

PRPHP16

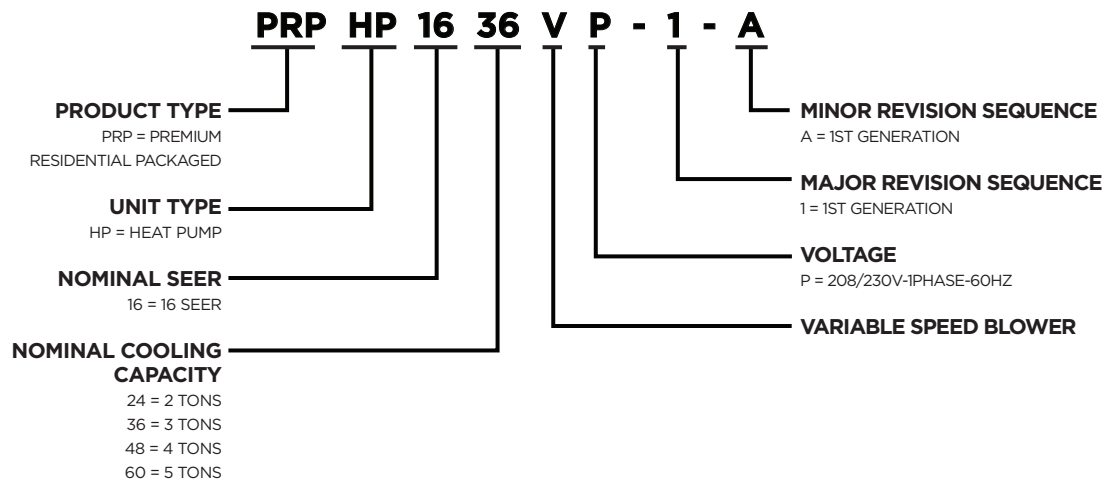
PRODUCT SPECIFICATIONS

TWO STAGE COMPRESSOR
VARIABLE SPEED BLOWER

FORM NO. PRPHP16-100 (01/2023)



MODEL NUMBER



FEATURES AND BENEFITS

WARRANTY

10 year limited parts and compressor warranty available. See limited warranty document for details.

APPLICATIONS

Designed for outdoor installations at ground level or rooftop for residential and light commercial applications.

APPROVALS

AHRI Certified to AHRI Standard 210/240-2008.

Units are design certified by ETL Intertek.

Heating ratings are according to Department of Energy (DOE) test procedures and Federal Trade Commission (FTC) labeling regulations and are Certified by AHRI.

Cooling system rated according to DOE test procedures.

Units are ETL certified for the U.S. and Canada.

Packaged unit and components within bonded for grounding to meet safety standards required by UL.

Each unit test operated at the factory before shipment ensuring dependable operation at start-up.

Seismic Certification (with Seismic Strapping Kit applied): Latest Edition of International Building Code, California Building Code, and ASCE 7-16.

REFRIGERATION SYSTEM

R-410A Refrigerant

Non-chlorine, ozone friendly, R-410A.

Unit pre-charged with refrigerant.

See Specification table.

Insulated Antimicrobial Evaporator Coil Drain Pan

Antimicrobial additive resists growth of mold and mildew on drain pan which improves indoor air quality and reduces drain line blockage.

Insulated to reduce condensation.

Includes drain pan overflow switch. Monitors condensate level in drain pan, shuts down unit if drain becomes clogged.

Outdoor Coil Fan

Weather protected heavy duty condenser fan motor with coated steel swept wing fan blades for long life.

Internally mounted.

Totally enclosed motor.

Fan guard constructed of corrosion-resistant coated steel.

Reversing Valve

4-way interchange reversing valve effects a rapid change in direction of refrigerant flow resulting in quick changeover from cooling to heating and vice versa.

High Pressure Switch

Shuts off unit if abnormal operating conditions cause the discharge pressure to rise above setting.

Loss of Charge Switch

Provides loss of charge protection by shutting off unit if liquid pressure falls below setting.

SCROLL COMPRESSOR

Two-Stage Compressor

Compressor features high efficiency with uniform suction flow, constant discharge flow, high volumetric efficiency and quiet operation.

Compressor consists of two involute spiral scrolls matched together to generate a series of crescent shaped gas pockets between them.

During compression, one scroll remains stationary while the other scroll orbits around it.

Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates.

As the spiral movement continues, gas pockets are pushed to the center of the scrolls. Volume between the pockets is simultaneously reduced.

When the pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls. During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle.

Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency.

Scroll compressor is tolerant to the effects of slugging and contaminants. If this occurs, scrolls separate, allowing liquid or contaminants to be worked toward the center and discharged.

During the compression process, there are several pockets in the scroll that are compressing gas. Modulation is achieved by venting a portion of the gas in the first suction pocket back to the low side of the compressor thereby reducing the effective displacement of the compressor.

A 24-volt DC solenoid valve inside the compressor controls staging. When the 3-way solenoid is energized it moves the lift ring assembly to block the ports and the compressor operates at full-load or 100% capacity. When the solenoid is de-energized the lift ring assembly moves to unblock the compressor ports and the compressor operates at part-load or approximately 67% of its full-load capacity.

The "loading" and "unloading" of the two stage scroll is done "on the fly" without shutting off the single-speed compressor motor between stages.

Low gas pulses during compression reduces operational sound levels.

Compressor motor is internally protected from excessive current and temperature.

Compressor is installed in the unit on specially formulated, resilient rubber mounts for better sound dampening and vibration free operation.

Heavy Duty Compressor Blanket

Durable PVC outer cover with sound insulating inner polyester fiber

Optional Accessories

Compressor Crankcase Heater

Protects against refrigerant migration that can occur during low ambient operation.

Compressor Hard Start Kit

Single-phase units are equipped with a PSC compressor motor. This type of motor normally doesn't need a potential relay and start capacitor.

In conditions such as low voltage, this kit may be required to increase the compressor starting torque.

Compressor Timed-Off Control

Prevents compressor short-cycling and allows time for suction and discharge pressure to equalize. Permits compressor start-up in an unloaded condition. Automatic reset with 5 minute delay between compressor shut-off and start-up.

Freezestat

Senses suction line temperature.

Cycles compressor off when suction line temperature falls below its setpoint.

Low Ambient Kit

Cycles the outdoor fan while allowing compressor operation in the cooling cycle.

This intermittent fan operation allows the system to operate without icing the evaporator coil and losing capacity.

Designed for use in ambient temperatures no lower than 0°F.

NOTE - Crankcase heater and freezestat are recommended on compressor equipped with a low ambient kit.

SUPPLY AIR BLOWER**Variable Speed Direct Drive Blower**

Each blower wheel statically and dynamically balanced.

Multi-speed operation is achieved by the use of an ECM (Electronically Commutated Motor) variable speed motor.

See Blower Performance tables.

Blower assembly easily removed for servicing.

ECM Variable Speed Blower Motor

Variable speed motor maintains specified air volume from 0 though 0.80 in. w.g. static range.

Motor is controlled by the blower control.

Change in blower speed is easily accomplished by simple jumper pin change on blower control.

Motor is resiliently mounted.

ELECTRIC HEAT (5-20 KW)

Field install internal to unit cabinet.

Available in several voltages and kw sizes.

Helix wound nichrome heating elements exposed directly in air stream resulting in instant heat transfer, low element temperatures and long service life.

Cutoff limit control provides positive protection in case of excessive temperatures.

Factory assembled with controls installed and wired.

Optional Accessories**Single Point Power Kits**

Control Box used with optional electric heat when single power supply is connected to multi-circuit electric heat.

CONTROLS**Electronic Blower Control**

Two stages - HEAT and COOL (with four different air volume selections for each) are made by simple jumper pins.

ADJUST jumper pin allows approximately 10% higher, normal or 10% lower motor speed selection within (COOL) speeds selected for fine tuning air volume. See Blower Data tables.

NOTE - HEAT speeds are not affected by jumper change.

Cooling Airflow Ramp Up - At the beginning of a call for cooling, the blower will run at 82% of full airflow for 7.5 minutes. This improves the system's moisture removal and saves blower power during cooling start.

Reduced Airflow Operation - For situations where humidity control is an issue, the variable speed motor can be connected to operate at a 25% reduction in the normal airflow rate. The variable speed motor interface provides for connection of a thermostat with humidity control or a humidistat on the HUM terminal. When connected, the dehumidifier resistor on the interface must be cut. The control should be wired to open during high humidity, which will reduce blower airflow.

Defrost Control

Defrost control furnished as standard equipment.

The control board initiates a defrost cycle based on either frost detection or time.

Units are quiet-shift enabled. The compressor is de-energized entering and exiting the defrost cycle, reducing system sounds.

Ambient temperature sensor and sensor mounted on the outdoor coil determine when defrost cycle is initiated and terminated.

Anti-short cycle, timed-off control incorporated into the board.

24 Volt Transformer

40VA transformer furnished and factory installed in control area.

Equipment Interface Module (EIM)

Allows the Comfort Sync® Thermostat to be used with residential packaged units.

Contains all necessary relays and controls to operate the system and communicate with the Comfort Sync® Thermostat.

Comfort Sync® Wi-Fi Thermostat

The Comfort Sync® Wi-Fi® Thermostat recognizes and connects conventional heating/cooling products to automatically configure and control the system (based on user-specified settings) for the highest level of comfort, performance and efficiency.

Wi-Fi remote temperature monitoring and adjustment through a home wireless network for desktop PCs, laptops and apps for smartphones or tablets. Also displays service alerts and reminders.

A simple easy-to-use touchscreen allows complete system configuration. Scheduled maintenance alerts, system warnings and troubleshooting are also displayed on thermostat screen.

One-Touch Away Mode - A quick and easy way to set the cooling and heating setpoints while away.

Weather-On-Demand - Live up-to-date weather data and five-day forecasts.

Easy to read 7-inch color screen (measured diagonally).

See the Comfort Sync Wi-Fi® Thermostat Product Specifications bulletin in the Controls section for more information.

CABINET

Conditioned areas insulated with foil faced insulation to minimize heat loss and reduce operating sound levels.

Pre-Painted galvanized steel for maximum durability.

Full perimeter heavy-gauge galvanized steel base rails.

Base rails have rigging holes.

Two sides of the base rails have forklift slots.

Raised edges around duct and power entry openings in the bottom of the unit for water protection.

Easy service access.

Steel louvered panels provides complete coil protection.

Airflow Choice

Units are shipped with horizontal and downflow duct covers provided with unit for installation flexibility.

Electrical Inlets and Service Valves

Field wiring inlets are located in one central area of the cabinet. See dimension drawing.

Gauge ports located inside compressor service compartment of the cabinet.

Optional Accessories**Bottom Entry Power Kit**

Allows high and low voltage wiring connections through the unit base pan.

Base Rail Openings Closure Kit

Kit consists of panels and hardware to cover rigging holes and forklift slots in unit base rails.

Square to Round Duct Adapter Kits

Downflow or horizontal kits available.

Converts square supply and return air openings on unit cabinet to round 14 in. diameter.

ROOF CURBS**Field Installed****Clip Curb (Full Perimeter)**

Interlocking tabs fasten corners together.

No tools required.

Fully gasketed around curb perimeter and supply and return openings.

Available in 8, 14, 18 and 24 inch heights.

Shipped knocked down.

Wind rating - 240mph (Lateral), 214mph (Uplift).

Adjustable Pitch Roof Curb (Full Perimeter) - Standard Curb

Fully adjustable pitch curb provides a level platform for packaged units.

Allows flexible installations on roofs with sloped or uneven angles.

Adjustable from 2/12 to 6/12 pitch.

Constructed of heavy-gauge galvanized steel with fully welded seams and corners.

Rounded corners on flange prevent damage to roof shingles.

Built-in drip edge.

IAPMO/UMC listed.

All Clip and Adjustable Pitch Curbs

IBC 2018 compliant.

CBC 2019 compliant.

Seismic rating - SDS 2.0g, z/h=1, Ip=1.5.

Wind rating - 240 mph (Lateral), 214 mph (Uplift).

Maximum load rating - 800 lbs.

Adaptor Curbs (not shown)

Curbs are regionally sourced.

Dimensions vary based upon the source.

NOTE - Contact your local sales representative for a detailed cut sheet with applicable dimensions.

Strapping Kit - Hurricane

Galvanized steel .07 in. thick minimum.

Attaches unit base rails to host structure.

Strapping Kit - Seismic

Heavy-gauge galvanized steel.

Kit contains 4 brackets and mounting hardware.

INDOOR AIR QUALITY**Internal Filter Rack Kits**

Available for 1 in. thick filters. Kit contains filter rails for mounting filters internal to unit. Filters are not furnished and must be field provided.

NOTE - The Internal Filter Rack Kit cannot be used with the PCO Accessory.

NOTE - Maximum acceptable filter efficiency is MERV 11

SPECIFICATIONS

GENERAL DATA	MODEL NO.		PRPHP1624	PRPHP1636	PRPHP1648	PRPHP1660
	NOMINAL TONNAGE		2	3	4	5
COOLING / HEATING PERFORMANCE	Cooling	Total capacity - Btuh (SEER)	23,000	35,000	47,000	57,000
		Total capacity - Btuh (SEER2)	23,000	34,200	45,000	55,500
		Total unit watts	1910	2970	3910	5180
		¹ SEER/EER (Btuh/Watt)	16.0/12.0	16.0/12.0	16.0/12.0	15.5/11.5
		¹ SEER2/EER2 (Btuh/Watt)	15.2/12.0	15.2/11.5	15.2/11.4	14.1/10.7
	High Temp. Heat	Total capacity - Btuh (HSPF)	22,000	34,000	46,000	56,000
		Total capacity - Btuh (HSPF2)	21,400	33,200	45,500	58,000
		Total unit watts	1,800	2,960	3,930	5,030
		COP	3.49	3.29	3.46	3.51
	HSPF / HSPF2 Region IV		8.2/6.7			
	Low Temp. Heat	Total capacity - Btuh (HSPF)	11,900	19,700	26,600	37,200
		Total capacity - Btuh (HSPF2)	11,900	18,900	24,700	35,700
		Total unit watts	1,660	2,520	3,460	4,470
		COP	2.10	2.2	2.09	2.34
² Sound Rating Number (dB)		71	71	74	74	
REFRIGERANT	Type	R-410A	R-410A	R-410A	R-410A	
	Charge	5 lbs. 0 oz.	7 lbs. 6 oz.	10 lbs. 8 oz.	10 lbs. 8 oz.	
CONDENSATE DRAIN SIZE (FPT) - IN.		3/4	3/4	3/4	3/4	
OUTDOOR COIL	Net Face Area - sq. ft.	16.3	15.5	18.6	18.6	
	Tube diameter - in.	5/16	5/16	5/16	5/16	
	Number of Rows	1	2	2	2	
	Fins per in.	22	22	22	22	
OUTDOOR COIL FAN	Motor horsepower	1/2	1/2	1/2	1/2	
	Diameter - in.	22	22	24	24	
	Number of blades	3	3	3	3	
INDOOR COIL	Net Face Area - sq. ft.	4.4	4.4	6.8	6.8	
	Tube Diameter - in.	5/16	3/8	3/8	3/8	
	Number of Rows	3	3	3	3	
	Fins per Inch	15	15	15	15	
INDOOR BLOWER	Blower wheel size dia. x width - in.	10 x 6	10 x 8	10 x 10	12 x 10	
	Motor horsepower	1/2	1/2	3/4	1	
NET WEIGHT OF BASIC UNIT - LBS.		411	446	526	541	
SHIPPING WEIGHT OF BASIC UNIT (1 PKG.) - LBS.		421	456	536	551	
ELECTRICAL CHARACTERISTICS (60 HZ)		208/230V-1ph-60hz				

¹ AHRI Certified to AHRI Standard 210/240:

Cooling Ratings - 95°F outdoor air temperature and 80°F db/67°F wb entering indoor coil air.

High Temperature Heating Ratings - 47°F db/43°F wb outdoor air temperature and 70°F entering indoor coil air.

Low Temperature Heating Ratings - 17°F db/15°F wb outdoor air temperature and 70°F entering indoor coil air.

² Sound Rating Number rated in accordance with test conditions included in AHRI Standard 270.

ACCESSORIES

DESCRIPTION	WHERE USED	KIT NUMBER	
Compressor Crankcase Heater	All	11X27	
Compressor Hard Start Kit	All	10J42	
Compressor Timed-Off Control	All	47J28	
Low Ambient Kit	All	21D20	
Electric Heater 5kW - PHK05BP	All	10W47	
Electric Heater 7.5kW - PHK07BP	All	10W48	
Electric Heater 10kW - PHK10BP	All	10W49	
Electric Heater 15kW - PHK15CP	36, 42, 48, 60	10W50	
Electric Heater 20kW - PHK20CP	42, 48, 60	10W51	
Internal Filter Rack Kit	24, 30, 36	11U73	
	42, 48, 60	11U74	
8" Height Full Perimeter Curb	24, 30, 36	21J13	
	42, 48, 60	21J17	
14" Height Full Perimeter Curb	24, 30, 36	21J14	
	42, 48, 60	21J19	
18" Height Full Perimeter Curb	24, 30, 36	21J15	
	42, 48, 60	21J20	
24" Height Full Perimeter Curb	24, 30, 36	21J16	
	42, 48, 60	21J25	
Adjustable Pitch Roof Curb (Knock-Down Style)	24, 30, 36	21J26	
	42, 48, 60	21U04	
Adjustable Pitch Roof Curb (Welded Style)	24, 30, 36	22V54	
	42, 48, 60	22V55	
Strapping Kit - Hurricane	Slab	21J74	
	Rail	22G53	
Strapping Kit - Seismic	All	21J75	
Duct Adapter Kit - Horizontal	14 in. dia.	24, 30, 36	21J92
	14 in. dia.	42, 48, 60	21D24
	16 in. dia.	42, 48, 60	22U78
	18 in. dia.	42, 48, 60	22U79
Duct Adapter Kit - Downflow	14 in. dia.	24, 30, 36	20X82
	14 in. dia.	42, 48, 60	21D26
Bottom Power Entry Kit	All	21J78	
Base Rail Openings - Closure Kit	All	21J84	
Single Point Power - 5kW ASPWR813-1	All	13W88	
Single Point Power - 7.5 kW ASPWR814-1	All	13W89	
Single Point Power - 10kW ASPWR815-1	All	13W90	
Single Point Power - 15-20kW ASPWR816-1	36, 42, 48, 60	13W91	
Comfort Sync® Wi-Fi Thermostat	All	1.841226	
Equipment Interface Module (EIM) - Required with Comfort Sync thermostat	All	R104785-01	
Outdoor Air Temperature Sensor	All	X2658	
Discharge Air Temperature Sensor	All	88K38	

ELECTRIC HEAT CAPACITIES

INPUT VOLTAGE	5 KW			7.5 KW			10 KW			15 KW			20 KW		
	NO OF STEPS	KW INPUT	KBTUH OUTPUT	NO OF STEPS	KW INPUT	KBTUH OUTPUT	NO OF STEPS	KW INPUT	KBTUH OUTPUT	NO OF STEPS	KW INPUT	KBTUH OUTPUT	NO OF STEPS	KW INPUT	KBTUH OUTPUT
208	1	3.8	12.8	1	5.6	19.2	1	7.5	25.6	1	11.2	38.2	1	15	51.2
220	1	4.2	14.3	1	6.3	21.5	1	8.4	28.7	1	12.6	43	1	16.8	57.3
230	1	4.6	15.7	1	6.9	23.5	1	9.2	31.3	1	13.8	47	1	18.4	62.7
240	1	5	17.1	1	7.5	25.6	1	10	34.1	1	15	51.2	1	20	68.2

ELECTRICAL/ELECTRICAL HEAT DATA

MODEL NO.				PRPHP1624		PRPHP1636		PRPHP1648		LRPHP60	
LINE VOLTAGE DATA - 60HZ - 1 PHASE				208/230V		208/230V		208/230V		208/230V	
COMPRESSOR	Rated Load Amps			11.6		16.1		21.1		23.4	
	Locked Rotor Amps			58.3		83.0		104.0		118.0	
OUTDOOR FAN MOTOR	Full Load Amps			2.3		2.3		2.3		3.6	
INDOOR BLOWER MOTOR	Full Load Amps			1.1		2.3		3.1		5.4	
1 MAXIMUM OVERCURRENT PROTECTION	VOLTAGE			208V	240V	208V	240V	208V	240V	208V	240V
	UNIT ONLY	Circuit 1		25	25	40	40	50	50	60	60
		Circuit 2		---	---	25	30	25	30	25	30
	5 KW	Circuit 1		25	30	30	30	30	30	30	35
		Circuit 2		---	---	---	---	---	---	---	---
	7.5 KW	Circuit 1		40	45	40	45	40	45	45	50
		Circuit 2		---	---	---	---	---	---	---	---
	10 KW	Circuit 1		50	60	50	60	50	60	60	60
Circuit 2		---	---	---	---	---	---	---	---		
3 15 KW	Circuit 1		---	---	50	60	50	60	60	60	
	Circuit 2		---	---	---	---	---	---	---	---	
3 20 KW	Circuit 1		---	---	---	---	50	60	60	60	
	Circuit 2		---	---	---	---	50	60	50	60	
1 MAXIMUM OVERCURRENT PROTECTION WITH OPTIONAL SINGLE POINT POWER SUPPLY	5 KW			45	50	50	60	70	70	70	80
	7.5 KW			60	60	60	70	80	80	80	90
	10 KW			70	80	70	80	80	90	90	100
	15 KW			---	---	100	110	100	110	110	125
	20 KW			---	---	---	---	125	150	150	150
2 MINIMUM CIRCUIT AMPACITY	UNIT ONLY	Circuit 1		18.0	18.0	24.7	24.7	31.8	31.8	38.3	38.3
		Circuit 2		---	---	22.6	26.0	22.6	26.0	22.6	26.0
	5 KW	Circuit 1		23.9	27.4	25.4	28.9	26.4	29.9	29.3	32.8
		Circuit 2		---	---	---	---	---	---	---	---
	7.5 KW	Circuit 1		35.2	40.4	36.7	41.9	37.7	42.9	40.6	45.8
		Circuit 2		---	---	---	---	---	---	---	---
	10 KW	Circuit 1		46.5	53.5	48.0	55.0	49.0	56.0	51.9	58.8
		Circuit 2		---	---	---	---	---	---	---	---
3 15 KW	Circuit 1		---	---	48.0	55.0	49.0	56.0	51.9	58.8	
	Circuit 2		---	---	---	---	---	---	---	---	
3 20 KW	Circuit 1		---	---	---	---	49.0	56.0	51.9	58.8	
	Circuit 2		---	---	---	---	45.1	52.1	45.1	52.1	
2 MINIMUM CIRCUIT AMPACITY WITH OPTIONAL SINGLE POINT POWER SUPPLY	5 KW			40.5	44.0	47.2	50.7	54.4	57.8	60.8	64.3
	7.5 KW			51.8	57.0	58.5	63.7	65.7	70.9	72.1	77.3
	10 KW			63.1	70.0	69.8	76.8	76.9	83.9	83.4	90.4
	15 KW			---	---	92.4	102.8	99.5	109.9	106.0	116.4
	20 KW			---	---	---	---	122.1	136.0	128.6	142.4

NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 5000 amps.
 NOTE - Circuit 1 Minimum Circuit Ampacity includes the Blower Motor Full Load Amps.
 NOTE- Extremes of operating range are plus and minus 10% of line voltage.
 1 HACR type breaker or fuse.
 2 Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.
 3 A separate compressor circuit is required.

COOLING RATINGS

2 TON - PRPHP1624 (1ST STAGE)																					
ENTERING WET BULB TEMP.	TOTAL AIR VOLUME	OUTDOOR AIR TEMPERATURE ENTERING OUTDOOR COIL																			
		75°F					85°F					95°F					105°F				
		TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)		
				DRY BULB					DRY BULB					DRY BULB					DRY BULB		
CFM	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	
63°F	400	15.7	4.6	.71	.82	.94	15.1	4.4	.71	.84	.96	14.2	4.2	.73	.86	.98	13.4	3.9	.75	.89	1.00
	550	17.1	5.0	.77	.91	1.00	16.3	4.8	.78	.93	1.00	15.4	4.5	.80	.96	1.00	14.4	4.2	.83	.99	1.00
	700	18.0	5.3	.83	.99	1.00	17.2	5.0	.85	1.00	1.00	16.3	4.8	.88	1.00	1.00	15.4	4.5	.91	1.00	1.00
67°F	400	16.7	4.9	.55	.68	.79	16.0	4.7	.57	.69	.81	15.1	4.4	.58	.70	.83	14.2	4.2	.59	.73	.85
	550	18.1	5.3	.59	.74	.88	17.3	5.1	.61	.76	.90	16.3	4.8	.63	.78	.93	15.2	4.5	.64	.81	.96
	700	19.0	5.6	.64	.81	.96	18.1	5.3	.65	.83	.99	17.0	5.0	.67	.86	1.00	15.9	4.7	.69	.89	1.00
71°F	400	17.6	5.2	.44	.54	.65	16.9	5.0	.44	.55	.66	16.0	4.7	.43	.56	.67	15.0	4.4	.44	.58	.70
	550	19.1	5.6	.45	.58	.72	18.2	5.3	.45	.59	.73	17.2	5.0	.46	.61	.76	16.1	4.7	.46	.63	.78
	700	20.0	5.9	.46	.62	.78	19.1	5.6	.46	.64	.81	18.0	5.3	.48	.66	.83	16.8	4.9	.49	.68	.87

NOTE: Values based on 0.50" w.c. external static pressure

2 TON - PRPHP1624 (2ND STAGE)																					
ENTERING WET BULB TEMP.	TOTAL AIR VOLUME	OUTDOOR AIR TEMPERATURE ENTERING OUTDOOR COIL																			
		85°F					95°F					105°F					115°F				
		TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)		
				DRY BULB					DRY BULB					DRY BULB					DRY BULB		
CFM	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	
63°F	600	22.0	6.4	.73	.86	.98	21.0	6.2	.74	.88	1.00	19.9	5.8	.76	.90	1.00	18.7	5.5	.78	.93	1.00
	820	23.6	6.9	.80	.95	1.00	22.4	6.6	.82	.98	1.00	21.2	6.2	.84	1.00	1.00	20.0	5.9	.87	1.00	1.00
	1000	24.6	7.2	.85	1.00	1.00	23.6	6.9	.88	1.00	1.00	22.4	6.6	.91	1.00	1.00	21.0	6.2	.94	1.00	1.00
67°F	600	23.4	6.9	.57	.70	.83	22.2	6.5	.59	.72	.85	21.0	6.2	.60	.74	.87	19.7	5.8	.61	.76	.90
	820	25.0	7.3	.62	.77	.92	23.6	6.9	.63	.80	.95	22.4	6.6	.65	.82	.98	20.8	6.1	.67	.85	1.00
	1000	25.8	7.6	.65	.83	.99	24.4	7.2	.67	.86	1.00	23.0	6.7	.69	.89	1.00	21.4	6.3	.71	.92	1.00
71°F	600	24.6	7.2	.44	.56	.68	23.4	6.9	.44	.57	.69	22.2	6.5	.45	.59	.71	20.8	6.1	.45	.60	.74
	820	26.2	7.7	.45	.61	.75	25.0	7.3	.46	.62	.77	23.6	6.9	.47	.64	.80	22.0	6.4	.48	.66	.83
	1000	27.0	7.9	.47	.65	.81	25.6	7.5	.48	.66	.84	24.2	7.1	.48	.68	.86	22.6	6.6	.49	.71	.90

NOTE: Values based on 0.50" w.c. external static pressure

2 TON - PRPHP1624 (1ST STAGE)																					
ENTERING WET BULB TEMP.	TOTAL AIR VOLUME	OUTDOOR AIR TEMPERATURE ENTERING OUTDOOR COIL																			
		75°F					85°F					95°F					105°F				
		TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)		
				DRY BULB					DRY BULB					DRY BULB					DRY BULB		
CFM	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	
63°F	400	15.7	4.6	.71	.82	.94	15.1	4.4	.71	.84	.96	14.2	4.2	.73	.86	.98	13.4	3.9	.75	.89	1.00
	550	17.1	5.0	.77	.91	1.00	16.3	4.8	.78	.93	1.00	15.4	4.5	.80	.96	1.00	14.4	4.2	.83	.99	1.00
	700	18.0	5.3	.83	.99	1.00	17.2	5.0	.85	1.00	1.00	16.3	4.8	.88	1.00	1.00	15.4	4.5	.91	1.00	1.00
67°F	400	16.7	4.9	.55	.68	.79	16.0	4.7	.57	.69	.81	15.1	4.4	.58	.70	.83	14.2	4.2	.59	.73	.85
	550	18.1	5.3	.59	.74	.88	17.3	5.1	.61	.76	.90	16.3	4.8	.63	.78	.93	15.2	4.5	.64	.81	.96
	700	19.0	5.6	.64	.81	.96	18.1	5.3	.65	.83	.99	17.0	5.0	.67	.86	1.00	15.9	4.7	.69	.89	1.00
71°F	400	17.6	5.2	.44	.54	.65	16.9	5.0	.44	.55	.66	16.0	4.7	.43	.56	.67	15.0	4.4	.44	.58	.70
	550	19.1	5.6	.45	.58	.72	18.2	5.3	.45	.59	.73	17.2	5.0	.46	.61	.76	16.1	4.7	.46	.63	.78
	700	20.0	5.9	.46	.62	.78	19.1	5.6	.46	.64	.81	18.0	5.3	.48	.66	.83	16.8	4.9	.49	.68	.87

NOTE: Values based on 0.58" w.c. external static pressure

2 TON - PRPHP1624 (2ND STAGE)																					
ENTERING WET BULB TEMP.	TOTAL AIR VOLUME	OUTDOOR AIR TEMPERATURE ENTERING OUTDOOR COIL																			
		85°F					95°F					105°F					115°F				
		TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)			TOTAL COOL CAP.	COMP. MOTOR INPUT	SENSIBLE TO TOTAL RATIO (S/T)		
				DRY BULB					DRY BULB					DRY BULB					DRY BULB		
CFM	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	KBTUH	KW	75°F	80°F	85°F	
63°F	600	22.0	6.4	.73	.86	.98	21.0	6.2	.74	.88	1.00	19.9	5.8	.76	.90	1.00	18.7	5.5	.78	.93	1.00
	820	23.6	6.9	.80	.95	1.00	22.4	6.6	.82	.98	1.00	21.2	6.2	.84	1.00	1.00	20.0	5.9	.87	1.00	1.00
	1000	24.6	7.2	.85	1.00	1.00	23.6	6.9	.88	1.00	1.00	22.4	6.6	.91	1.00	1.00	21.0	6.2	.94	1.00	1.00
67°F	600	23.4	6.9	.57	.70	.83	22.2	6.5	.59	.72	.85	21.0	6.2	.60	.74	.87	19.7	5.8	.61	.76	.90
	820	25.0	7.3	.62	.77	.92	23.6	6.9	.63	.80	.95	22.4	6.6	.65	.82	.98	20.8	6.1	.67	.85	1.00
	1000	25.8	7.6	.65	.83	.99	24.4	7.2	.67	.86	1.00	23.0	6.7	.69	.89	1.00	21.4	6.3	.71	.92	1.00
71°F	600	24.6	7.2	.44	.56	.68	23.4	6.9	.44	.57	.69	22.2	6.5	.45	.59	.71	20.8	6.1	.45	.60	.74
	820	26.2	7.7	.45	.61	.75	25.0	7.3	.46	.62	.77	23.6	6.9	.47	.64	.80	22.0	6.4	.48	.66	.83
	1000	27.0	7.9	.47	.65	.81	25.6	7.5	.48	.66	.84	24.2	7.1	.48	.68	.86	22.6	6.6	.49	.71	.90

NOTE: Values based on 0.58" w.c. external static pressure

HEATING RATINGS

MODEL	OUTDOOR TEMP - DB/WB °F									
	0/0		17/15		35/33		47/43		62/56	
	BTUH	KW	BTUH	KW	BTUH	KW	BTUH	KW	BTUH	KW
PRPHP1624	9,300	1.60	11,900	1.67	17,700	1.76	21,400	1.82	26,400	1.89
PRPHP1636	14,400	2.46	18,500	2.61	27,500	2.82	33,200	2.96	40,900	3.13
PRPHP1648	19,800	3.43	24,700	3.49	37,700	3.76	46,000	3.94	57,200	4.16
PRPHP1660	26,900	4.12	35,500	4.33	50,800	4.76	58,000	5.04	73,600	5.40

ACCESSORY AIR RESISTANCE DATA - in. w.g.

AIR VOLUME CFM	RECTANGULAR TO ROUND DUCT ADAPTOR KITS					
	DOWNFLOW			HORIZONTAL		
	14 in. Diameter		14 in. Diameter		16 in. Diameter	18 in. Diameter
	24, 30, 36	42, 48, 60	24, 30, 36	42, 48, 60	42, 48, 60	42, 48, 60
500	0.03	---	0.04	---	---	---
600	0.05	---	0.07	---	---	---
700	0.08	0.13	0.08	0.13	---	---
800	0.10	0.17	0.12	0.16	---	---
900	0.12	0.21	0.15	0.21	---	---
1000	0.17	0.24	0.19	0.25	0.11	0.03
1100	0.18	0.30	0.23	0.30	0.11	0.03
1200	0.20	0.36	0.29	0.37	0.13	0.03
1300	0.26	0.43	0.31	0.43	0.17	0.03
1400	0.31	0.50	0.39	0.51	0.20	0.03
1500	---	0.57	---	0.57	0.21	0.05
1600	---	0.63	---	0.65	0.26	0.05
1700	---	0.71	---	0.72	0.30	0.06
1800	---	0.80	---	0.81	0.30	0.06
1900	---	0.91	---	0.90	0.40	0.06
2000	---	0.99	---	1.01	0.41	0.06

BLOWER DATA

PRPHP1624 BLOWER PERFORMANCE 0 THROUGH 0.80 IN. W.G. EXTERNAL STATIC PRESSURE RANGE												
"ADJUST" JUMPER SETTING	BLOWER CONTROL JUMPER SPEED POSITIONS											
	"COOL" SPEED - CFM				"HEAT" SPEED - CFM				"CONTINUOUS FAN" SPEED - CFM			
	A	¹ B	C	D	A	¹ B	C	D	A	B	C	D
+	1100	880	660	440	1150	1035	690	690	550	440	330	220
NORM	1000	800	600	400	1000	900	600	600	500	400	300	200
-	900	720	540	360	1000	900	600	600	450	360	270	180

¹ Factory Settings.

NOTE - All air data is measured external to unit without air filters.

NOTE - 1st Stage airflow is 70% of 2nd Stage airflow (full capacity) in cooling mode.

PRPHP1636 BLOWER PERFORMANCE 0 THROUGH 0.80 IN. W.G. EXTERNAL STATIC PRESSURE RANGE												
"ADJUST" JUMPER SETTING	BLOWER CONTROL JUMPER SPEED POSITIONS											
	"COOL" SPEED - CFM				"HEAT" SPEED - CFM				"CONTINUOUS FAN" SPEED - CFM			
	A	¹ B	C	D	A	¹ B	C	D	A	B	C	D
+	1430	1320	1100	880	1495	1380	1150	1150	715	660	550	440
NORM	1300	1200	1000	800	1300	1250	1000	1000	650	600	500	400
-	1170	1080	900	720	1300	1200	1000	1000	585	540	450	360

¹ Factory Settings.

NOTE - All air data is measured external to unit without air filters.

NOTE - 1st Stage airflow is 70% of 2nd Stage airflow (full capacity) in cooling mode.

PRPHP1648 BLOWER PERFORMANCE 0 THROUGH 0.80 IN. W.G. EXTERNAL STATIC PRESSURE RANGE												
"ADJUST" JUMPER SETTING	BLOWER CONTROL JUMPER SPEED POSITIONS											
	"COOL" SPEED - CFM				"HEAT" SPEED - CFM				"CONTINUOUS FAN" SPEED - CFM			
	A	¹ B	C	D	A	¹ B	C	D	A	B	C	D
+	1980	1760	1540	1320	2070	1840	1610	1610	990	880	770	660
NORM	1800	1600	1400	1200	1800	1600	1400	1400	900	800	700	600
-	1620	1440	1260	1080	1800	1600	1400	1400	810	720	630	540

¹ Factory Settings.

NOTE - All air data is measured external to unit without air filters.

NOTE - 1st Stage airflow is 70% of 2nd Stage airflow (full capacity) in cooling mode.

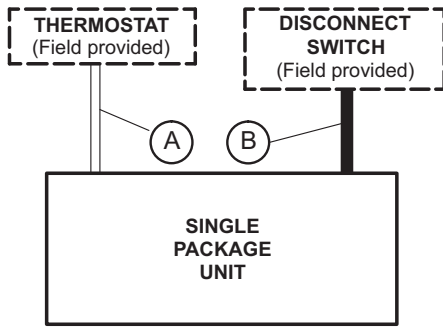
PRPHP1660 BLOWER PERFORMANCE 0 THROUGH 0.80 IN. W.G. EXTERNAL STATIC PRESSURE RANGE												
"ADJUST" JUMPER SETTING	BLOWER CONTROL JUMPER SPEED POSITIONS											
	"COOL" SPEED - CFM				"HEAT" SPEED - CFM				"CONTINUOUS FAN" SPEED - CFM			
	A	¹ B	C	D	A	¹ B	C	D	A	B	C	D
+	2200	1980	1760	1540	2300	2070	1840	1840	1100	990	880	770
NORM	2000	1800	1600	1400	2000	1800	1600	1600	1000	900	800	700
-	1800	1620	1440	1260	2000	1800	1600	1600	900	810	720	630

¹ Factory Settings.

NOTE - All air data is measured external to unit without air filters.

NOTE - 1st Stage airflow is 70% of 2nd Stage airflow (full capacity) in cooling mode.

FIELD WIRING



A – Seven Wire Low Voltage (Electronic)

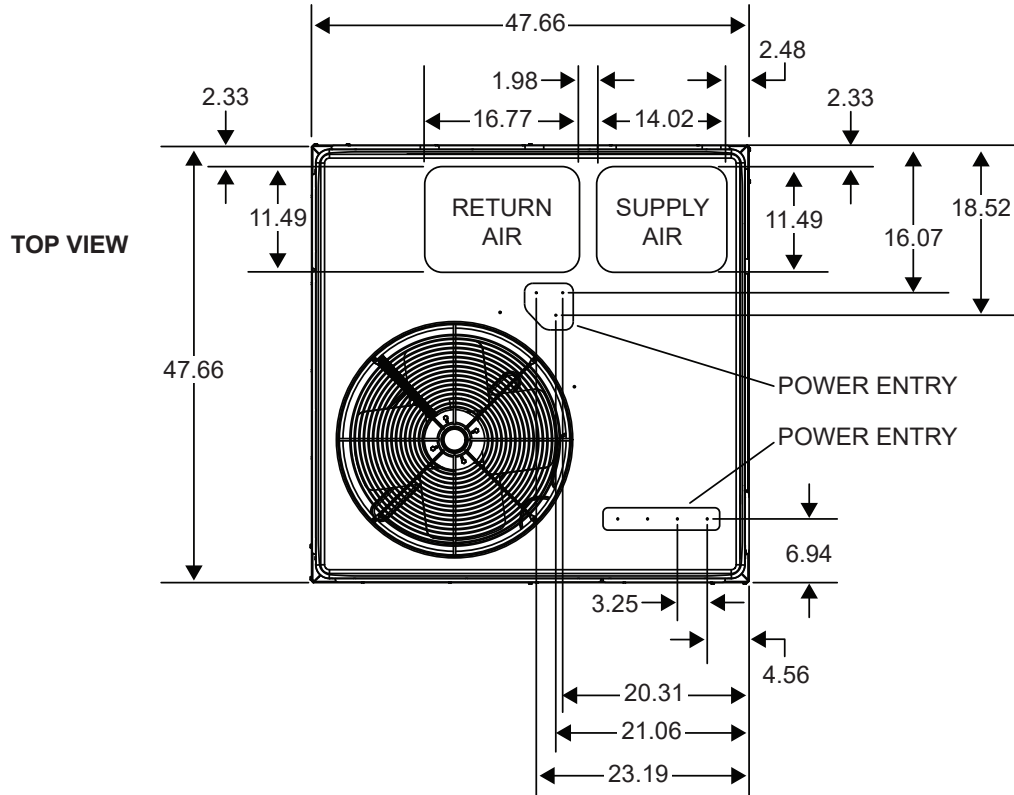
B – Two Wire Power (See Electrical Data Table)

If multiple disconnects are used on units with electric heat, there must be two-wire power provided for each disconnect

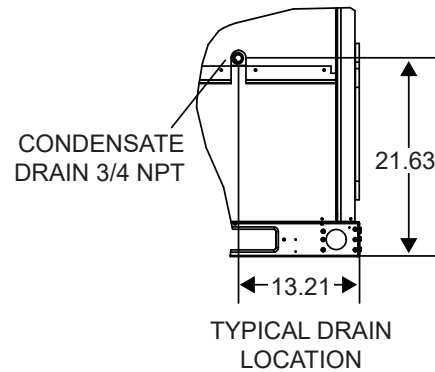
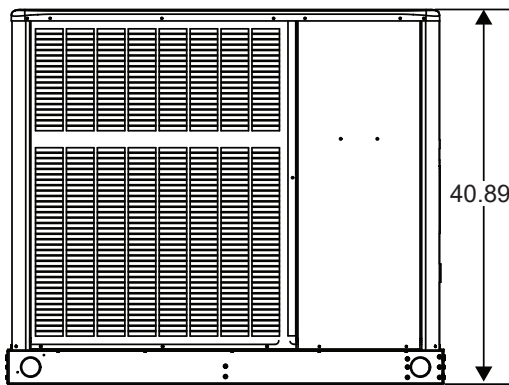
– Field Wiring Not Furnished –

INSTALLATION CLEARANCES		
	IN.	MM
Front	24	610
Right Side (blower access)	24	610
Left Side (evaporator coil access)	24	610
Back	0	0
Top	48	1219

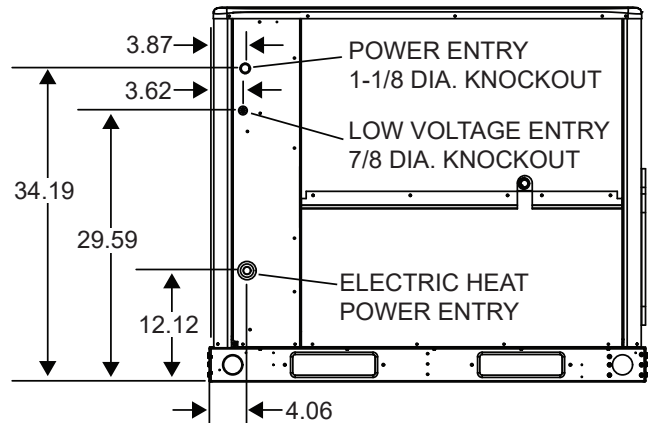
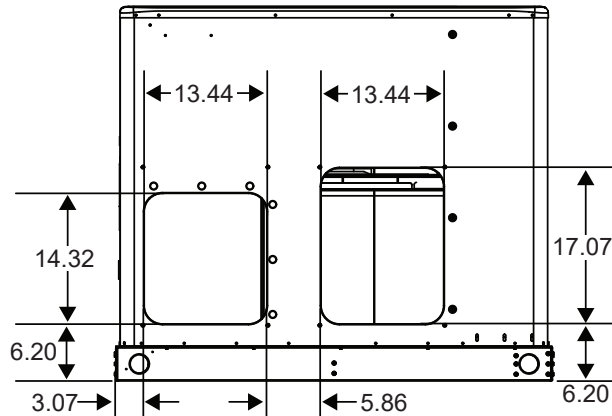
DIMENSIONS (IN.) - SMALL BASE



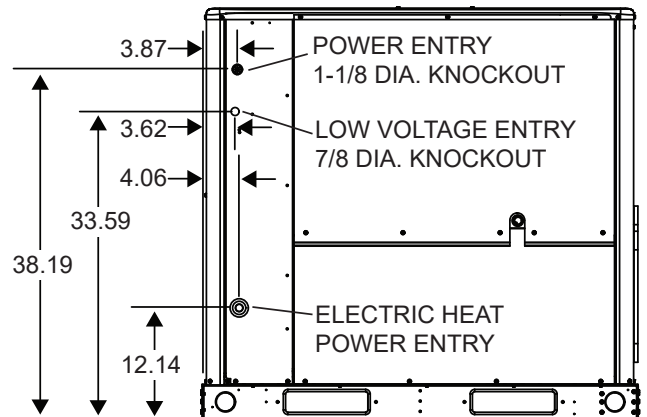
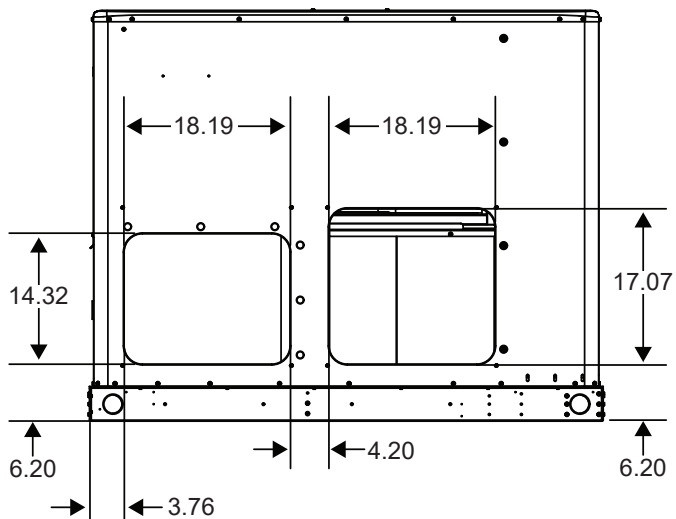
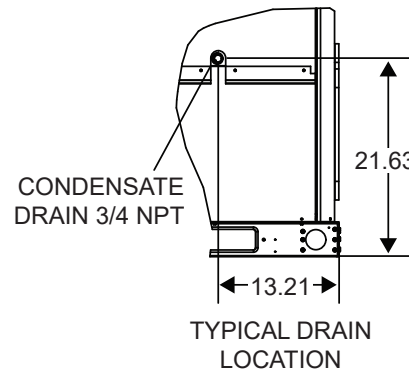
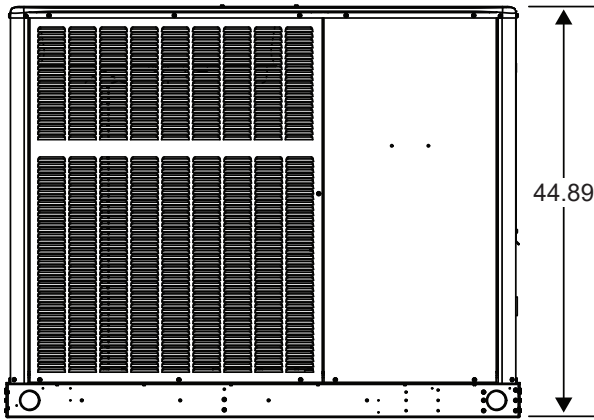
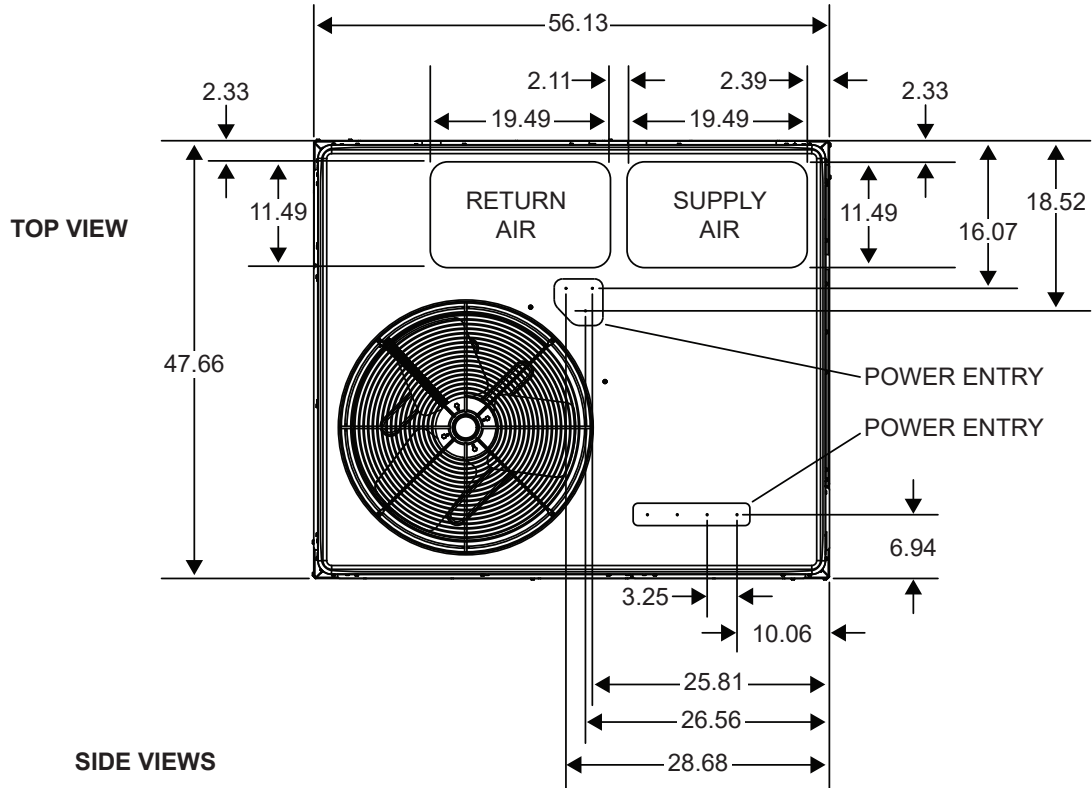
SIDE VIEWS



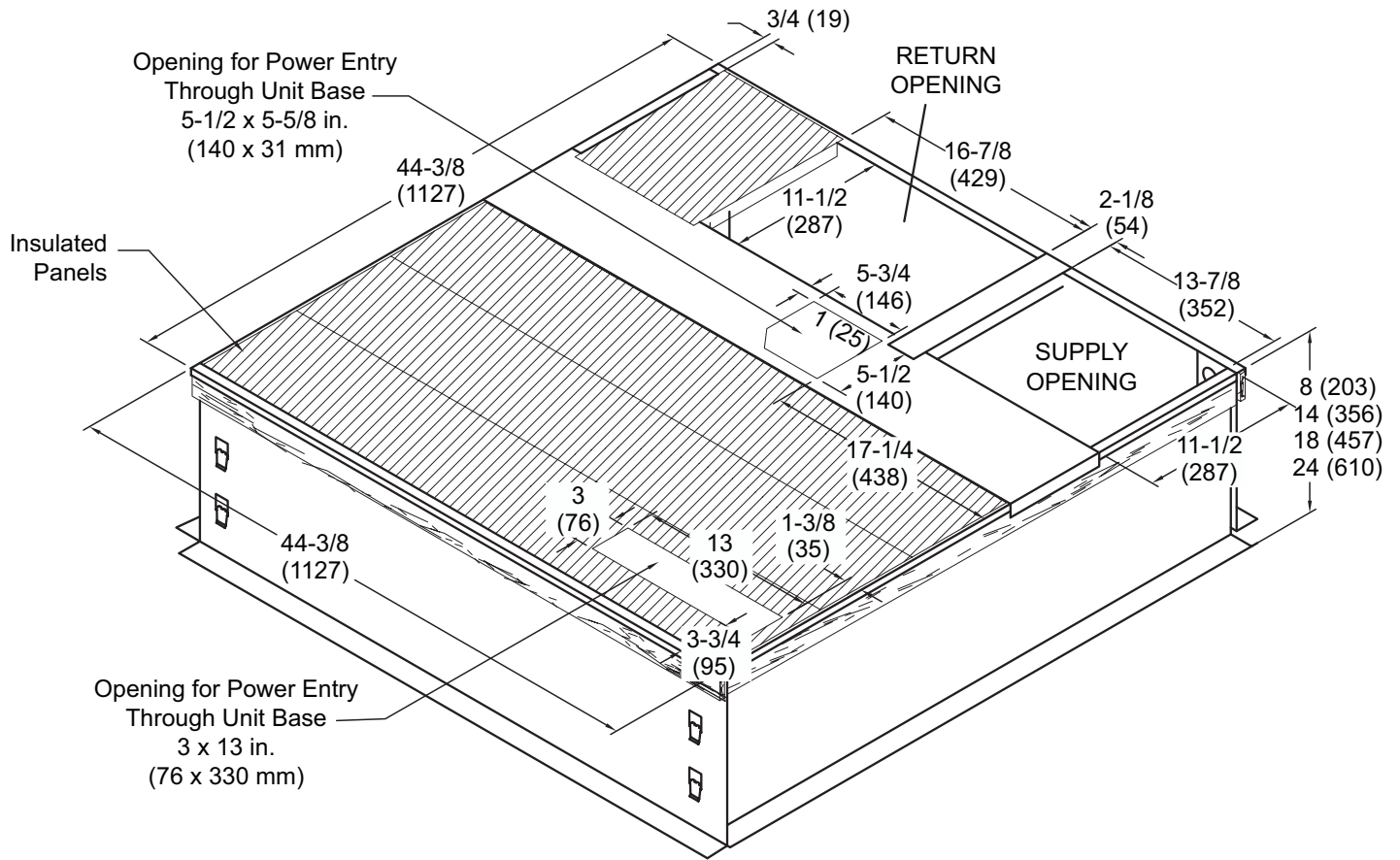
TYPICAL DRAIN LOCATION



DIMENSIONS (IN.) - LARGE BASE



ROOF CURB DIMENSIONS - SMALL BASE

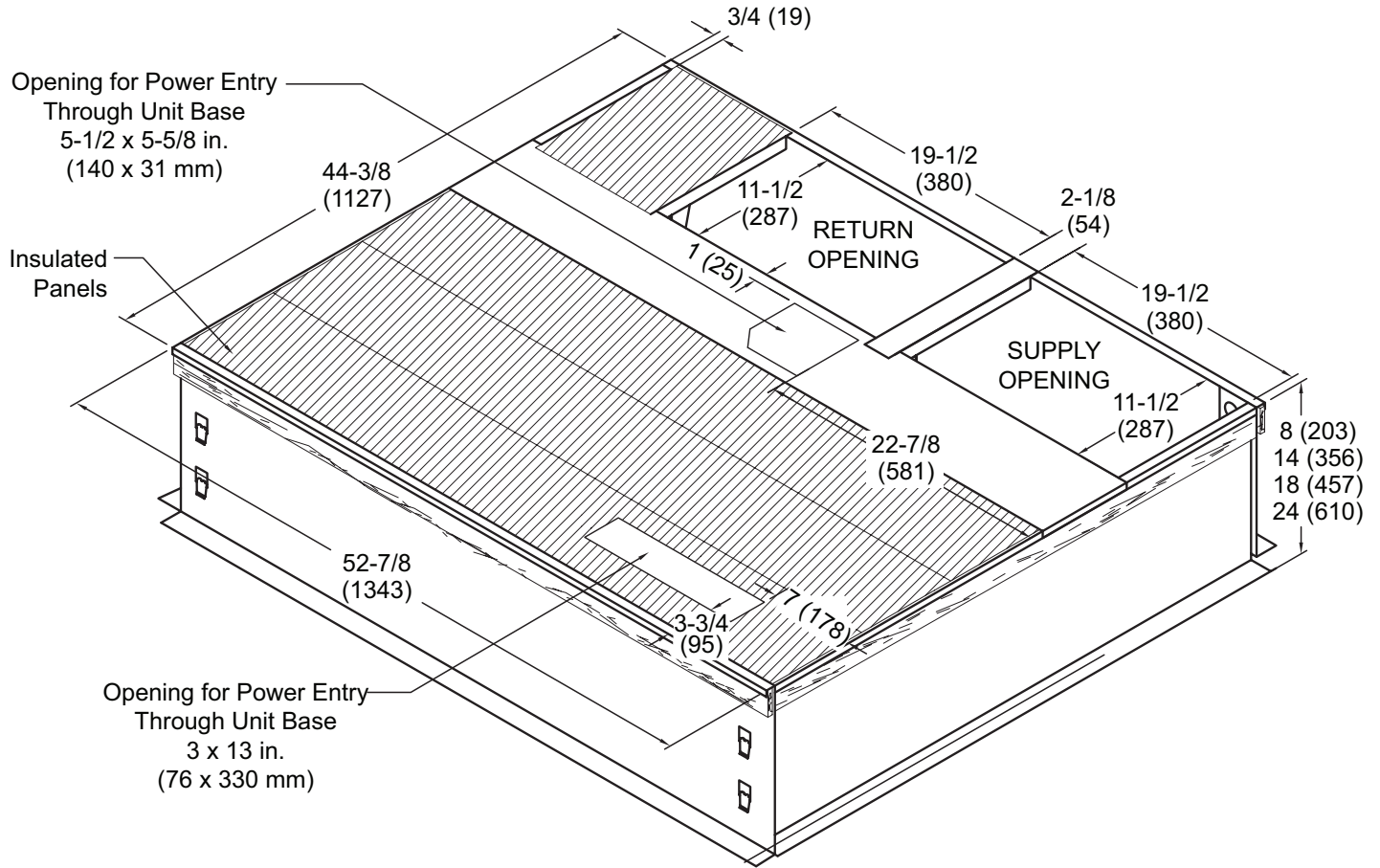


NOTE - Roof deck may be omitted within confines of curb.

NOTE - All Curbs::

- IBC 2018 compliant
- CBC 2019 compliant
- Seismic rating - SDS 2.0g, z/h=1, Ip=1.5
- Wind rating - 240 mph (Lateral), 214 mph (Uplift)
- Maximum load rating - 800 lbs.
- Tool-less filter access panels NOT for seismic-rated applications

ROOF CURB DIMENSIONS - LARGE BASE

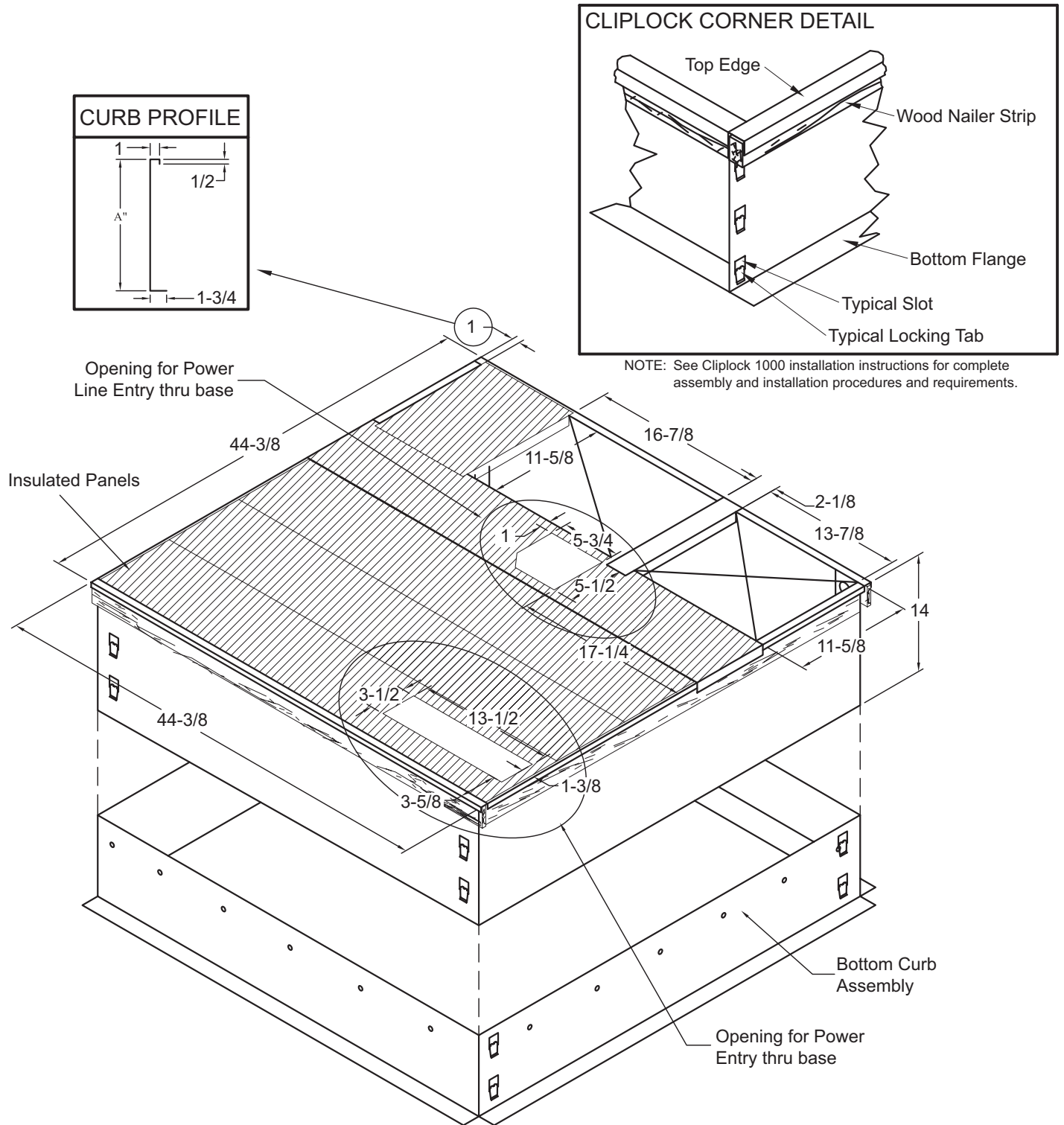


NOTE - Roof deck may be omitted within confines of curb.

NOTE - All Curbs::

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- Seismic rating - SDS 2.0g, z/h=1, Ip=1.5
- Wind rating - 240 mph (Lateral), 214 mph (Uplift)
- Maximum load rating - 800 lbs.
- Tool-less filter access panels NOT for seismic-rated applications

ADJUSTABLE CURB (KNOCK-DOWN STYLE) DIMENSIONS - SMALL BASE

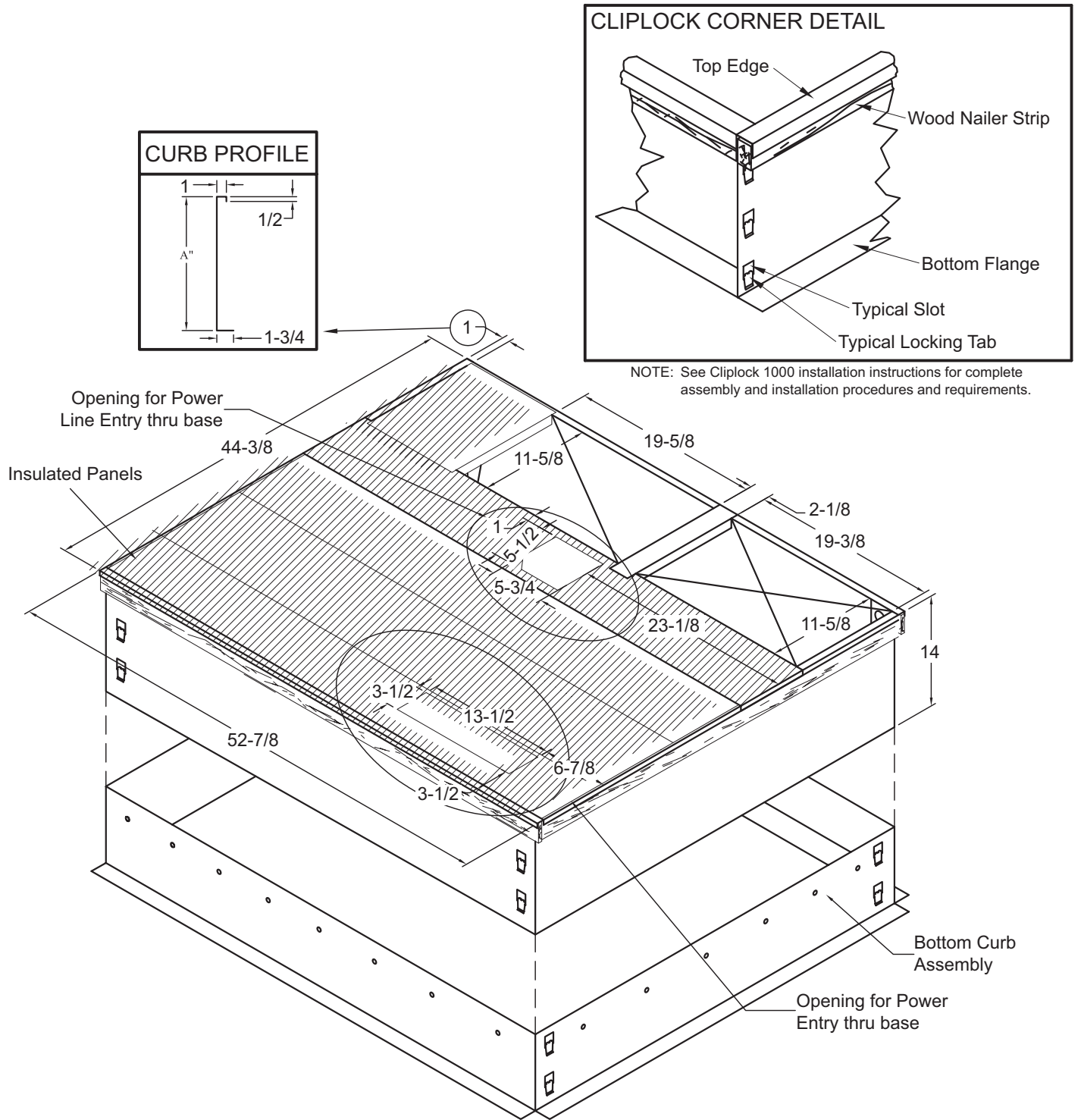


NOTE - Roof deck may be omitted within confines of curb.

NOTE - All Curbs::

- IBC 2018 compliant
- CBC 2019 compliant
- Seismic rating - SDS 2.0g, z/h=1, I_p=1.5
- Wind rating - 240 mph (Lateral), 214 mph (Uplift)
- Maximum load rating - 800 lbs.
- Tool-less filter access panels NOT for seismic-rated applications

ADJUSTABLE CURB (KNOCK-DOWN STYLE) DIMENSIONS - LARGE BASE

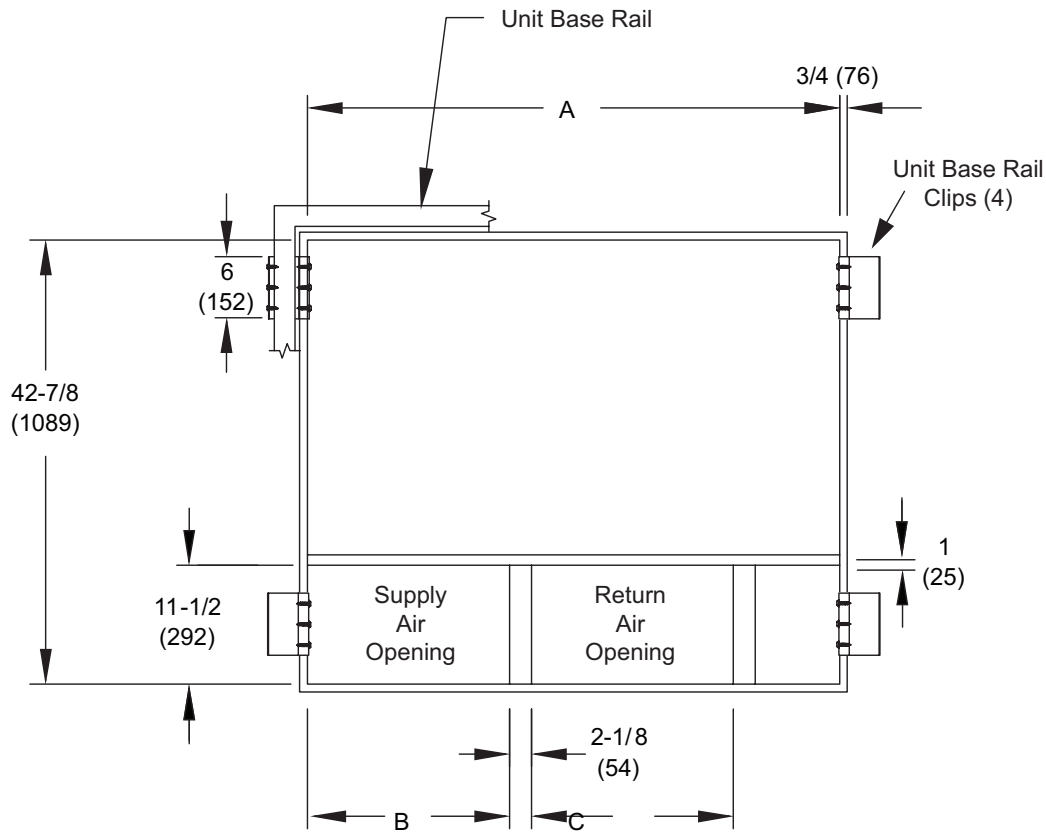
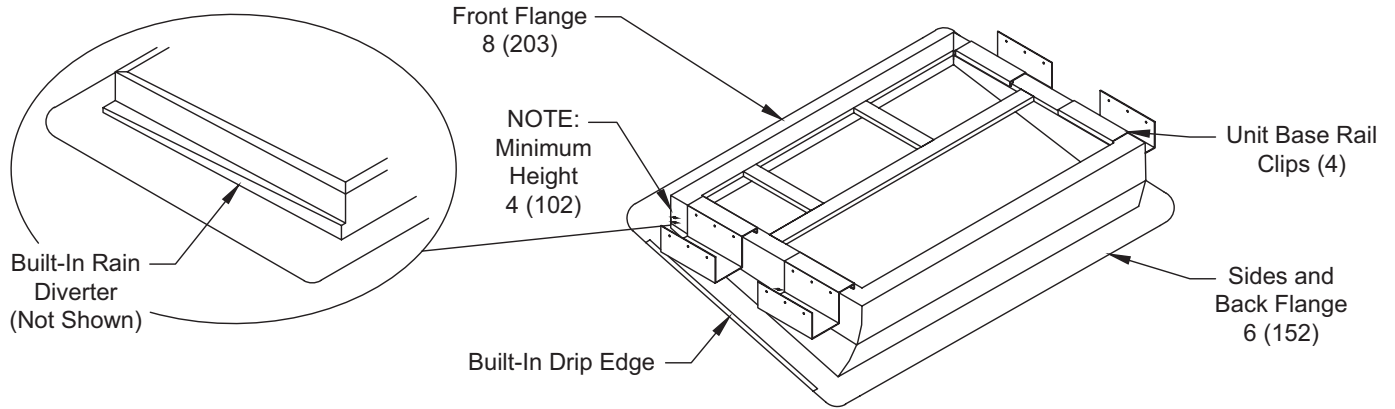


NOTE - Roof deck may be omitted within confines of curb.

NOTE - All Curbs::

- IBC 2018 compliant
- CBC 2019 compliant
- Seismic rating - SDS 2.0g, z/h=1, I_p=1.5
- Wind rating - 240 mph (Lateral), 214 mph (Uplift)
- Maximum load rating - 800 lbs.
- Tool-less filter access panels NOT for seismic-rated applications

ADJUSTABLE CURB (WELDED STYLE) DIMENSIONS



USAGE	A		B		C	
	IN.	MM	IN.	MM	IN.	MM
24,30,36	42-7/8	1089	13-7/8	352	16-7/8	429
42,48,60	51-3/8	1305	19-1/2	495	19-1/2	495



1-800-448-5872

All specifications and illustrations subject to change without notice and without incurring obligations.