling	63,700	61,850	60,050	58,250	56,400	54,650	52,900	51,150	49,400	47,300	45,150	43,050	40,950	38,800	36,800	
		Sensible Cooling	39,950	39,150	38,350	37,550	36,750	36,000	35,250	34,500	33,700	32,750	31,800	30,850	29,900	28,950	28,050	
		Total Cooling	57,550	55,700	53,900	52,050	50,250	48,452	46,650	44,850	43,100	41,100	39,100	37,150	35,150	33,200	31,250	
PA13481	85/72	Sensible Cooling	42,200	41,300	40,400	39,500	38,600	37,700	36,850	35,950	35,100	34,050	33,050	32,000	30,950	29,950	28,950	
		Total Cooling	60,850	59,050	57,250	55,450	53,650	51,850	50,100	48,300	46,500	44,600	42,750	40,850	39,000	37,100	35,250	
		Sensible Cooling	42,600	41,600	40,550	39,550	38,550	37,500	36,450	35,350	34,300	33,500	32,700	31,900	31,100	30,300	29,450	
		Total Cooling	67,900	66,000	64,050	62,100	60,150	58,350	56,500	54,650	52,800	50,450	48,100	45,750	43,400	41,000	38,800	
		Sensible Cooling	42,950	41,950	40,950	39,950	38,950	37,950	36,900	35,850	34,850	34,026	33,200	32,400	31,600	30,800	29,900	
PA13601	75/62	Total Cooling	67,000	65,000	63,000	61,000	59,050	57,150	55,250	53,350	51,450	49,100	46,750	44,400	42,050	39,700	37,500	
		Sensible Cooling	47,450	46,600	45,800	45,000	44,200	43,700	43,150	42,650	42,150	40,100	38,100	36,050	34,050	32,000	30,400	
		Total Cooling	70,850	68,900	66,950	65,000	63,050	61,150	59,300	57,400	55,500	53,300	51,050	48,850	46,600	44,400	42,250	
		Sensible Cooling	47,900	47,000	46,050	45,100	44,150	43,400	42,700	41,950	41,200	39,440	37,700	35,900	34,150	32,400	30,900	
		Total Cooling	79,050	76,950	74,900	72,800	70,700	68,800	66,900	64,950	63,050	60,250	57,450	54,700	51,900	49,100	46,550	
PA13601	85/72	Sensible Cooling	48,300	47,350	46,450	45,550	44,650	43,950	43,250	42,550	41,850	40,050	38,250	36,500	34,700	32,900	31,450	

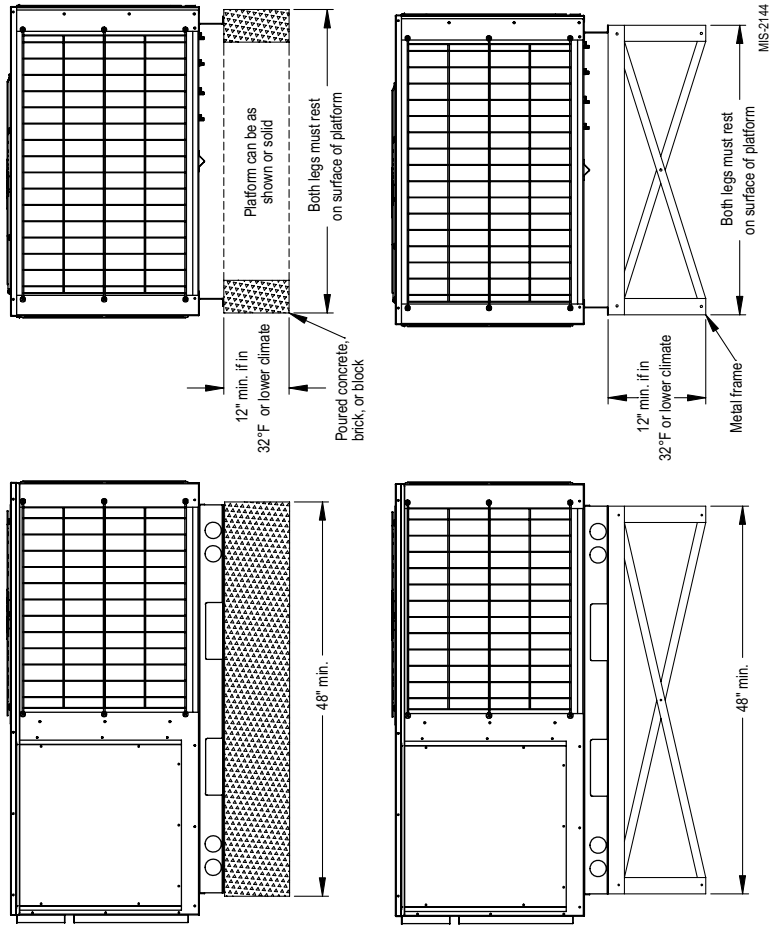
① Below 55°F, unit requires a field installed low ambient control model CMA-28.

② Return air temperature °F.

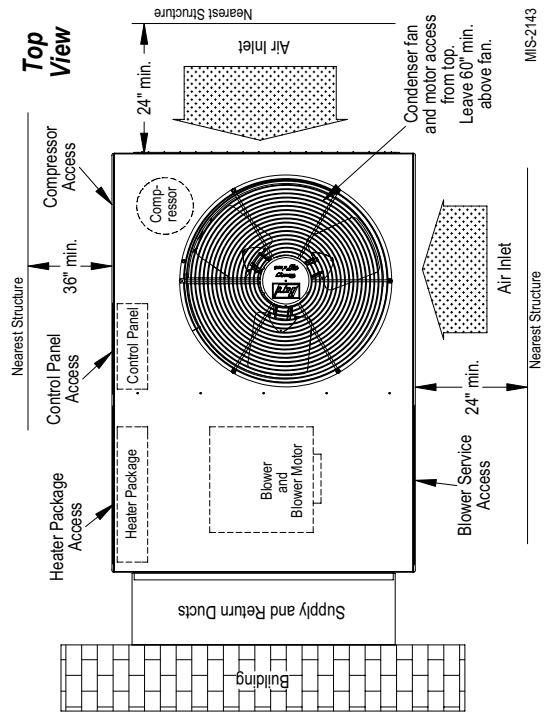
Slab Mounting at Ground Level



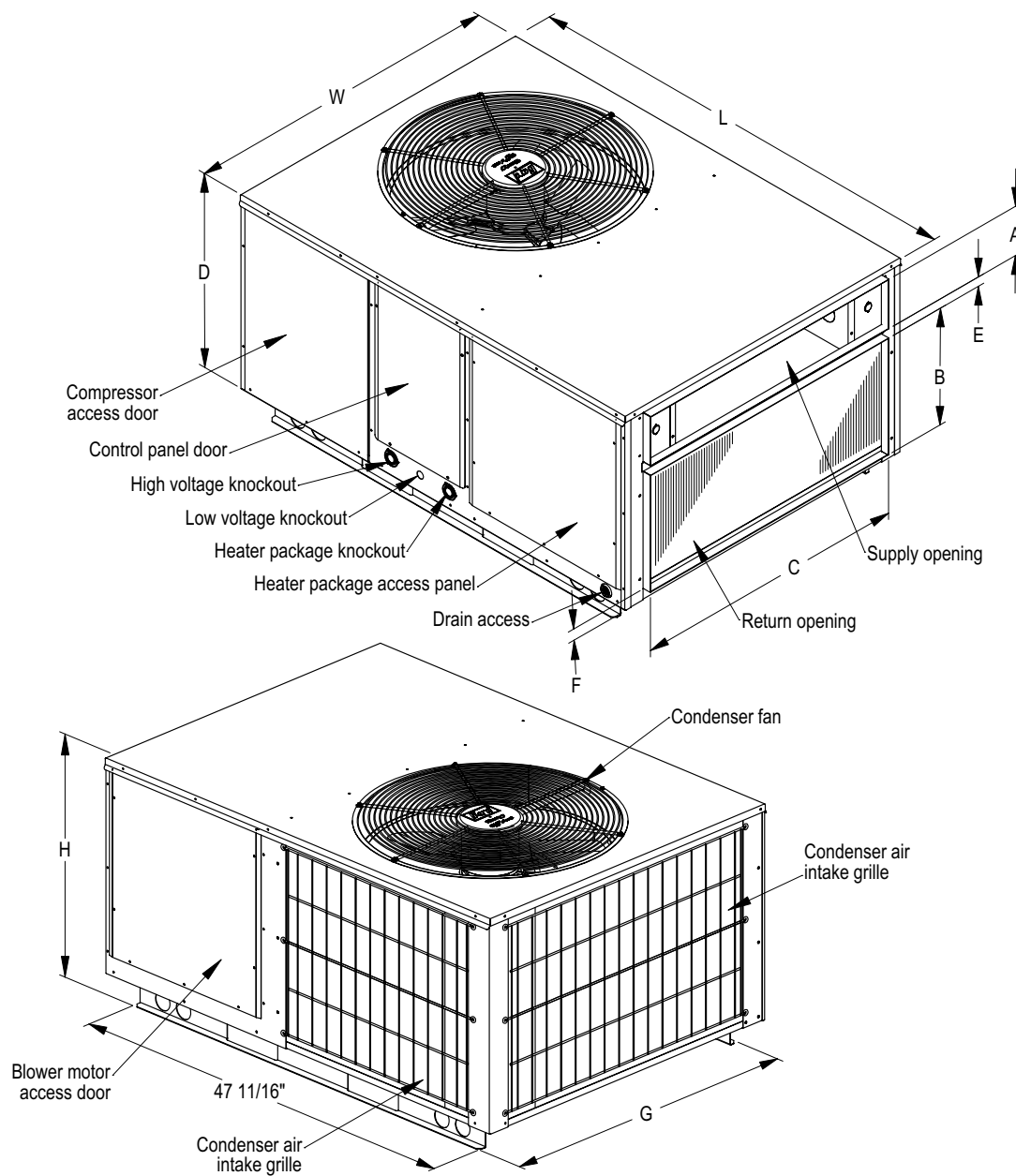
Elevated Mounting Platforms (Field Constructed)



Airflow & Service Access Clearances



Unit Dimensions



Unit Dimension Chart

Unit	Supply Size		Return Size		Unit Overall Dimensions			Unit General Dimensions			
	A	C	B	C	H (height)	L (length)	W (width)	D	E	F	G
PA/PH1324,1330,1336	5.875	32.875	13.875	32.875	26.25	53.25	38.125	23.25	1.125	1.375	35.625
PA/PH1342,1348,1360	9.875	37.875	15.875	37.875	33.25	55.25	42.375	30.25	1.5	2.375	38.125

MIS-2142

Optional Control Modules — Field Installed

Field Installed Part	Applicable To	Description
CMA-28	All Models	Low Ambient Control



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Supersedes: **NEW**