

## PRODUCT SPECIFICATIONS



**UP TO 15 SEER**

**2 - 4 TONS**

**COOLING CAPACITY:  
 24,000 - 45,500 BTU/H**



To receive the 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California or Québec. Full warranty details available at [www.amana-hac.com](http://www.amana-hac.com).

# GPC15M

## PACKAGED AIR CONDITIONER

The Amana® Distinctions™ brand GPC15M Packaged Air Conditioner features energy-efficient cooling and heating performance in one self-contained unit. The GPC15M is housed in a heavy-gauge, galvanized-steel cabinet protected by a high-quality, UV-resistant powder-paint finish and allows for a ground-level or rooftop mount.

### Standard Features

- R-410A chlorine-free refrigerant
- Energy-efficient compressor with internal relief valve
- ECM (X-13) blower motor
- Convertible airflow — horizontal or downflow
- Copper tube/aluminum fin coil
- Totally enclosed, permanently lubricated condenser fan motor
- Electric heat kit available as a field-installed accessory
- AHRI Certified; ETL Listed

### Cabinet Features

- Heavy-gauge galvanized-steel cabinet with attractive Architectural Gray powder-paint finish
- Fully insulated blower compartment with convenient access panels
- Louvered condenser coil protection
- One footprint; two heights

### Contents

Nomenclature.....	2
Product Specifications.....	3
Evaporator Blower Specifications.....	4
Expanded Cooling Data.....	6
Heat Kit Electrical Data.....	8
Dimensions.....	9
Wiring Diagrams.....	10
Accessories.....	11

**NOMENCLATURE**

	<b>G</b>	<b>P</b>	<b>C</b>	<b>15</b>	<b>36</b>	<b>M</b>	<b>4</b>	<b>1</b>	<b>A</b>	<b>*</b>	
	1	2	3	4,5	6,7	8	9	10	11	12	
<b>Brand</b>	G Goodman or Distinctions™										<b>Engineering</b> Minor Revision
<b>Product Category</b>	P Packaged Unit										<b>Engineering</b> Major Revision
<b>Type</b>	H Heat Pump C Air Conditioner										<b>Voltage Designator</b> 1 208-230/1/60 3 208-230/3/60 4 460/3/60
<b>Efficiency</b>	13 13 SEER	15 15 SEER									<b>Refrigerant</b> 2 R-22 4 R-410A
<b>Nominal Capacity</b>	24 2 Tons	42 3½ Tons									<b>Configuration</b> H Horizontal M Multi-position

**SPECIFICATIONS**

	<b>GPC15 24M41*</b>	<b>GPC15 30M41*</b>	<b>GPC15 36M41*</b>	<b>GPC15 42M41*</b>	<b>GPC15 48M41*</b>
<b>COOLING CAPACITY</b>					
Total BTU/h	24,000	28,000	35,000	40,000	45,500
Sensible BTU/h	17,300	20,700	25,000	29,200	32,400
SEER / EER	14.5 / 12	14.5 / 12	14.5 / 12	14.5 / 12	15 / 12
Decibels	76	76	77	78	78
AHRI #s	3479845	3479846	3479847	3479848	3479849
<b>EVAPORATOR MOTOR</b>					
Type	Scroll	Scroll	Scroll	Scroll	Scroll
Nominal Cooling CFM	850	1,050	1,150	1,350	1,350
Wheel (DxW)	10x9	10x9	10x9	10x9	10x9
No. of Speeds	5	5	5	5	5
Horsepower - RPM	½ - 1,050	½ - 1,050	½ - 1,050	¾ - 1,050	¾ - 1,050
<b>EVAPORATOR COIL</b>					
Face Area (ft <sup>2</sup> )	4.52	4.52	4.52	6.17	6.17
Rows Deep/ Fin per Inch	3 / 16	3 / 16	4 / 14	4 / 14	4 / 14
Drain Size (NPT)	¾"	¾"	¾"	¾"	¾"
R-410A Refrigerant Charge (oz.)	80	100	115	138	168
<b>CONDENSER FAN / COIL</b>					
Horsepower - RPM	1/6 - 815	1/4 - 837	1/4 - 837	1/4 - 1,075	1/4 - 1,075
Fan Diameter / # Fan Blades	22 / 3	22 / 3	22 / 3	22 / 3	22 / 3
Face Area (ft <sup>2</sup> )	12.33	12.33	12.33	15.38	15.38
Rows Deep/ Fins per Inch	1 / 24	2 / 16	2 / 16	2 / 16	2 / 16
<b>COMPRESSOR</b>					
Quantity	1	1	1	1	1
Type	Scroll	Scroll	Scroll	Scroll	Scroll
Stage	Single	Single	Single	Single	Single
<b>ELECTRICAL DATA</b>					
Voltage-Hz-Phase	208/230-60-1	208/230-60-1	208/230-60-1	208/230-60-1	208/230-60-1
Compressor RLA/LRA	12.8 / 58.3	14.1 / 73	16.7 / 79	17.9 / 112	19.9 / 109
Indoor Blower FLA	1.9	1.9	1.9	2.9	2.9
Outdoor Fan FLA / LRA	1.1 / 1.7	1.5 / 3.0	1.5 / 3.0	1.4 / 2.9	1.4 / 2.9
Total Unit Amps	15.8	17.5	20.1	22.2	24.2
Min. Circuit Ampacity <sup>1</sup>	19.0	21.0	24.2	26.7	29.2
Max. Overcurrent Protection <sup>2</sup>	30	35	40	40	45
<b>OPERATING WEIGHT (LBS)</b>	354	363	395	438	438
<b>SHIP WEIGHT (LBS)</b>	375	384	416	459	459

<sup>1</sup> Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

<sup>2</sup> May use fuses or HACR-type circuit breakers of the same size as noted.

Note: Always check the S&R plate for electrical data on the unit being installed.

# EVAPORATOR BLOWER SPECIFICATIONS

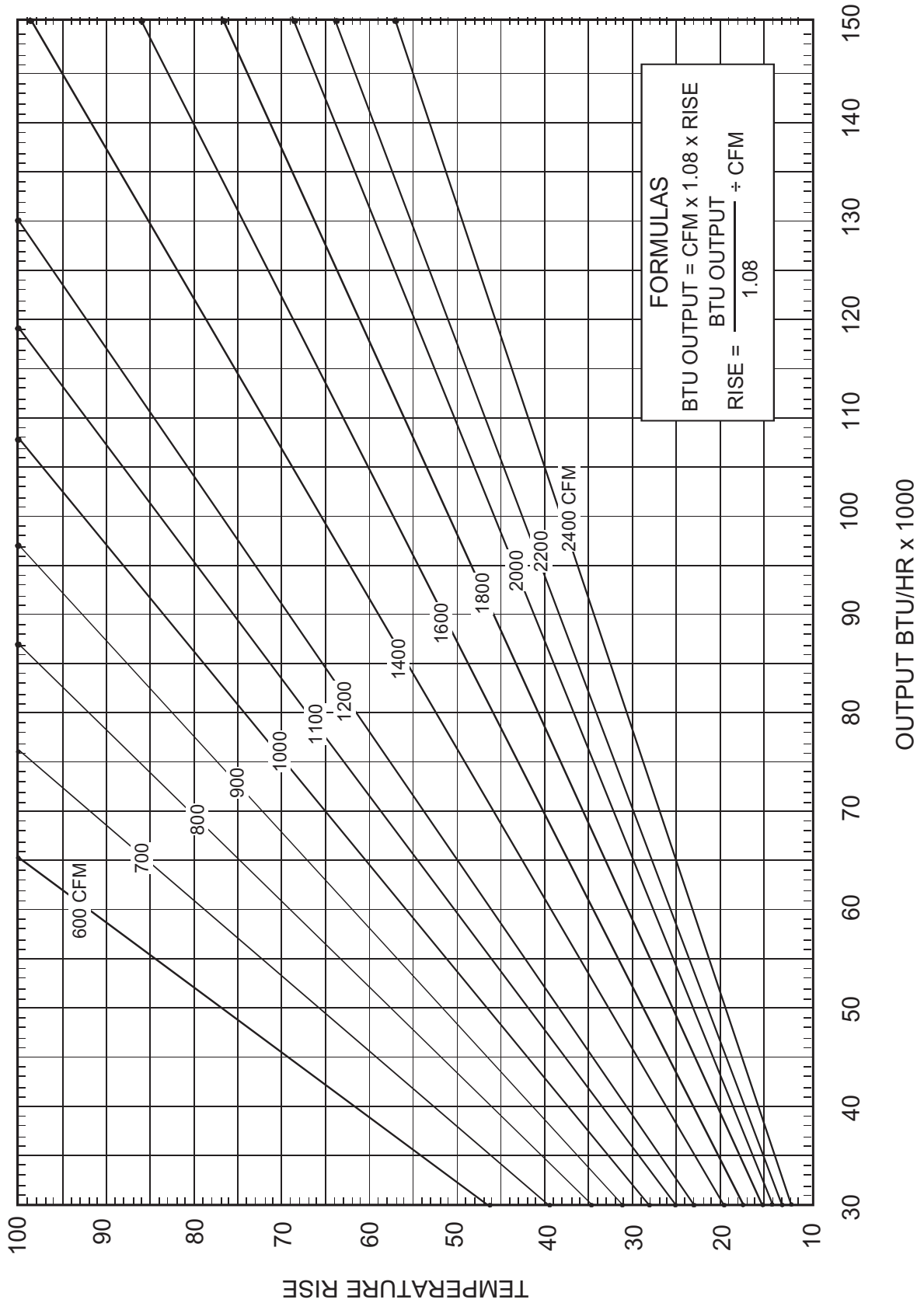
Model	Speed	Volts		E.S.P (In. of H <sub>2</sub> O)							
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
GPC15 24M41*	T1 (G)	230	CFM	882	808	727	649	545	---	---	---
			WATTS	82	86	92	102	108	---	---	---
	T2 / T3	230	CFM	933	873	810	733	637	584	---	---
			WATTS	93	103	109	120	126	135	---	---
	T4 / T5	230	CFM	1058	1012	945	896	816	723	672	---
			WATTS	124	136	142	153	168	172	179	---
GPC15 30M41*	T1 (G)	230	CFM	893	824	752	665	575	---	---	---
			WATTS	87	95	101	111	115	---	---	---
	T2 / T3	230	CFM	1132	1070	1011	959	889	827	733	669
			WATTS	153	162	168	179	184	195	206	208
	T4 / T5	230	CFM	1287	1236	1165	1123	1066	1012	958	857
			WATTS	211	217	228	239	244	255	265	272
GPC15 36M41*	T1 (G)	230	CFM	852	764	711	592	545	---	---	---
			WATTS	80	82	86	95	99	---	---	---
	T2 / T3	230	CFM	1232	1190	1131	1082	1023	966	889	819
			WATTS	202	214	221	229	235	246	258	264
	T4 / T5	230	CFM	1267	1213	1162	1120	1058	1009	932	841
			WATTS	218	226	236	245	247	260	272	275
GPC15 42M41*	T1 (G)	230	CFM	1123	1070	1025	984	942	894	839	774
			Watts	162	170	182	193	204	216	229	242
	T2 / T3	230	CFM	1437	1390	1354	1318	1281	1243	1204	1165
			Watts	310	317	331	342	355	366	377	389
	T4 / T5	230	CFM	1528	1490	1450	1410	1383	1348	1312	1267
			Watts	372	379	391	403	416	427	439	451
GPC15 48M41*	T1 (G)	230	CFM	1199	1138	1085	1017	957	889	820	755
			WATTS	162	173	185	193	211	219	232	245
	T2 / T3	230	CFM	1799	1745	1698	1658	1610	1560	1522	1450
			WATTS	480	493	508	521	531	545	550	547
	T4 / T5	230	CFM	1921	1865	1818	1780	1719	1667	1579	1483
			WATTS	582	585	602	625	627	621	595	569

**Notes**

- Data shown is dry coil. Wet coil pressure drop is approximately 0.1" H2O, for two-row indoor coil; 0.2" H2O, for three-row indoor coil; and 0.3" H2O, for four-row indoor coil.
- Data shown does not include filter pressure drop, approximately 0.08" H2O.
- ALL MODELS SHOULD RUN NO LESS THAN 350 CFM/TON. USE HIGHER SPEED TAP OR NEXT SIZE LARGER BLOWER ASM. See Repair Parts list.
- Reduce airflow by 2% for 208-volt operation.

# EVAPORATOR BLOWER SPECIFICATIONS (CONT.)

BTU OUTPUT vs TEMPERATURE RISE CHART





## EXPANDED COOLING DATA (CONT.)

### GPC1542M41

Indoor Air		Condenser Air Temperature														
		75			85			95			105			115		
SCFM	WB	Total <sup>1</sup>	Sens <sup>1</sup>	Watts <sup>2</sup>	Total <sup>1</sup>	Sens <sup>1</sup>	Watts <sup>2</sup>	Total <sup>1</sup>	Sens <sup>1</sup>	Watts <sup>2</sup>	Total <sup>1</sup>	Sens <sup>1</sup>	Watts <sup>2</sup>	Total <sup>1</sup>	Sens <sup>1</sup>	Watts <sup>2</sup>
1181	71	41.4	20.6	2.97	40.5	20.6	3.19	39.5	20.7	3.40	37.5	20.4	3.57	34.7	19.1	3.72
	67	38.8	25.7	2.85	37.8	25.8	3.07	36.9	26.0	3.27	35.1	25.6	3.43	32.5	23.9	3.57
	63	36.3	29.6	2.74	35.4	29.6	2.96	34.6	29.8	3.14	32.8	29.4	3.30	30.4	27.5	3.44
	59	35.5	30.9	2.67	34.7	30.9	2.88	33.8	31.1	3.06	32.1	30.7	3.22	29.8	28.7	3.35
1350	71	44.9	23.1	3.06	43.8	23.1	3.29	42.8	23.3	3.50	40.6	23.0	3.68	37.6	21.5	3.83
	67	42.0	28.9	2.94	41.0	29.0	3.17	40.0	29.2	3.37	38.0	28.8	3.54	35.2	26.9	3.68
	63	39.3	33.3	2.83	38.4	33.3	3.05	37.4	33.5	3.24	35.6	33.1	3.40	32.9	30.9	3.55
	59	38.5	34.7	2.76	37.6	34.7	2.97	36.6	35.0	3.16	34.8	34.5	3.32	32.2	32.2	3.45
1519	71	46.2	25.0	3.09	45.1	25.0	3.32	44.0	25.2	3.54	41.8	24.8	3.71	38.8	23.2	3.87
	67	43.3	31.2	2.97	42.2	31.3	3.20	41.2	31.5	3.40	39.1	31.1	3.57	36.3	29.0	3.72
	63	40.5	35.9	2.86	39.5	36.0	3.08	38.6	36.2	3.27	36.6	36.6	3.44	33.9	33.9	3.58
	59	39.6	37.5	2.78	38.7	37.5	3.00	37.7	37.7	3.19	35.9	35.9	3.35	33.2	33.2	3.49

<sup>1</sup> MBTU/h    <sup>2</sup> kW    Total MBTU/h    **37.1**    Sensible MBTU/h    **28.9**    Latent MBTU/h    **8.2**

### GPC1548M41

Indoor Air		Condenser Air Temperature														
		75			85			95			105			115		
SCFM	WB	Total <sup>1</sup>	Sens <sup>1</sup>	Watts <sup>2</sup>	Total <sup>1</sup>	Sens <sup>1</sup>	Watts <sup>2</sup>	Total <sup>1</sup>	Sens <sup>1</sup>	Watts <sup>2</sup>	Total <sup>1</sup>	Sens <sup>1</sup>	Watts <sup>2</sup>	Total <sup>1</sup>	Sens <sup>1</sup>	Watts <sup>2</sup>
1181	71	47.1	22.9	3.29	46.0	22.9	3.54	44.9	23.1	3.77	42.6	22.7	3.96	39.5	21.3	4.13
	67	44.1	28.6	3.16	43.0	28.7	3.41	42.0	28.9	3.62	39.9	28.5	3.81	37.0	26.6	3.97
	63	41.3	32.9	3.04	40.3	33.0	3.28	39.3	33.2	3.49	37.3	32.7	3.66	34.6	30.6	3.82
	59	40.4	34.4	2.96	39.4	34.4	3.19	38.5	34.7	3.40	36.5	34.2	3.57	33.9	31.9	3.72
1350	71	51.1	25.7	3.39	49.9	25.7	3.65	48.6	25.9	3.88	46.2	25.6	4.08	42.8	23.9	4.25
	67	47.8	32.2	3.26	46.6	32.2	3.51	45.5	32.4	3.74	43.2	32.0	3.93	40.0	29.9	4.09
	63	44.7	37.0	3.13	43.7	37.1	3.38	42.6	37.3	3.59	40.5	36.8	3.78	37.5	34.4	3.93
	59	43.8	38.6	3.05	42.7	38.7	3.29	41.7	38.9	3.50	39.6	38.4	3.68	36.7	35.9	3.83
1519	71	52.6	27.8	3.42	51.4	27.8	3.69	50.1	28.0	3.92	47.6	27.6	4.12	44.1	25.8	4.29
	67	49.2	34.8	3.29	48.0	34.8	3.55	46.9	35.0	3.77	44.5	34.6	3.96	41.2	32.3	4.13
	63	46.1	40.0	3.17	45.0	40.0	3.41	43.9	40.3	3.63	41.7	39.7	3.81	38.6	37.1	3.97
	59	45.1	41.7	3.08	44.0	41.8	3.32	42.9	42.9	3.54	40.8	40.8	3.72	37.8	37.8	3.87

<sup>1</sup> MBTU/h    <sup>2</sup> kW    Total MBTU/h    **42.2**    Sensible MBTU/h    **32.1**    Latent MBTU/h    **10.0**

Sensible heat capacities shown are based on 80°F DB entering air at the evaporator coil.

For sensible heat capacities at other than 80°F DB, deduct 84 BTU/h per 100 CFM of evaporator coil air for each degree below 80°F, or add 84 BTU/h per 100 CFM of evaporator coil air per degree above 80°F.

**Capacities at 95°F Outdoor, 75°F DB and 63°F WB Indoor**

**HEAT KIT ELECTRICAL DATA (BLOWER ONLY, HEAT MODE)**

Model & Heat Kit Usage	Circuit #1		Circuit #2		Actual kW & BTU at 240V
	MCA @ 208 / 240V	MOD @ 208 / 240V	MCA @ 208 / 240V	MOD @ 208 / 240V	
GPC1524M41					
HKR05A,CA	24 / 27	30 / 30	----	----	4.75 / 16,200
HKR08A,CA	33 / 28	40 / 40	----	----	7.00 / 23,800
HKR10A,CA	45 / 51	60 / 60	----	----	9.50 / 32,400
GPC1530M41					
HKR05A,CA	24 / 27	30 / 30	--	--	4.75 / 16,200
HKR08A,CA	34 / 39	40 / 40	--	--	7.0 / 23,800
HKR10A,CA	45 / 52	60 / 60	--	--	9.5 / 32,400
HKR15A,CA	45 / 52	60 / 60	22 / 25	30 / 30	14.25 / 48,600
GPC1536M41					
HKR05A,CA	24 / 27	30 / 30	----	----	4.75 / 16,200
HKR08A,CA	34 / 39	40 / 40	----	----	7.00 / 23,800
HKR10A,CA	45 / 52	60 / 60	----	----	9.50 / 32,400
HKR15A,CA	45 / 52	60 / 60	22 / 25	30 / 30	14.25 / 48,600
GPC1542M41					
HKR05A,CA	24 / 27	30 / 30	--	--	4.75 / 16,200
HKR08A,CA	34 / 39	40 / 40	--	--	7.0 / 23,800
HKR10A,CA	45 / 52	60 / 60	--	--	9.5 / 32,400
HKR15A,CA	45 / 52	60 / 60	22 / 25	30 / 30	14.25 / 48,600
GPC1548M41					
HKR05A,CA	25 / 28	30 / 30	----	----	4.75 / 16,200
HKR08A,CA	34 / 40	40 / 40	----	----	7.00 / 23,800
HKR10A,CA	46 / 53	60 / 60	----	----	9.50 / 32,400
HKR15A,CA	46 / 52	60 / 60	22 / 25	30 / 30	14.25 / 48,600
HKR20A,CA	46 / 52	60 / 60	43 / 49	60 / 60	19.50 / 66,500

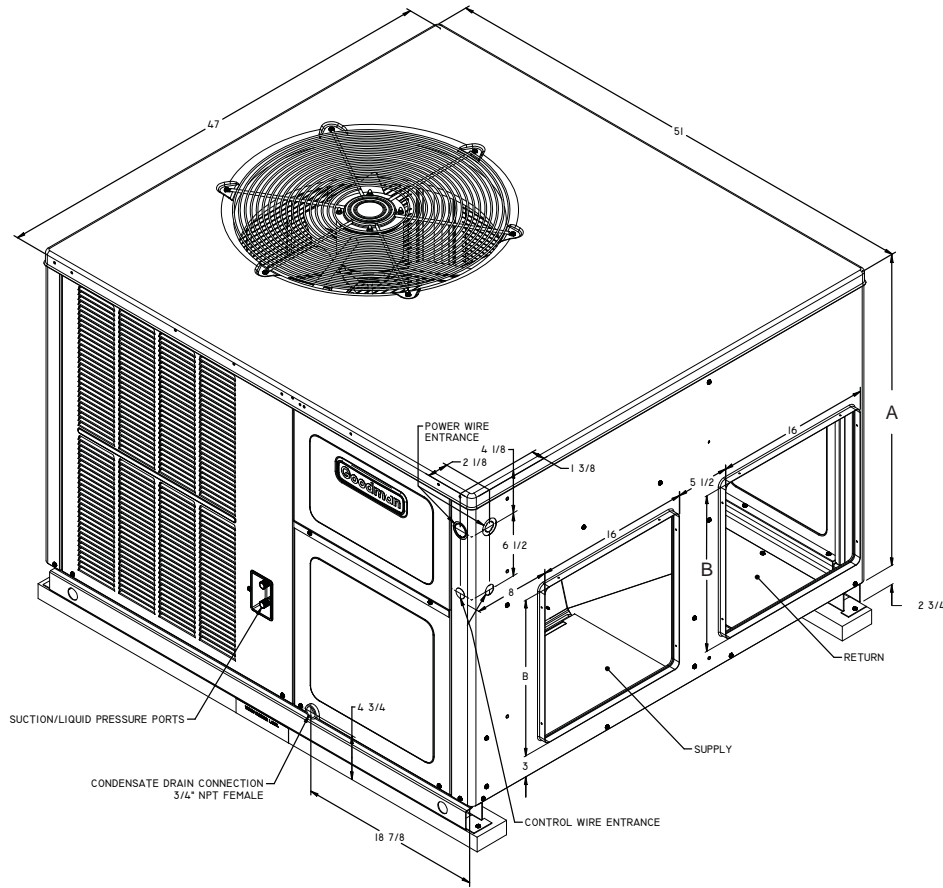
<sup>1</sup> Minimum Circuit Ampacity @ 208 / 240 V

<sup>2</sup> Maximum Overcurrent Protection device @ 208 / 240 V

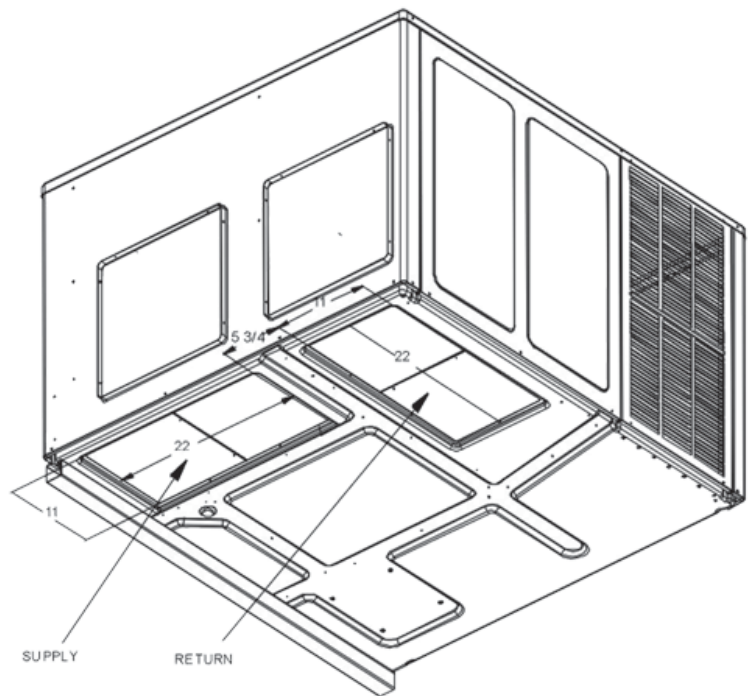
\* Revision level that may or may not be designated

C Circuit Breaker option

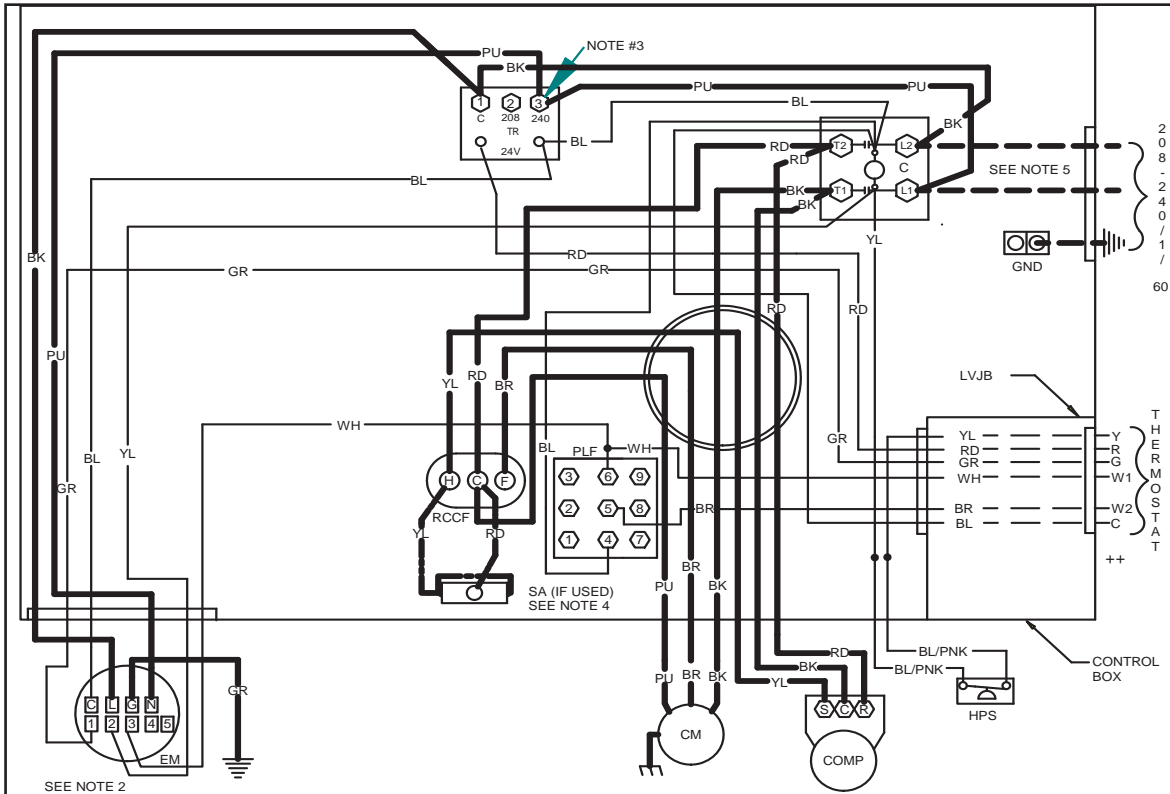
# DIMENSIONS



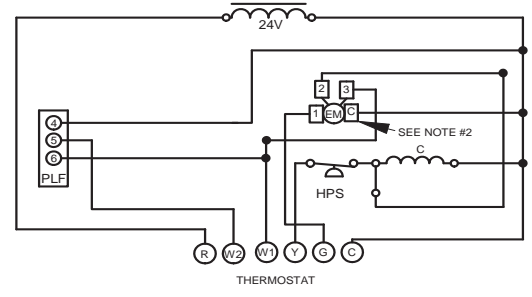
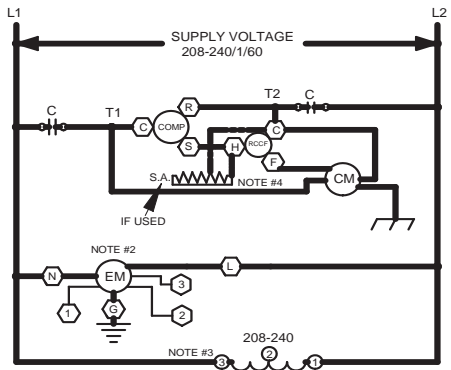
Model	Chassis Size		Dimensions (")		
	Med.	Large	W x D x H	A	B
GPC1524M41	X		47 x 51 x 35	32 1/4	16
GPC1530M41	X		47 x 51 x 35	32 1/4	16
GPC1536M41	X		47 x 51 x 35	32 1/4	16
GPC1542M41		X	47 x 51 x 42 1/4	39 1/2	18
GPC1548M41		X	47 x 51 x 42 1/4	39 1/2	18



# WIRING DIAGRAM — GPC1524-48M41



SEE NOTE 2



**COMPONENT LEGEND**

- C CONTACTOR
- CM CONDENSER MOTOR
- COMP COMPRESSOR
- EM EVAPORATOR MOTOR
- GND EQUIPMENT GROUND
- LVJB LOW VOLTAGE JUNCTION BOX
- PLF FEMALE PLUG / CONNECTOR
- RCCF RUN CAPACITOR FOR COMPRESSOR AND FAN
- SA START ASSIST TRANSFORMER
- HPS HIGH PRESSURE SWITCH

**FACTORY WIRING**

- LINE VOLTAGE
- LOW VOLTAGE
- OPTIMAL HIGH VOLTAGE

**FIELD WIRING**

- - HIGH VOLTAGE
- - LOW VOLTAGE

**WIRE CODE**

- BK BLACK
- BL BLUE
- BR BROWN
- GR GREEN
- OR ORANGE
- PU PURPLE
- RD RED
- WH WHITE
- YL YELLOW
- BL/PNK BLUE/PINK STRIPE

**NOTES:**

1. REPLACEMENT WIRE MUST BE SAME SIZE AND TYPE INSULATION AS ORIGINAL (AT LEAST 105°C) USE COPPER CONDUCTOR ONLY.
2. TO CHANGE EVAPORATOR MOTOR SPEED MOVE WHITE AND YELLOW LEADS FROM EM "2" AND "3" TO "4" AND "5". IF BOTH LEADS ARE ENERGIZED, THE HIGHER SPEED SETTING IS USED.
3. FOR 208 VOLT TRANSFORMER OPERATION MOVE PURPLE WIRES FROM TERMINAL 3 TO TERMINAL 2 ON TRANSFORMER.
4. START ASSIST FACTOR EQUIPPED WHEN REQUIRED
5. USE COPPER CONDUCTORS ONLY
- ++ USE N.E.C. CLASS 2 WIRE

SEE UNIT RATING PLATE FOR TYPE AND SIZE OF OVER CURRENT PROTECTION

208-240/1/60 0140G01077 REV A



**High Voltage:** Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.



**WARNING**  
Wiring is subject to change. Always refer to the wiring diagram on the unit for the most up-to-date wiring

## ACCESSORIES

Item	Description
20464501PDGK	Horizontal Duct Cover for Medium Chassis
20464502PDGK	Horizontal Duct Cover for Large Chassis
GPH13MED102/103	Downflow Economizer for Medium/Large Chassis
GPH13MFR102/103	Internal filter rack for Downflow Applications
OT/EHR18-60	Emergency Heat Relay kit
OT18-60A	Outdoor Thermostat Kit with Lockout Stat
PGC102/103	Roof Curb for Medium/Large Chassis
PGMDD102	Manual Damper for Downflow Application — Medium Chassis
PGMDD103	Manual Damper for Downflow Application — Large Chassis
PGMDH102	Manual 25% Fresh Air Damper for Horizontal Applications — Medium Chassis
PGMDH103	Manual 25% Fresh Air Damper for Horizontal Applications — Large Chassis
PGMDMD102	Motorized Damper for Downflow Application — Medium Chassis
PGMDMD103	Motorized Damper for Downflow Application — Large Chassis
PGMDMH102	Motorized 25% Fresh Air Damper for Horizontal Applications — Medium Chassis
PGMDMH103	Motorized 25% Fresh Air Damper for Horizontal Applications — Large Chassis
SQRPG102	Square-to-Round Adapter with 16" Round for Downflow Applications — Medium Chassis
SQRPG103	Square-to-Round Adapter with 18" Round for Downflow Applications — Large Chassis
SQRPGH101/102	Square-to-Round Adapters for Medium Chassis — 16" x 14"
SQRPGH103	Square-to-Round Adapters for Large Chassis — 18" x 14"

**NOTES**

