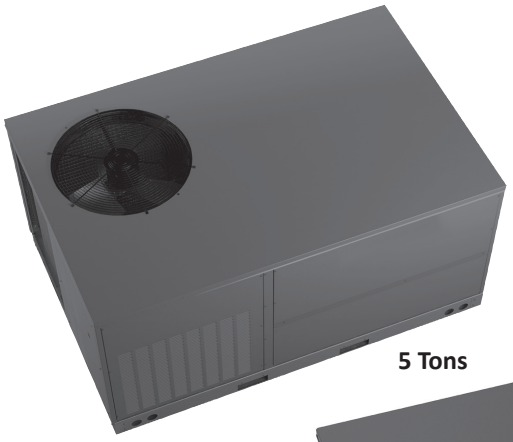
Goodman
Air Conditioning & Heating

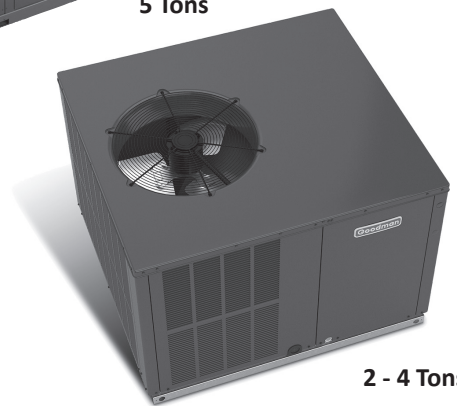
GPH16M

Cooling Capacity: 24,000 - 58,000 BTU/h
Heating Capacity: 22,800 - 55,000 BTU/h

High-Efficiency Packaged Heat Pumps Up to 16 SEER & 8.2 HSPF 2 through 5 Tons



5 Tons



2 - 4 Tons

ASK ABOUT ENERGY STAR

Contents

Standard Features

- Energy-efficient compressor with internal relief valve
- Two-stage heating and cooling
- Multi-Speed EEM indoor blower motor
- Liquid-line filter drier
- Convertible airflow: horizontal or downflow
- Copper tube/aluminum fin condenser coils
- All-aluminum evaporator coil on 2- to 4-ton units
- Aluminum-copper evaporator coil on 5-ton units
- Totally enclosed, permanently lubricated condenser fan motor
- Electric heat kit available as a field-installed option

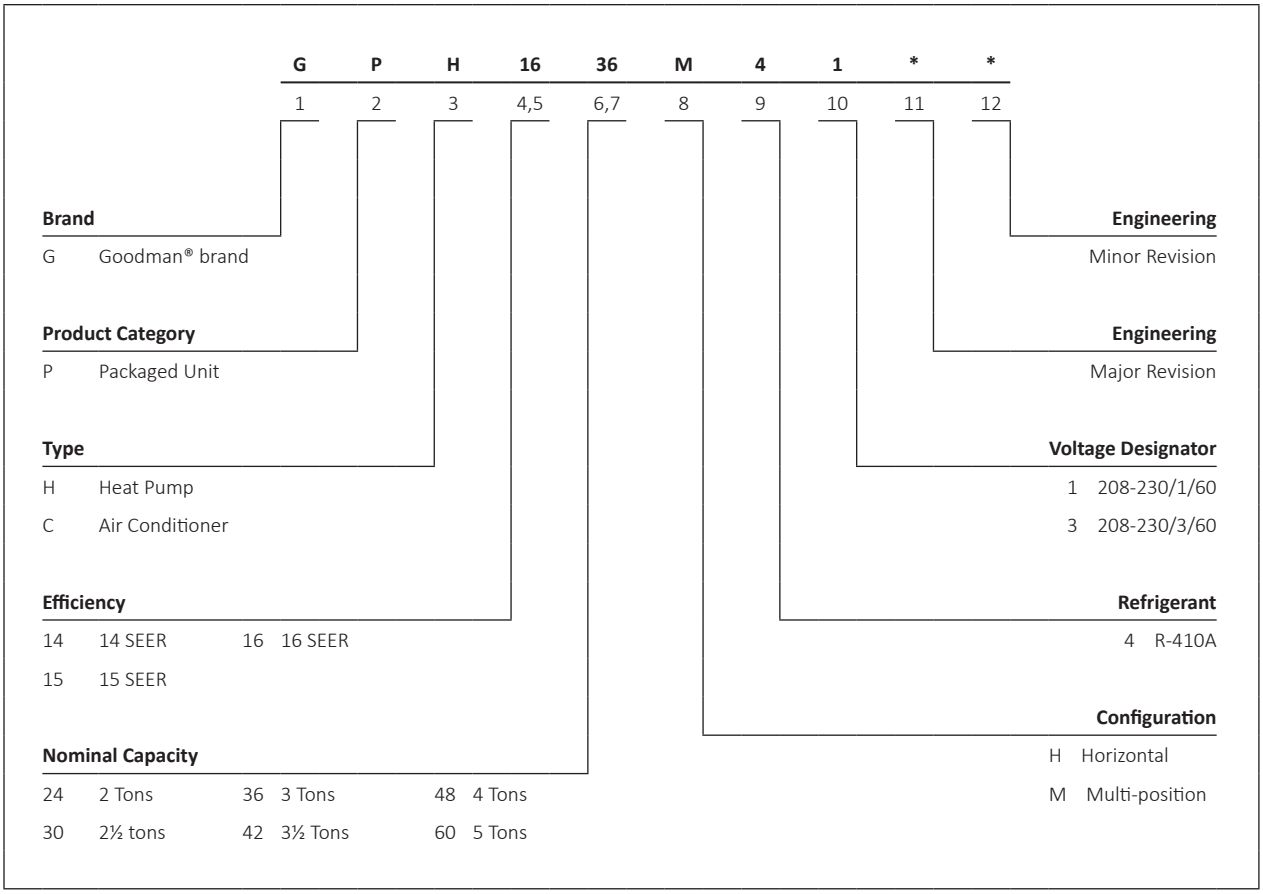
Cabinet Features

- Heavy-gauge galvanized-steel cabinet with attractive two-tone Architectural Gray powder-paint finish
- Aluminum foil-facing internal insulation reinforced with fiberglass scrim
- Fully insulated air-handling compartment with convenient access panels
- Louvered condenser coil protection
- One footprint; two heights

10 YEAR PARTS LIMITED WARRANTY*

Intertek

* Complete warranty details available from your local dealer or at www.goodmanmfg.com. To receive the 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration not required in California or Québec.

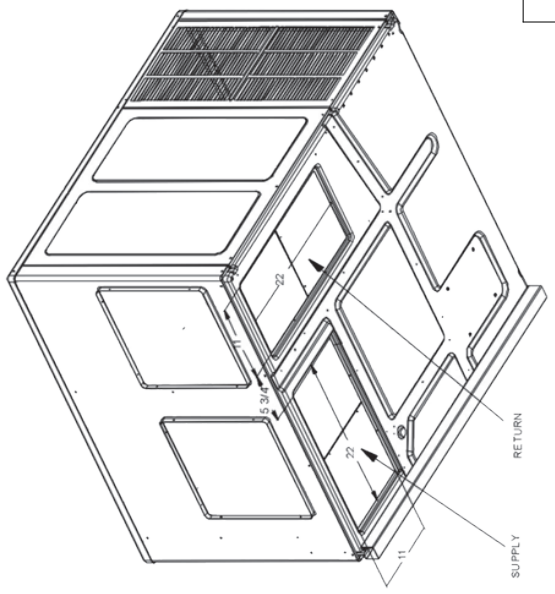

G P H 16 36 M 4 1 * *
1 2 3 4,5 6,7 8 9 10 11 12
Brand
G Goodman® brand
Product Category
P Packaged Unit
Type
H Heat Pump
C Air Conditioner
Efficiency
14 14 SEER
15 15 SEER
16 16 SEER
Nominal Capacity
24 2 Tons
30 2½ tons
36 3 Tons
42 3½ Tons
48 4 Tons
60 5 Tons
Configuration
H Horizontal
M Multi-position
Refrigerant
4 R-410A
Voltage Designator
1 208-230/1/60
3 208-230/3/60
Engineering
Major Revision
Engineering
Minor Revision

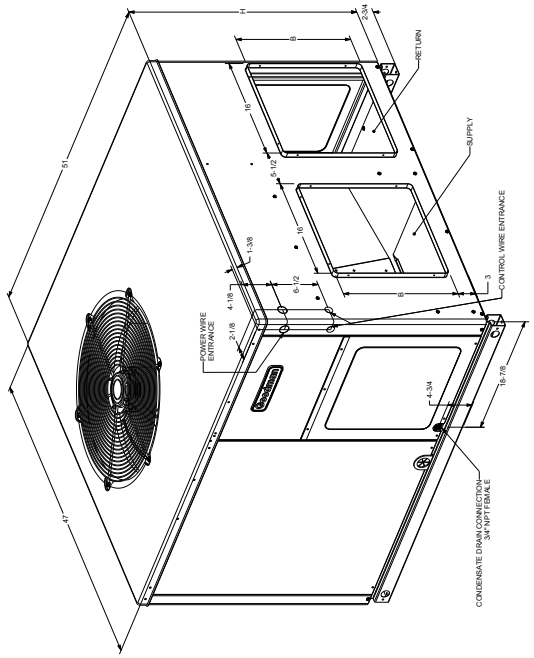
	GPH16 24M41A*	GPH1624M41 A*+OTHPPKG	GPH16 30M41A*	GPH1630M41 A*+OTHPPKG	GPH16 36M41A*	GPH16 42M41A*	GPH16 48M41C*	GPH16 60M41A*
COOLING CAPACITY								
Total BTU/h	24,000	24,000	29,000	29,000	33,600	41,000	47,000	58,000
Sensible BTU/h	18,200	18,200	22,000	22,000	25,200	30,000	35,800	44,000
SEER / EER	16.0/ 12.5	16.0/ 12.5	15.5/ 12.0	15.5/ 12.0	16.0/ 12.0	16.0/ 12.0	16.0/ 12.0	16.0/ 12.0
Decibels	76	76	76	76	76	78	78	78
AHRI #s	8143312	10061984	8143313	10061985	8143314	8143315	8143316	9134480
HEATING CAPACITY								
BTU/h (47°F)	22,800	22,800	28,400	28,400	33,600	38,000	45,500	55,000
C.O.P (47°F)	3.6	3.6	3.5	3.5	3.6	3.6	3.7	3.8
BTU/h (17°F)	12,500	12,500	16,600	16,200	19,400	21,600	27,000	30,000
C.O.P (17°F)	2.3	2.3	2.4	2.4	2.4	2.3	2.4	2.4
HSPF	8.0	8.2	8.0	8.2	8.2	8.2	8.2	8.2
EVAPORATOR MOTOR								
Type	EEM	EEM	EEM	EEM	EEM	EEM	EEM	EEM
Wheel (D x W)	10 x 9	10 x 9	10 x 9	10 x 9	10 x 9	10 x 9	10 x 9	11x 10
Nominal Cooling CFM	850	850	1,050	1,050	1,200	1,300	1,600	2,000
FLA	4.3	4.3	4.3	4.3	4.3	5.8	5.8	6.9
No. of Speeds	5	5	5	5	5	5	5	5
Horsepower - RPM	½ -1,050	½ -1,050	½ -1,050	½ -1,050	½ -1,050	¾ - 1,050	¾ - 1,050	1 - 1,050
EVAPORATOR COIL								
Face Area (ft^2)	4.5	4.5	4.5	4.5	4.5	6.2	6.2	8.9
Rows Deep/ Fin per Inch	4/ 14	4/ 14	4/ 14	4/ 14	4/ 14	4/ 14	4/ 14	4/ 16
Expansion Device	TXV	TXV	TXV	TXV	TXV	TXV	TXV	TXV
Drain Size (NPT)	¾"	¾"	¾"	¾"	¾"	¾"	¾"	¾"
R-410A Refrigerant Charge (oz.)	137	137	137	137	137	170	170	240
CONDENSER FAN / COIL								
Horsepower - RPM	¼ - 850	¼ - 850	¼ - 850	¼ - 850	¼ - 850	¼ - 1,075	¼ - 1,075	1/3 - 1,090
FLA/LRA	1.5/ 3.0	1.5/ 3.0	1.5/ 3.0	1.5/ 3.0	1.5/ 3.0	1.4 / 2.9	1.4 / 2.9	2/ 4.4
Fan Diameter / # Fan Blades	22 / 3	22 / 3	22 / 3	22 / 3	22 / 3	22 / 3	22 / 3	22 / 4
Expansion Device	TXV	TXV	TXV	TXV	TXV	TXV	TXV	TXV
Face Area (ft^2)	15.5	15.5	15.5	15.5	15.5	19.4	19.4	19
Rows Deep/ Fin per Inch	2 / 16	2 / 16	2 / 16	2 / 16	2 / 16	2 / 16	2 / 16	2 / 20
COMPRESSOR								
Quantity	1	1	1	1	1	1	1	1
Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Stage	Two	Two	Two	Two	Two	Two	Two	Two
ELECTRICAL DATA								
Voltage/ Phase/ Hz	208-230/ 1	208-230/ 1	208-230/ 1	208-230/ 1	208-230/ 1	208-230/ 1	208-230/ 1	208-230/ 1
Compressor RLA/ LRA	11.7 / 58.3	11.7 / 58.3	13.1 / 73	13.1 / 73	15.3 / 83	17.9 / 96	21.2 / 104	26.9/ 152.9
Indoor Blower FLA	4.3	4.3	4.3	4.3	4.3	5.8	5.8	6.9
Total Unit Amps	17.5	17.5	18.9	18.9	21.1	25.1	28.4	35.8
Min. Circuit Ampacity[1]	20.4	20.4	22.2	22.2	24.9	29.6	33.7	42.5
Max. Overcurrent Protection[2]	30	30	35	35	40	45	50	60
SHIPPING WEIGHT (LBS)	366	366	375	375	428	472	470	620
ENERGY STAR CERTIFIED	NO	NO	NO	NO	NO	NO	NO	YES

[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.
"OTHPPKG" stands for Outdoor Thermostat Heat-Pump Package

ECN	REV	ZONE	DESCRIPTION	CHK	D	DATE
XXXXXXX	A	XXXXX		-	GL	

MODEL	W"	D'	H'
GPH1624M41**	47	51	34¾
GPH1630M41**	47	51	34¾
GPH1636M41**	47	51	34¾
GPH1642M41**	47	51	42¼
GPH1648M41**	47	51	42¼





MODEL	B	H	CHASSIS
GPH1624M41**	16"	32½"	Med.
GPH1630M41**	16"	32½"	Med.
GPH1636M41**	16"	32½"	Med.
GPH1642M41**	18"	40"	Large
GPH1648M41**	18"	40"	Large

SPECIAL CHARACTERISTICS:

6S = 6SIGMA CC CRITICAL CHARACTERISTIC SC SIGNIFICANT CHARACTERISTIC

COMPONENTS AND MATERIALS SPECIFIED HEREIN WILL ALSO CONFORM TO THE APPLICABLE SECTION OF GOODMAN MSP 824.01 WORKMANSHIP STANDARD FOR FIT, FEEL AND FINISH.

CONFIDENTIAL PROPERTY OF THE GOODMAN MANUFACTURING COMPANY, L.P. NOT TO BE DISCLOSED TO OTHERS, COPIED, OR USED FOR ANY PURPOSE EXCEPT AS AUTHORIZED IN WRITING. MUST BE RETURNED UPON DEMAND, ON COMPLETION OF ORDER, OR OTHER PURPOSE FOR WHICH IT WAS LENT.

DRAWING TO BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100

DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

TOLERANCES:
ANGLES ± 1.5°
X: ± 1 .XX ± .03
.XXX ± .015
HOLE Ø ± .05
TUBE CUT LG. ± .063

DWN BY: ENG:

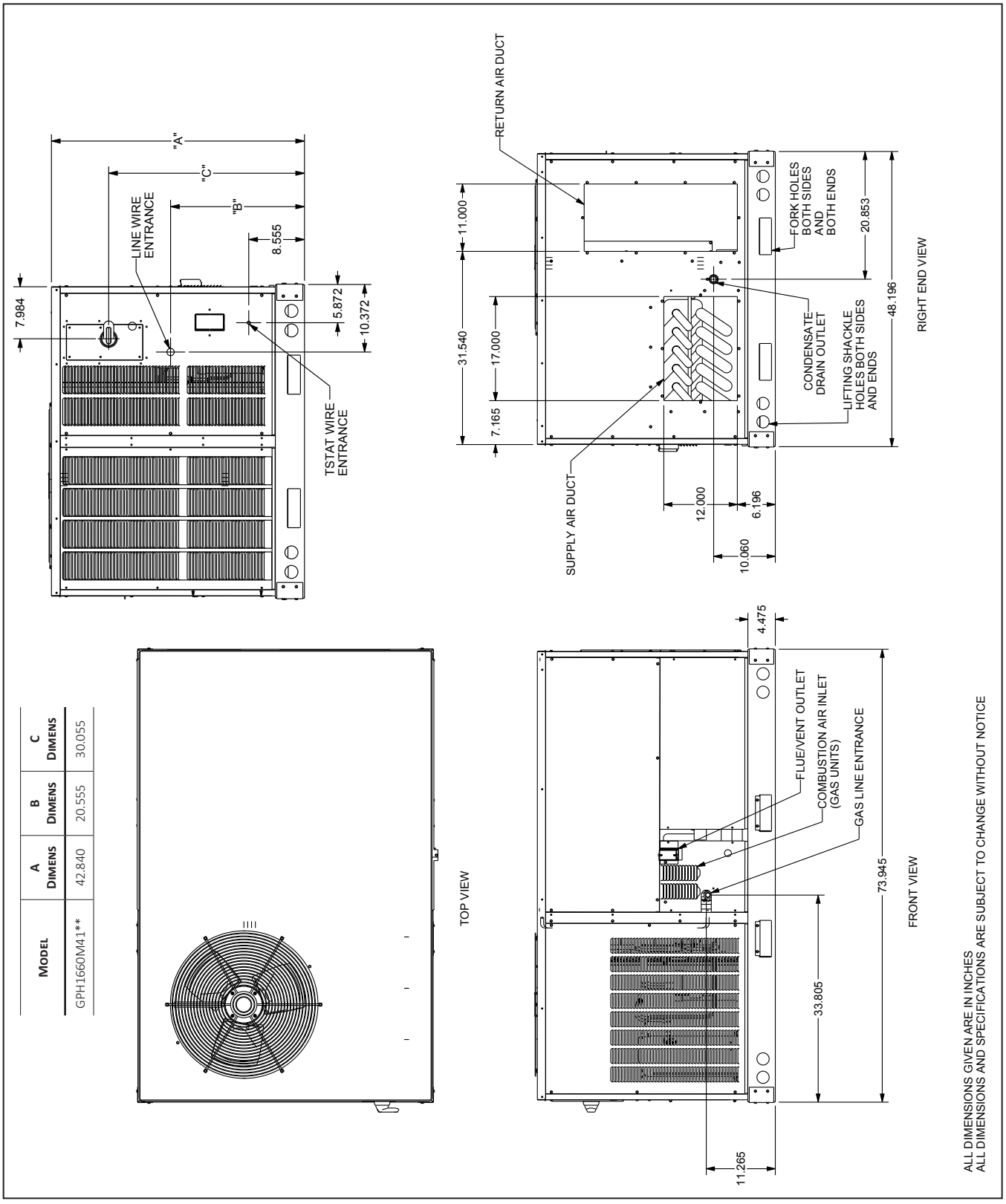
Goodman Company, L.C.

GPH16M

DO NOT SCALE DRAWING

SHT 1 OF 1

REV A

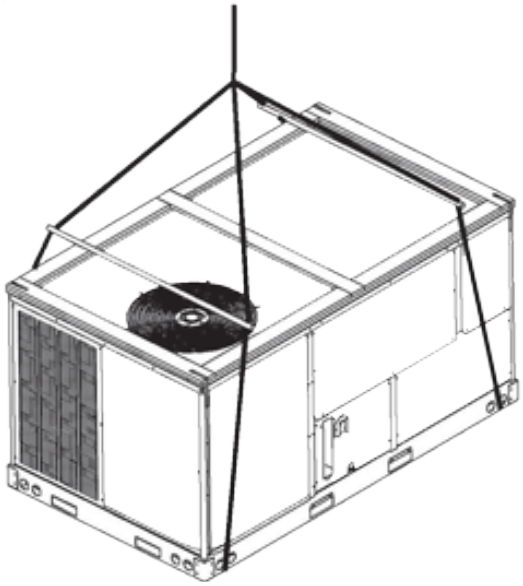


Model	A Dimens	B Dimens	C Dimens
GPH1660M41**	42.840	20.555	30.055

ALL DIMENSIONS GIVEN ARE IN INCHES
ALL DIMENSIONS AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

Provisions for forks have been included in the unit base frame. No other fork locations are approved.

- Unit must be lifted by the four lifting holes located at the base frame corners.
- Lifting cables should be attached to the unit with shackles.
- The distance between the crane hook and the top of the unit must not be less than 60".
- Two spreader bars must span over the unit to prevent damage to the cabinet by the lift cables. Spreader bars must be of sufficient length so that cables do not come in contact with the unit during transport. Remove wood struts mounted beneath unit base frame before setting unit on roof curb. These struts are intended to protect unit base frame from fork lift damage. To remove the struts, extract the sheet metal retainers and pull the struts through the base of the unit. Refer to rigging label on the unit.



Important: If using bottom discharge with roof curb, duct-work should be attached to the curb prior to installing the unit. Duct-work dimensions are shown in Roof Curb Installation Instructions Manual.

Refer to the Roof Curb Installation Instructions for proper curb installation. Curbing must be installed in compliance with the National Roofing Contractors Association Manual.

Lower unit carefully onto roof mounting curb. While rigging the unit, the center of gravity will cause the condenser end to be lower than the supply air end.

Bring condenser end of unit into alignment with the curb. With condenser end of the unit resting on curb member and using curb as a fulcrum, lower opposite end of the unit until entire unit is seated on the curb. When a rectangular cantilever curb is used, take care to center the unit. Check for proper alignment and orientation of supply and return openings with duct.

To assist in determining rigging requirements, unit weights are shown on the following page.

Curb installations must comply with local codes and should follow the established guidelines of the National Roofing Contractors Association.

Proper unit installation requires that the roof curb be firmly and permanently attached to the roof structure. Check for adequate fastening method prior to setting the unit on the curb.

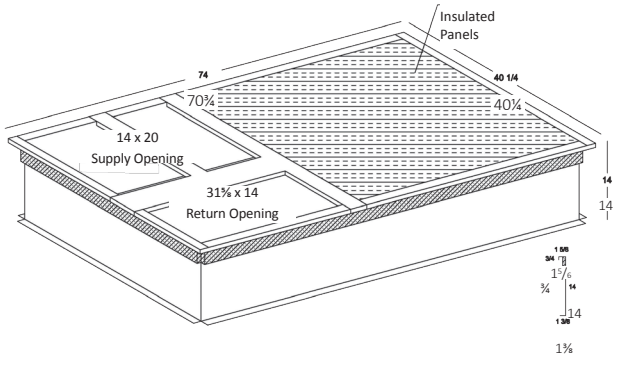
Full perimeter roof curbs are available from the factory and are shipped unassembled. The installing contractor is responsible for field assembly, squaring, leveling, and mounting on the roof structure. All required hardware necessary for the assembly of the sheet metal curb is included in the curb accessory package.

- Determine sufficient structural support before locating and mounting the curb and package unit.
- Duct-work must be constructed using industry guidelines. The duct-work must be placed into the roof curb before mounting the package unit. Our full perimeter curbs include duct connection frames to be assembled with the curb. Cantilevered-type curbs are not available from the factory.
- Contractor furnishes curb insulation, cant strips, flashing, and general roofing material.
- Support curbs on parallel sides with roof members. To prevent damage to the unit, the roof members cannot penetrate supply and return duct openings.

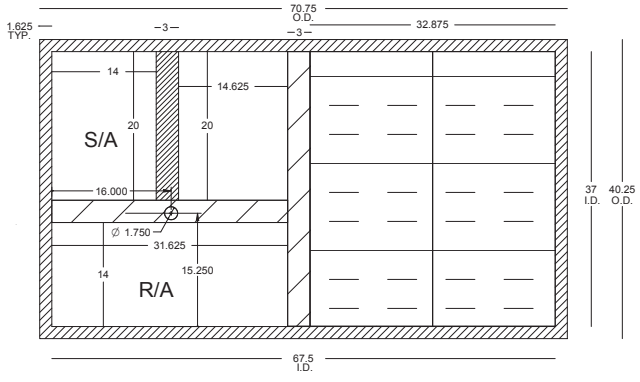
Note: The unit and curb accessories are designed to allow vertical duct installation before unit placement. Duct installation after unit placement is not recommended.

See the manual shipped with the roof curb for assembly and installation instructions.

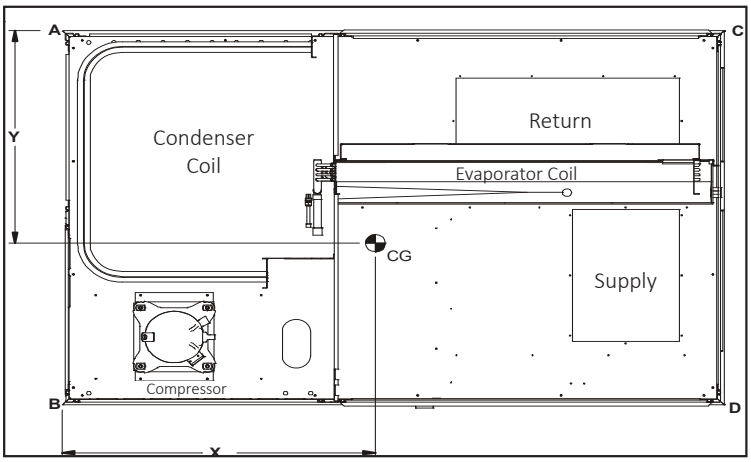
3-D View



Top View



Corner & Center-of-Gravity Locations



Model	X (in)	Y (in)	Shipping Weight (lbs)	Operating Weight (lbs)	Corner Weights (lbs.)			
					A	B	C	D
GPH1660M41**	40.0	25.1	612	583	204	113	72	194

Unit Clearances

Maintain an adequate clearance around the unit for safety, service, maintenance, and proper unit operation. Leave a total clearance of 75” on the main control panel side of the unit for possible removal of fan shaft, coil, electric heat, and gas furnace. Leave a clearance of 48” on all other sides of the unit for possible compressor removal or service access, and to ensure proper ventilation and condenser airflow. Do not install the unit beneath any obstruction. Install the unit away from all building exhausts to inhibit ingestion of exhaust air into the unit’s fresh-air intake.