Goodman
Air Conditioning & Heating

PC

Packaged Air Conditioners

Product Specifications

The PC50 Packaged Air Conditioner features energy-efficient cooling and heating performance in one self-contained unit. This unit is housed in a heavy-gauge, galvanized-steel cabinet protected by a high-quality, UV-resistant powder-paint finish. The PC50 allows for ground-level or rooftop applications, and is approved for manufactured or modular homes.

Standard Features

- Energy-efficient compressor with internal relief valve
- PSC blower motor
- Quiet horizontal discharge
- Copper tube/aluminum fin coil
- Totally enclosed, permanently lubricated condenser fan motor
- Fully charged system

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
- Common footprint

Heat Kit Selection

- HKR5-12 (12 kW)
- HKR5-15 (15 kW)
- Above electric heat kits available as field-installed options.

11 SEER, 50 Hertz

4 and 5 Tons

Nominal Cooling Capacity:

46,400 to 54,700 BTU/h [13.6 kW to 16.0 kW]

NOMENCLATURE

P	C	048	5	GA
1	2	3,4,5	6	7,8

Product Category

P Packaged Unit

Type

C Air Conditioner

H Heat Pump

Nominal Capacity

48 4 Tons

60 5 Tons

Electrical Data

1 208/230 V, 1 Phase, 60 Hz

2 220/240 V, 1 Phase, 50 Hz

3 208/230 V, 3 Phase, 60 Hz

4 460 V, 3 Phase, 60 Hz

5 380/415 V, 3 Phase, 50 Hz

Engineering

Major/ Minor Revision

SPECIFICATIONS

	PC048-5	PC060-5
Cooling Capacity		
Total BTU/h	46,400	54,700
Sensible BTU/h	33,300	39,400
SEER / EER	11.9 / 10.2	10.9 / 9.4
Decibels	80	80
Evaporator Motor		
Type	DD	DD
Wheel (D x W)	9 x 8	10 x 8
Nominal Cooling CFM	1,365	1,693
No. of Speeds	2	2
Horsepower - RPM	1/2 - 1075	3/4 - 1075
Evaporator Coil		
Face Area (ft^2)	6.2	7.0
Rows Deep/ Fins per Inch	4/14	4/14
Filter Size (ft^2)	(2) 20 x 20 x 1	(2) 20 x 20 x 1
Drain Size (NPT)	3/4”	3/4”
Refrigerant Charge (oz.)	126	125
Condenser Fan / Coil		
Horsepower - RPM	1/4 - 1075	1/4 - 1075
Fan Diameter/ # Fan Blades	22 / 4	22 / 4
Face Area (ft^2)	17.8	19.1
Rows Deep/ Fins per Inch	2 / 16	2 / 16
Electrical Data		
Voltage/Phase/ Frequency	380-415 / 3 / 50	
Compressor RLA/LRA	7.4 / 50	10.3 / 65
Indoor Blower FLA	1.4	2.2
Outdoor Fan RLA	0.8	1.2
Total Unit Amps	8.9	11.4
Min. Circuit Ampacity [1]	11.5	16.3
Max. Overcurrent Protection [2]	20 amps	20 amps
Ship Weight (lbs)	400	400

[1] Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

[2] 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.

Expanded Cooling Ratings

PC048-5G

Indoor Air		Condenser Air Temperature														
		75			85			95			105			115		
SCFM	WB	Total MBTU	Sens MBTU	Watts kWh	Total MBTU	Sens MBTU	Watts kWh	Total MBTU	Sens MBTU	Watts kWh	Total MBTU	Sens MBTU	Watts kWh	Total MBTU	Sens MBTU	Watts kWh
1194	71	48.1	23.5	4.05	46.9	23.6	4.32	45.8	23.7	4.56	43.5	23.4	4.76	40.3	21.8	4.93
	67	45.0	29.5	3.92	43.9	29.5	4.18	42.8	29.7	4.41	40.7	29.3	4.60	37.7	27.3	4.77
	63	42.1	33.9	3.80	41.1	33.9	4.04	40.1	34.1	4.26	38.1	33.7	4.45	35.3	31.4	4.61
	59	41.2	35.3	3.71	40.2	35.4	3.96	39.2	35.6	4.17	37.3	35.1	4.35	34.5	32.8	4.50
1365	71	52.1	26.4	4.16	50.8	26.5	4.44	49.6	26.7	4.68	47.1	26.3	4.89	43.6	24.6	5.06
	67	48.7	33.1	4.02	47.6	33.1	4.29	46.4	33.4	4.52	44.1	32.9	4.72	40.8	30.7	4.89
	63	45.6	38.1	3.90	44.5	38.1	4.15	43.4	38.4	4.37	41.3	37.8	4.57	38.2	35.3	4.73
	59	44.6	39.7	3.81	43.6	39.8	4.06	42.5	40.0	4.28	40.4	39.5	4.46	37.4	36.9	4.62
1536	71	53.6	28.6	4.20	52.4	28.6	4.47	51.1	28.8	4.72	48.5	28.4	4.93	45.0	26.5	5.11
	67	50.2	35.7	4.06	49.0	35.8	4.33	47.8	36.0	4.56	45.4	35.5	4.76	42.1	33.2	4.94
	63	47.0	41.1	3.93	45.9	41.1	4.19	44.7	41.4	4.41	42.5	40.9	4.61	39.4	38.2	4.77
	59	46.0	42.9	3.84	44.9	42.9	4.09	43.8	43.8	4.31	41.6	41.6	4.50	38.5	38.5	4.66

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.

Total MBTU/h **43.0** Sensible MBTU/h **33.0** Latent MBTU/h **10.0**

PC060-5G

Indoor Air		Condenser Air Temperature														
		75			85			95			105			115		
SCFM	WB	Total MBTU	Sens MBTU	Watts kWh	Total MBTU	Sens MBTU	Watts kWh	Total MBTU	Sens MBTU	Watts kWh	Total MBTU	Sens MBTU	Watts kWh	Total MBTU	Sens MBTU	Watts kWh
1481	71	56.7	27.7	5.23	55.3	27.8	5.57	54.0	28.0	5.87	51.3	27.6	6.12	47.5	25.8	6.35
	67	53.0	34.7	5.06	51.8	34.8	5.39	50.5	35.0	5.68	48.0	34.5	5.92	44.4	32.2	6.13
	63	49.6	39.9	4.90	48.4	40.0	5.21	47.3	40.3	5.49	44.9	39.7	5.73	41.6	37.1	5.93
	59	48.6	41.7	4.79	47.4	41.7	5.10	46.2	42.0	5.37	43.9	41.4	5.60	40.7	38.7	5.80
1693	71	61.4	31.2	5.36	59.9	31.2	5.71	58.5	31.4	6.02	55.6	31.0	6.29	51.5	28.9	6.52
	67	57.4	39.0	5.19	56.1	39.1	5.53	54.7	39.3	5.83	52.0	38.8	6.08	48.1	36.2	6.30
	63	53.8	44.9	5.02	52.5	44.9	5.35	51.2	45.2	5.64	48.6	44.6	5.88	45.1	41.7	6.09
	59	52.6	46.8	4.92	51.4	46.9	5.23	50.1	47.2	5.51	47.6	46.5	5.75	44.1	43.5	5.95
1905	71	63.2	33.7	5.41	61.7	33.7	5.76	60.2	33.9	6.08	57.2	33.5	6.34	53.0	31.3	6.57
	67	59.2	42.1	5.23	57.7	42.2	5.57	56.3	42.5	5.87	53.5	41.9	6.13	49.6	39.1	6.35
	63	55.4	48.5	5.07	54.1	48.5	5.39	52.7	48.8	5.68	50.1	48.2	5.93	46.4	45.0	6.14
	59	54.2	50.6	4.96	52.9	50.6	5.28	51.6	51.6	5.56	49.0	49.0	5.80	45.4	45.4	6.01

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.

Total MBTU/h **50.7** Sensible MBTU/h **38.9** Latent MBTU/h **11.8**

Evaporator Blower Specifications

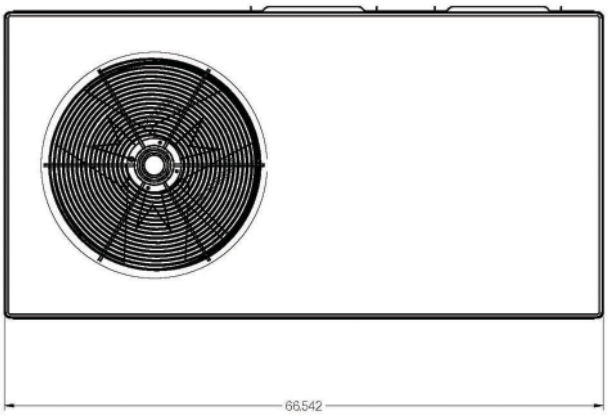
Model	Speed	Airflow	External Static Pressure In-Water [Mbar]				
			0.1 [0.25]	0.2 [0.5]	0.3 [0.75]	0.4 [1.0]	0.5 [1.25]
PC060-5A	Low	CFM [L/s]	1885 [890]	1840 [870]	1795 [850]	1675 [790]	1575 [740]
	High	CFM [L/s]	2030 [960]	1955 [920]	1900 [900]	1760 [830]	1655 [780]
PC048-5A	Low	CFM [L/s]	1540 [730]	1450 [680]	1315 [620]	1215 [570]	1070 [500]
	High	CFM [L/s]	1590 [750]	1490 [700]	1395 [660]	1280 [600]	1120 [530]

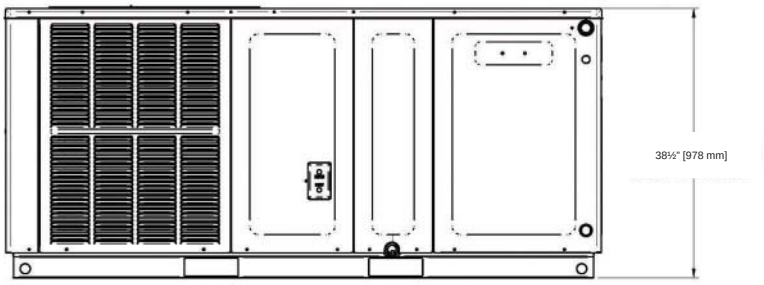
[ ] Designates metric measurements

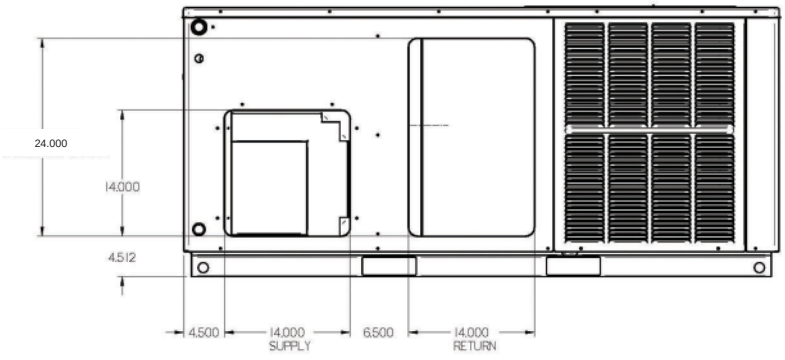
Notes:

1. Data shown is dry coil. Wet coil pressure drop is approx.
2. 0.1" H2O, for two-row indoor coil; 0.2" H_2O, for three-row indoor coil; and 0.3" H_2O, for four-row indoor coil.
3. Data shown does not include filter pressure drop, approx. 0.08" H_2O.
4. ALL MODELS SHOULD RUN NO LESS THAN 350 CFM/TON. USE HIGHER SPEED TAP OR NEXT SIZE LARGER BLOWER ASM., See Repair Parts list.
5. Reduce airflow by 2% for 208-volt operation.

Dimensions





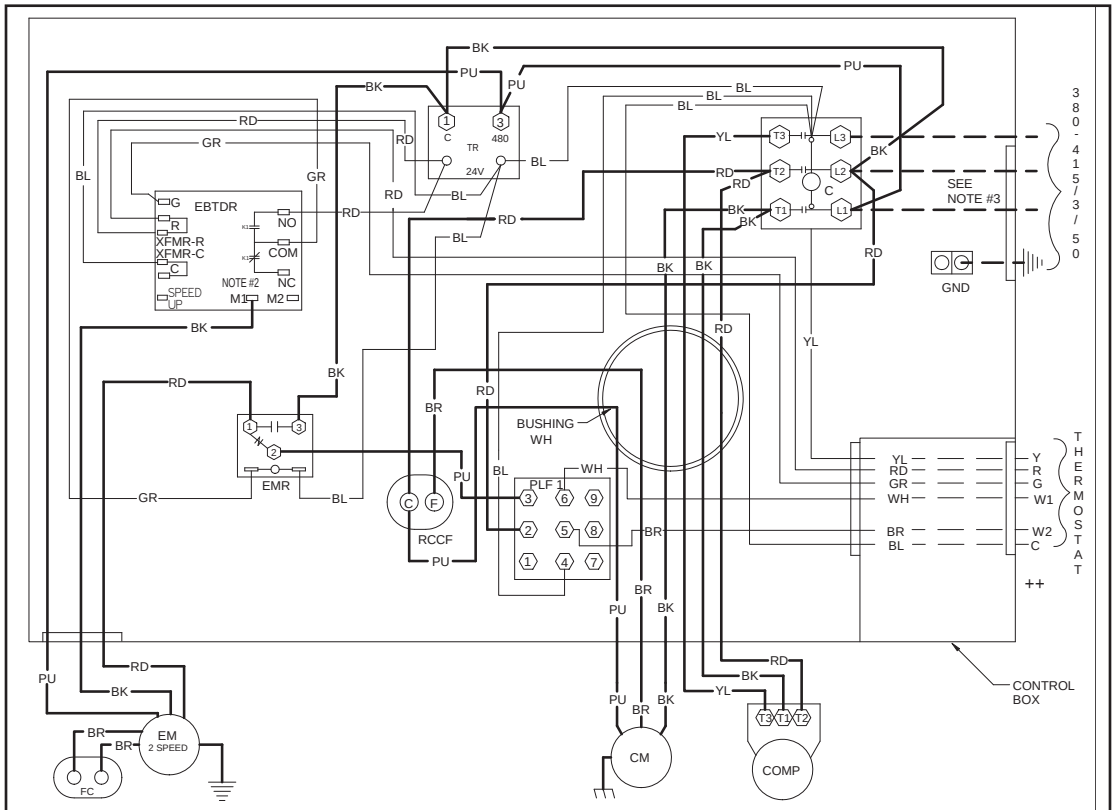


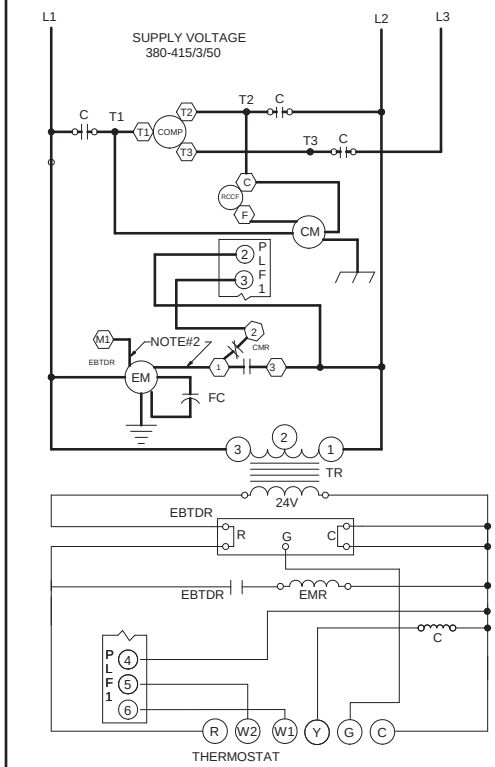
BACK VIEW
(DUCT OPENINGS)

Model	Dimensions (Inches)		
	W	D	H
PCO48-5	66”	33”	38½”
PC060-5	66”	33”	38½”

Dimensions (mm)		
W	D	H
1,676	838	978
1,676	838	978

SCHEMATIC WIRING DIAGRAMS





COMPONENT LEGEND

C	CONTACTOR
CH	CRANKCASE HEATER
CM	CONDENSER MOTOR
COMP	COMPRESSOR
ECON	ECONOMIZER
EBTD	ELECTRONIC BLOWER TIME DELAY
R	RELAY
EM	EVAPORATOR MOTOR
EMR	EVAPORATOR MOTOR RELAY
FC	FAN CAPACITOR
GND	EQUIPMENT GROUND
LVJB	LOW VOLTAGE JUNCTION BOX
PLF	FEMALE PLUG / CONNECTOR
RCCF	RUN CAPACITOR FOR COMPRESSOR AND FAN
TR	TRANSFORMER

FACTORY WIRING
- LINE VOLTAGE
- LOW VOLTAGE
- OPTINAL 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

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 REPLACE LEAD ON EMR "1" WITH LEAD ON EBTDR "M1" OR "M2"
3. USE COPPER CONDUCTORS ONLY

++ USE N.E.C. CLASS 2 WIRE

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

380-415/3/50 0140G00588 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
PCCP101-103	Roof Curb for PC- Electric/Electric Package Unit
PCP101-103	Downflow Plenum Kit for PC- Package Unit
PCP101-103R8	Downflow Plenum Kit for PC- Package Unit with R-8 Insulation
PCE101-103	Downflow Economizer for PC- Package Unit to be used with PCP101-103
PCMD101-103	Manual Damper for PC- Package Unit to be used with PCP101-103
PCMDM101-103	Motorized Damper for PC- Package Unit to be used with PCP101-103
PCMDH101-103	Manual Damper for PC- Package Unit Horizontal Applications
SQRPCH101	Square-to-Round Adapters for PC- Package Unit 16” & 14”
SQRPCH102-103	Square-to-Round Adapters for PC- Package Unit 18” & 14”
SQRPC101	Square-to-Round Adapter for PC- Package Unit for use with PCCP101-103 Curb 16” Rounds
SQRPC102-103	Square-to-Round Adapter for PC- Package Unit for use with PCCP101-103 Curb 18” Rounds
PCFR101-103	External Horizontal Filter Rack
PCEF101-103	Elbow & Flashing with R-8 Liner for PC- Package Unit

The above accessories are offered by McDaniel Metals • Main: (281) 987-8400 • Fax: (281) 987-9494