

# MPH\*1M414A-2

## PRODUCT SPECIFICATIONS

14 SEER HEAT PUMP  
PACKAGED UNIT

FORM NO. MPH\*1M414A-2 (01/2021)

### REFRIGERANT SYSTEM

- Environmentally friendly R410A refrigerant
- Copper tubing with enhanced fin coils
- Internal service gauge ports
- Sleeved distributor tubes
- Antimicrobial insulated drain pan
- High and Low Threaded pressure switches for system protection

### CABINET CONSTRUCTION

- Heavy-gauge galvanized steel base rails with rigging holes
- Rounded corners for safety and an attractive, clean appearance
- One piece base design for strength and stability
- Condensate and coil runoff drains to the perimeter of the unit
- Horizontal and downflow duct openings are flanged to minimize water entry
- Low profile, with compact footprint
- Insulation to minimize heat loss plus reduce sound
- Textured pre-painted steel cabinet finish
- Superior service access to components
- Louvered coil guard protection
- One piece “no leak” top design

### BLOWER

- Insulated compartment to reduce sound
- Efficient constant torque motor for wide airflow range
- Slide out blower housing for easy service

### CONTROLS

- Integrated control with L.E.D. self diagnostics
- Defrost control board with field selectable time intervals
- Built in short cycle protection to protect compressor
- Built in “quiet shift” operation during defrost on select models

### INSTALLATION

- Horizontal or down discharge capable
- Horizontal and downflow duct covers provided with unit for installation flexibility
- Drain pan float switch monitors condensate level in drain pan and shuts down unit if drain becomes clogged
- Utility connections on “right side”
- Kits enable bottom gas and power entry through base pan



### ACCESSORIES

- Electric heat kit

### WARRANTY

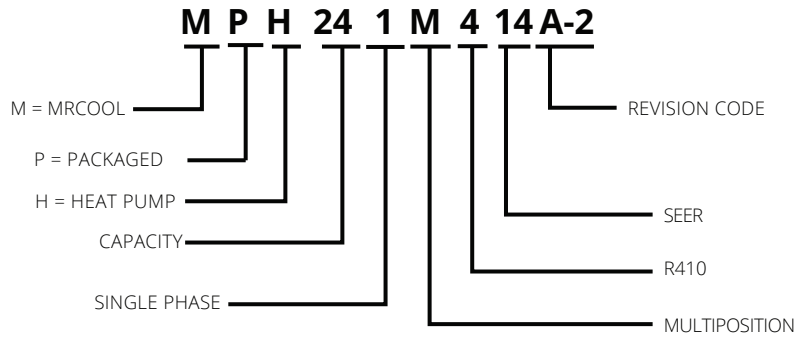
10 year limited parts and compressor warranty. See limited warranty document for details.



Intertek



**MODEL NUMBER GUIDE**



**ELECTRICAL AND PHYSICAL DATA**

Model	Voltage	Phase	Hz	Min Volts @ 60 hz	MCA	Max Fuse/HACR Breaker	Compressor		Condenser Motor		Blower Motor		Refrig. Charge (oz.)	Weight (lbs.)
							RLA	LRA	RLA	HP	RLA	HP		
MPH241M414A-2	208-230	1	60	197	17.4	25	12.1	59.3	1.0	1/6	2.8	1/3	91	369
MPH301M414A-2					21.9	35	15	72.5			4.1		96	379
MPH361M414A-2					23.4	35	14.7	75			4.1		1/2	90
MPH421M414A-2					27.8	40	16	85	1.7	1/4	6	1/3	173	460
MPH481M414A-2					28.7	45	16.9	94				1/2	173	464
MPH601M414A-2					37.2	55	22.2	127.9	1.8	1/3	7.6	1.0	161	503

**PERFORMANCE**

MODEL	COOLING					HEATING					Sound dBA
	Rated AHRI Capacity Btuh	SEER	EER	Rated Sensible Capacity Btuh	CFM	47 DEG.		HSPF	17 DEG.		
						BTUH	COP		BTUH	COP	
MPH241M414A-2	22,600	14.0	11.0	16,700	850	22,000	3.8	8.0	12,300	2.3	78
MPH301M414A-2	28,600		11.0	21,700	1050	27,000	3.7		15,900		
MPH361M414A-2	34,000		11.0	25,200	1250	32,400			20,000		
MPH421M414A-2	40,000		11.0	30,800	1400	39,000	3.6		23,600	78	
MPH481M414A-2	46,000		11.0	34,000	1600	45,000	3.7		27,000	79	
MPH601M414A-2	57,000		11.0	41,600	1800	56,000			33,600	2.4	78

\*Certified in accordance with Unitary Air Conditioner Certification Program, which is based on AHRI Standard 210/240

**BLOWER PERFORMANCE**

Model	Blower Tap	CFM @ ext. Static Pressure in in. wc without filter, dry coil									
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
MPH241M414A-2	TAP 1	680	590	550	450	380	N/A	N/A	N/A	N/A	N/A
	TAP 2	890	830	800	760	710	680	640	600	N/A	N/A
	TAP 3	1000	960	930	880	840	810	770	730	N/A	N/A
MPH301M414A-2	TAP 1	680	640	600	570	530	490	N/A	N/A	N/A	N/A
	TAP 2	1100	1070	1050	1020	990	960	930	900	N/A	N/A
	TAP 3	1180	1160	1130	1090	1070	1040	1010	960	N/A	N/A
MPH361M414A-2	TAP 1	860	810	760	710	640	590	550	490	N/A	N/A
	TAP 2	1300	1265	1235	1200	1165	1125	1085	1040	1000	885
	TAP 3	1475	1450	1420	1375	1345	1310	1275	1190	1070	885
MPH421M414A-2	TAP 1	800	720	640	550	475	390	310	0	0	0
	TAP 2	1470	1410	1360	1300	1260	1210	1155	1095	1000	940
	TAP 3	1700	1650	1610	1575	1540	1480	1430	1390	1340	1210
MPH481M414A-2	TAP 1	1145	1075	1000	930	850	790	740	670	570	490
	TAP 2	1675	1630	1600	1540	1490	1440	1390	1300	1230	1125
	TAP 3	1800	1770	1715	1690	1640	1610	1565	1500	1460	1380
MPH601M414A-2	TAP 1	1400	1320	1260	1200	1120	1060	980	900	N/A	N/A
	TAP 2	1920	1870	1820	1770	1720	1670	1450	1360	N/A	N/A
	TAP 3	2235	2195	2165	2130	2090	2060	2025	1985	1960	1940

**COOLING PERFORMANCE - EXTENDED RATINGS**

Outdoor Model	Indoor Temp DB/WB °F	Outdoor Temperature - DB °F														
		65°			82°			95°			105°			115°		
		Btuh	S/T	kW	Btuh	S/T	kW	Btuh	S/T	kW	Btuh	S/T	kW	Btuh	S/T	kW
MPH241M414A-2	85 / 72	29500	0.63	1.4	28100	0.65	1.67	27000	0.67	1.89	25400	0.72	2.06	23800	0.78	2.23
	80 / 67	27800	0.70	1.39	26300	0.72	1.65	24800	0.74	1.89	23300	0.80	2.07	21800	0.86	2.24
	75 / 63	26400	0.73	1.38	24400	0.76	1.66	22800	0.79	1.87	21500	0.84	2.06	20300	0.88	2.25
	75 / 57	23300	1.00	1.38	21800	1.00	1.65	20600	1.00	1.86	20100	1.00	2.05	19500	1.00	2.25
MPH301M414A-2	85 / 72	29700	0.66	1.92	31300	0.69	2.27	32600	0.71	2.53	29600	0.74	2.71	26600	0.76	2.89
	80 / 67	33500	0.71	1.89	32700	0.74	2.18	30100	0.76	2.48	27900	0.80	2.69	25600	0.84	2.9
	75 / 63	31700	0.75	1.85	29200	0.79	2.21	27400	0.82	2.49	25600	0.84	2.69	23800	0.86	2.89
	75 / 57	29900	1.00	1.87	27500	1.00	2.24	25800	1.00	2.52	24500	1.00	2.71	23300	1.00	2.89
MPH361M414A-2	85 / 72	44500	0.70	2.25	40600	0.74	2.6	37400	0.78	2.91	35000	0.80	3.19	32600	0.84	3.49
	80 / 67	41100	0.77	2.24	37600	0.81	2.58	34400	0.79	2.9	32300	0.87	3.17	30100	0.92	3.48
	75 / 63	38500	0.79	2.22	35100	0.83	2.57	32200	0.87	2.87	30200	0.90	3.15	28100	0.93	3.46
	75 / 57	36000	1.00	2.21	33300	1.00	2.56	31000	1.00	2.9	29300	1.00	3.15	27500	1.00	3.46
MPH421M414A-2	85 / 72	52600	0.69	2.5	48100	0.72	2.91	44100	0.75	3.3	41400	0.77	3.66	36900	0.76	4.03
	80 / 67	48200	0.75	2.51	44200	0.79	2.91	40500	0.78	3.27	37800	0.84	3.67	35000	0.90	4.04
	75 / 63	45100	0.78	2.51	41200	0.81	2.92	38100	0.85	3.31	35500	0.87	3.68	32600	0.92	4.04
	75 / 57	42000	1.00	2.52	38800	1.00	2.92	36100	1.00	3.32	34200	1.00	3.68	31700	1.00	4.05
MPH481M414A-2	85 / 72	59300	0.69	2.76	54400	0.72	3.29	50200	0.75	3.72	46800	0.78	4.05	43300	0.82	4.42
	80 / 67	54800	0.76	2.78	50100	0.79	3.28	46500	0.79	3.68	43300	0.85	4.04	40100	0.89	4.4
	75 / 63	51200	0.78	2.78	46800	0.81	3.27	43400	0.84	3.69	40400	0.87	4.02	37600	0.91	4.38
	75 / 57	47700	1.00	2.79	44200	1.00	3.26	41400	1.00	3.68	39000	1.00	4.01	36500	1.00	4.37
MPH601M414A-2	85 / 72	74100	0.62	3.54	68100	0.65	4.32	63500	0.67	4.91	60100	0.71	5.53	56600	0.75	6.14
	80 / 67	69200	0.69	3.51	63000	0.71	4.24	57400	0.73	4.85	55000	0.78	5.48	52400	0.82	6.1
	75 / 63	64200	0.72	3.49	57100	0.74	4.19	51700	0.76	4.72	50400	0.80	5.39	49000	0.84	6.07
	75 / 57	57500	1.00	3.44	51700	1.00	4.21	47300	1.00	4.8	46900	1.00	5.42	46500	1.00	6.04

## HEAT STRIP ELECTRICAL

Model	Heater Model	Unit Supply Voltage Single Phase	Input kW 240V	Circuit 1 240V		Circuit 2 240V		Single Circuit 240V	
				Ampacity	Breaker	Ampacity	Breaker	Ampacity	Breaker
MPH241M414A-2	MHK05P	240	5	29.5	30	-	-	43.4	45
		208	3.8	26.1	30	-	-	40.0	45
	MHK07P	240	7.5	42.6	45	-	-	56.5	60
		208	5.6	37.4	40	-	-	51.3	60
	MHK10P	240	10	55.6	60	-	-	69.5	70
		208	7.5	48.6	50	-	-	62.5	70
	MHK15P	240	15	-	-	-	-	-	-
		208	11.3	-	-	-	-	-	-
MHK20P	240	20	-	-	-	-	-	-	
	208	15	-	-	-	-	-	-	
MPH301M414A-2	MHK05P	240	5	31.2	35	-	-	47.9	50
		208	3.8	27.7	30	-	-	44.5	50
	MHK07P	240	7.5	44.2	45	-	-	61.0	70
		208	5.6	39.0	40	-	-	55.8	60
	MHK10P	240	10	57.2	60	-	-	74.0	80
		208	7.5	50.3	60	-	-	67.0	70
	MHK15P	240	15	57.2	60	26.0	30	100.0	110
		208	11.3	50.3	60	22.6	25	89.6	90
MHK20P	240	20	-	-	-	-	-	-	
	208	15	-	-	-	-	-	-	
MPH361M414A-2	MHK05P	240	5	31.2	35	-	-	49.5	50
		208	3.8	27.7	30	-	-	46.0	50
	MHK07P	240	7.5	44.2	45	-	-	62.5	70
		208	5.6	39.0	40	-	-	57.3	60
	MHK10P	240	10	57.2	60	-	-	75.5	80
		208	7.5	50.3	60	-	-	68.6	70
	MHK15P	240	15	57.2	60	26.0	30	101.5	110
		208	11.3	50.3	60	22.6	25	91.1	100
MHK20P	240	20	-	-	-	-	-	-	
	208	15	-	-	-	-	-	-	
MPH421M414A-2	MHK05P	240	5	33.5	35	-	-	53.8	60
		208	3.8	30.1	35	-	-	50.3	60
	MHK07P	240	7.5	46.6	50	-	-	66.8	70
		208	5.6	41.4	45	-	-	61.6	70
	MHK10P	240	10	59.6	60	-	-	79.9	80
		208	7.5	52.6	60	-	-	72.9	80
	MHK15P	240	15	59.6	60	26.0	30	105.9	110
		208	11.3	52.6	60	22.6	25	95.5	100
MHK20P	240	20	59.6	60	52.1	60	131.9	150	
	208	15	52.6	60	45.1	50	118.0	125	

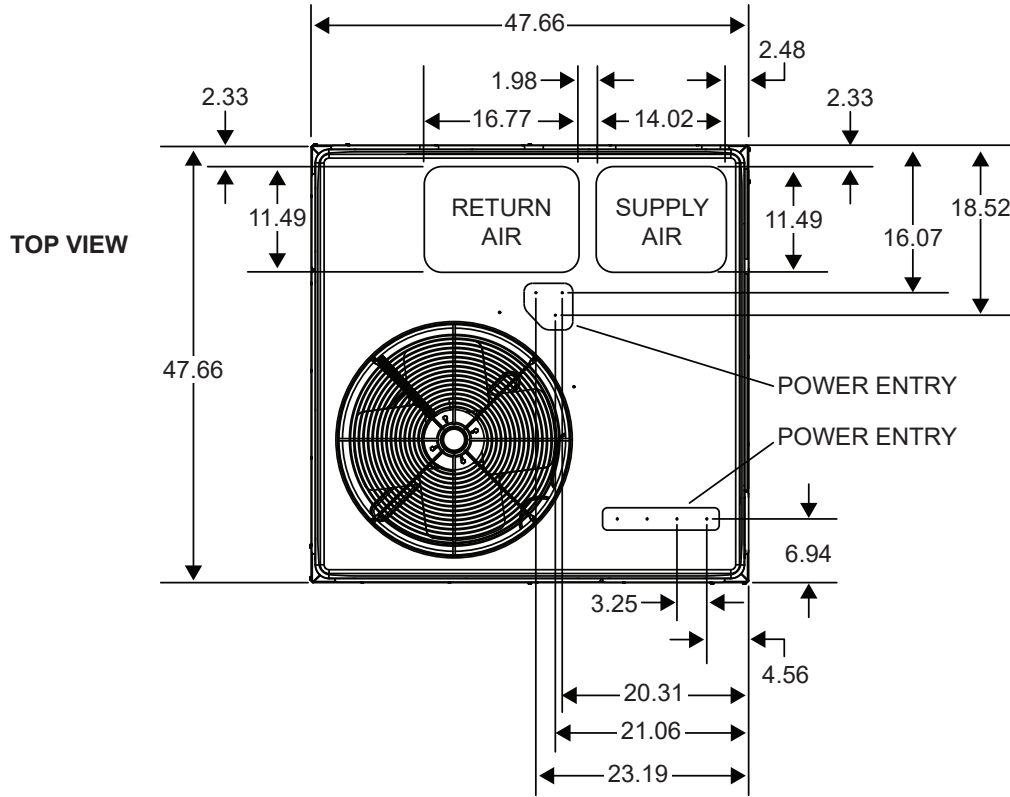
**HEAT STRIP ELECTRICAL**

Model	Heater Model	Unit Supply Voltage Single Phase	Input kW 240V	Circuit 1 240V		Circuit 2 240V		Single Circuit 240V	
				Ampacity	Breaker	Ampacity	Breaker	Ampacity	Breaker
MPH481M414A-2	MHK05P	240	5	33.5	35	-	-	54.8	60
		208	3.8	30.1	35	-	-	51.3	60
	MHK07P	240	7.5	46.6	50	-	-	67.8	70
		208	5.6	41.4	45	-	-	62.6	70
	MHK10P	240	10	59.6	60	-	-	80.8	90
		208	7.5	52.6	60	-	-	73.9	80
	MHK15P	240	15	59.6	60	26.0	30	106.9	110
		208	11.3	52.6	60	22.6	25	96.4	100
MHK20P	240	20	59.6	60	52.1	60	132.9	150	
	208	15	52.6	60	45.1	50	119.0	125	
MPH601M414A-2	MHK05P	240	5	35.5	40	-	-	63.2	80
		208	3.8	32.1	35	-	-	59.7	80
	MHK07P	240	7.5	48.6	50	-	-	76.2	90
		208	5.6	43.4	45	-	-	71.0	80
	MHK10P	240	10	61.6	70	-	-	89.2	100
		208	7.5	54.6	60	-	-	82.3	90
	MHK15P	240	15	61.6	70	26.0	30	115.3	125
		208	11.3	54.6	60	22.6	25	104.9	110
MHK20P	240	20	61.6	70	52.1	60	141.3	150	
	208	15	54.6	60	45.1	50	127.4	150	

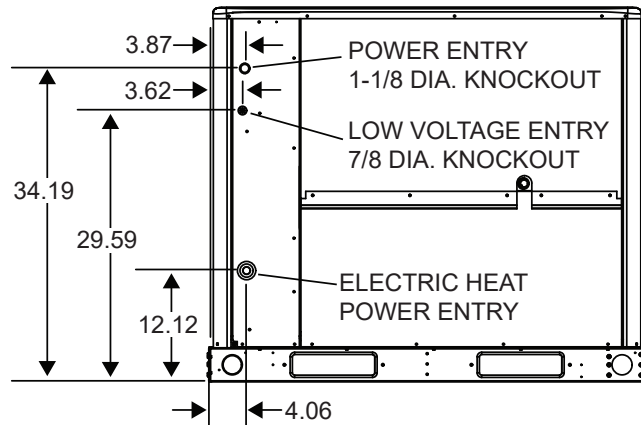
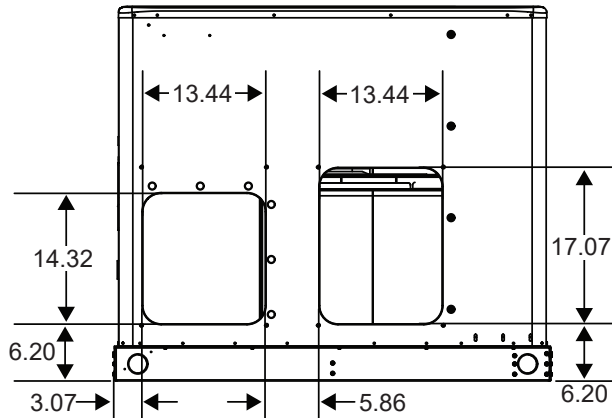
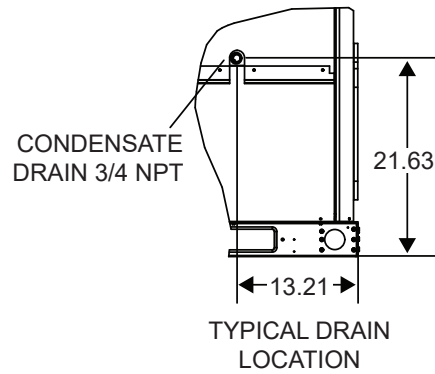
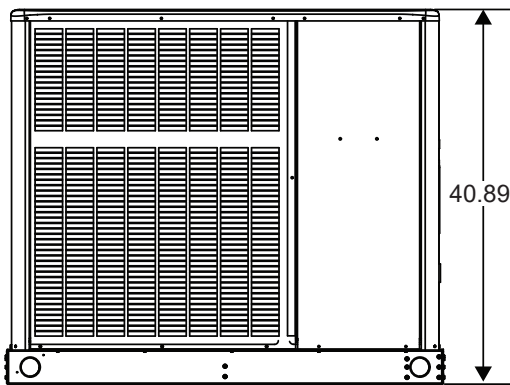
**HEATING PERFORMANCE EXT. RATINGS**

Model	Outdoor Temp. DB/WB deg. F									
	0/0		17/15		35/33		47/43		62/56	
	Btuh	KW	Btuh	KW	Btuh	KW	Btuh	KW	Btuh	KW
MPH241M414A-2	7000	1.55	12300	1.60	17900	1.68	22000	1.71	27800	1.75
MPH301M414A-2	9900	1.92	15900	2.00	22200	2.10	27300	2.16	33000	2.23
MPH361M414A-2	19000	2.10	23800	2.40	28900	2.72	32300	2.93	36600	3.2
MPH421M414A-2	13600	2.88	23500	3.03	33900	3.19	40900	3.29	49600	3.42
MPH481M414A-2	15300	3.18	26300	3.35	57900	3.56	45700	3.66	55400	3.82
MPH601M414A-2	20100	3.89	33700	4.10	48100	4.51	57000	4.78	67400	4.88

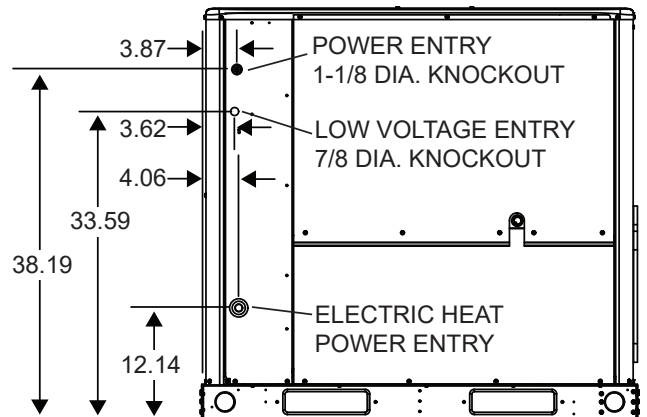
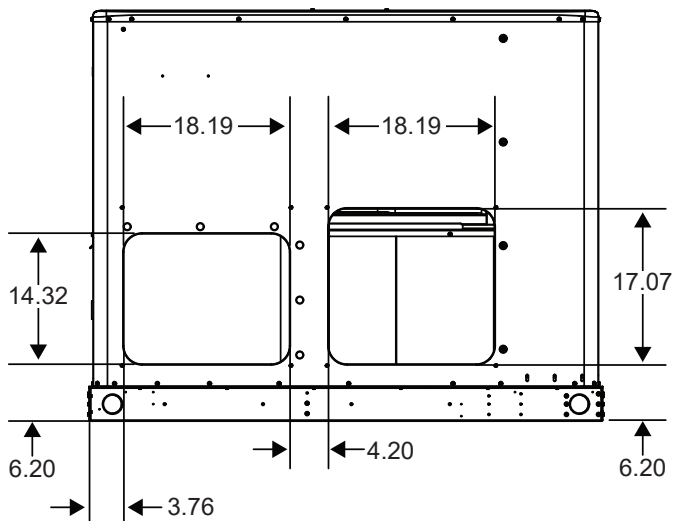
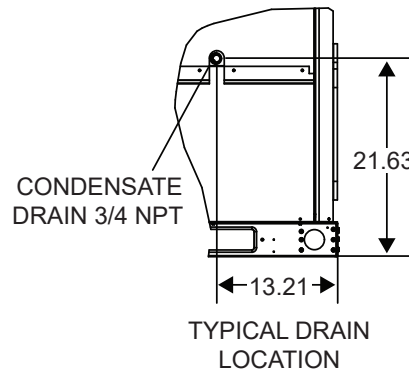
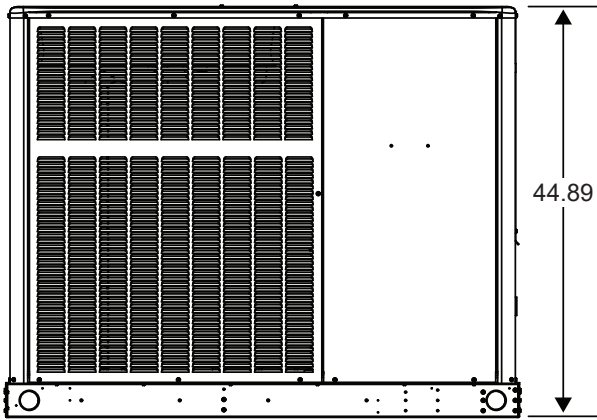
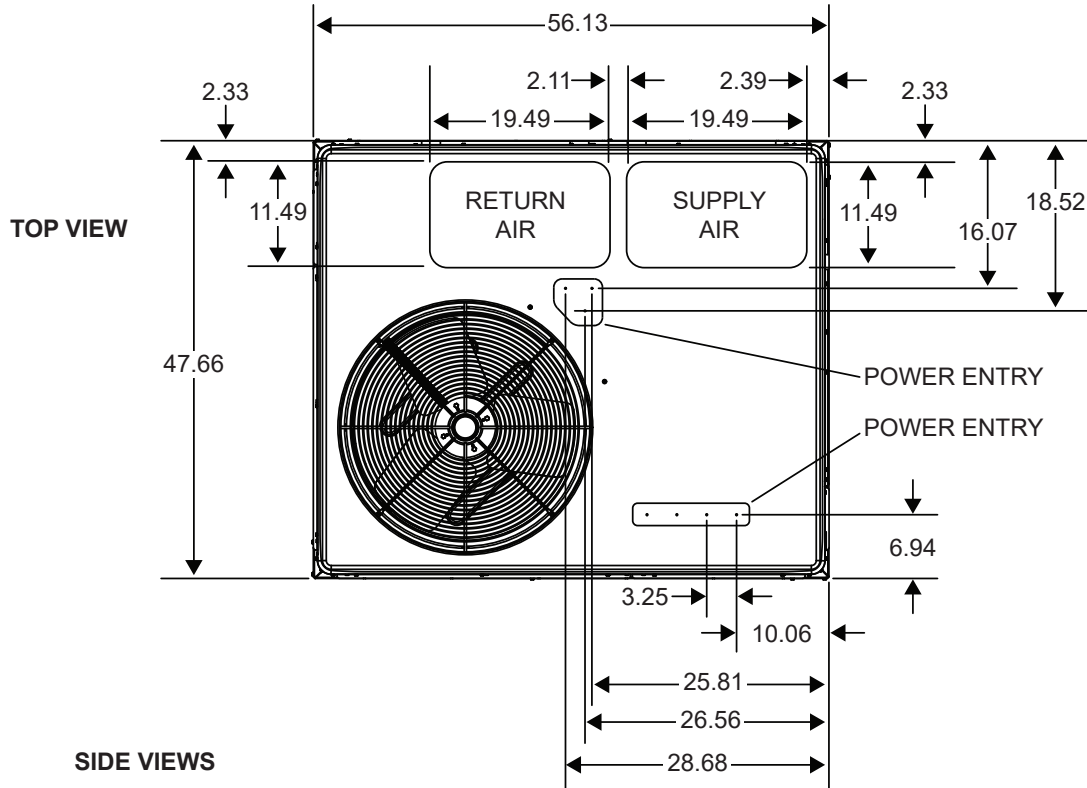
**DIMENSIONS (IN.) - SMALL BASE**



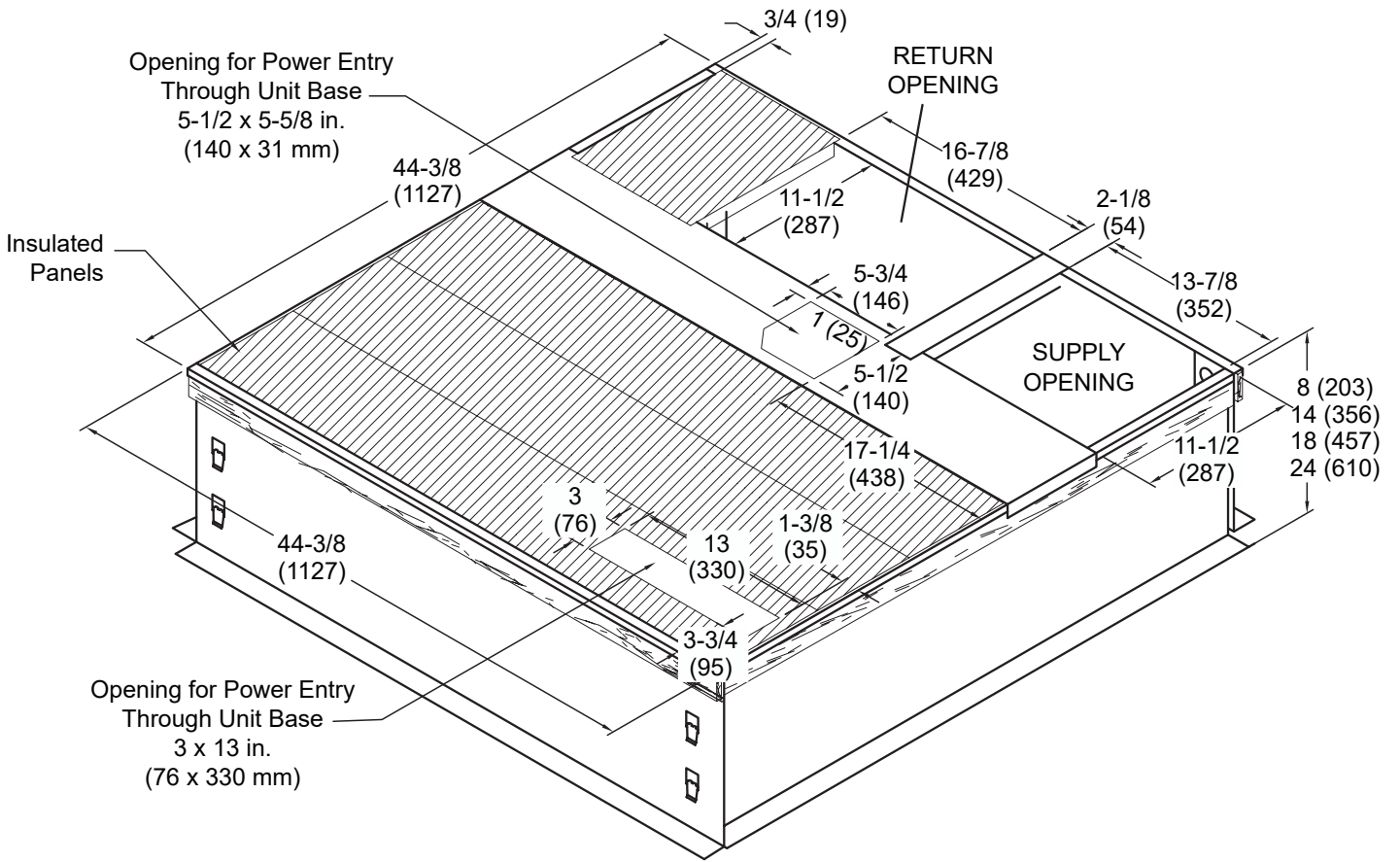
**SIDE VIEWS**



**DIMENSIONS (IN.) - LARGE BASE**



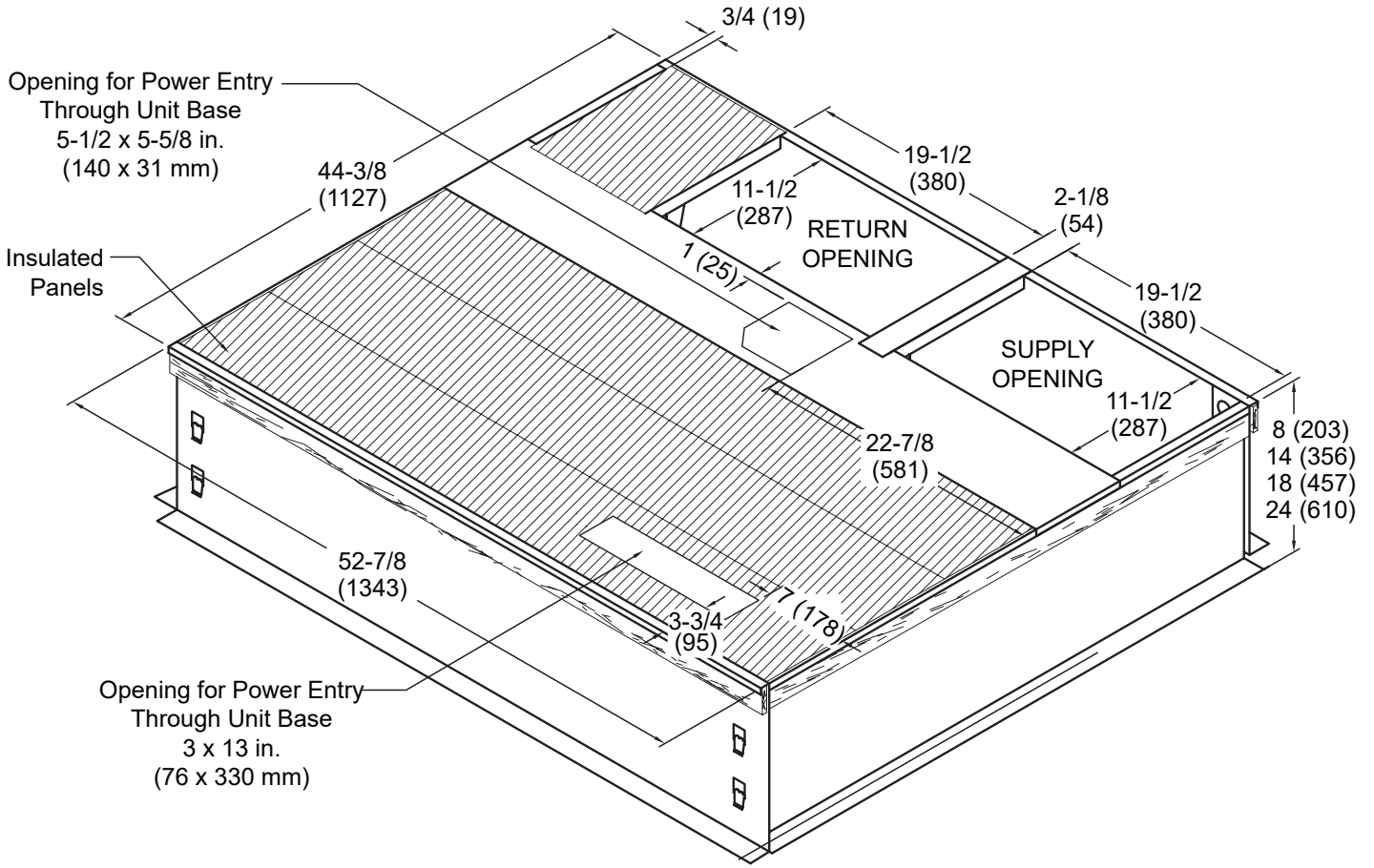
**ROOF CURB DIMENSIONS - SMALL BASE**



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

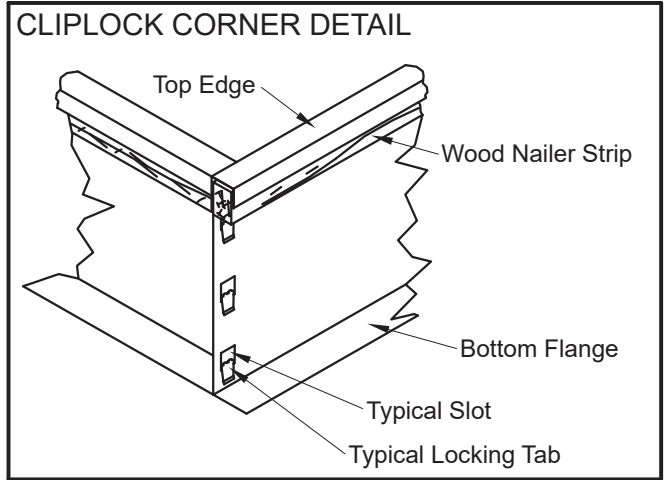


**ROOF CURB DIMENSIONS - LARGE BASE**

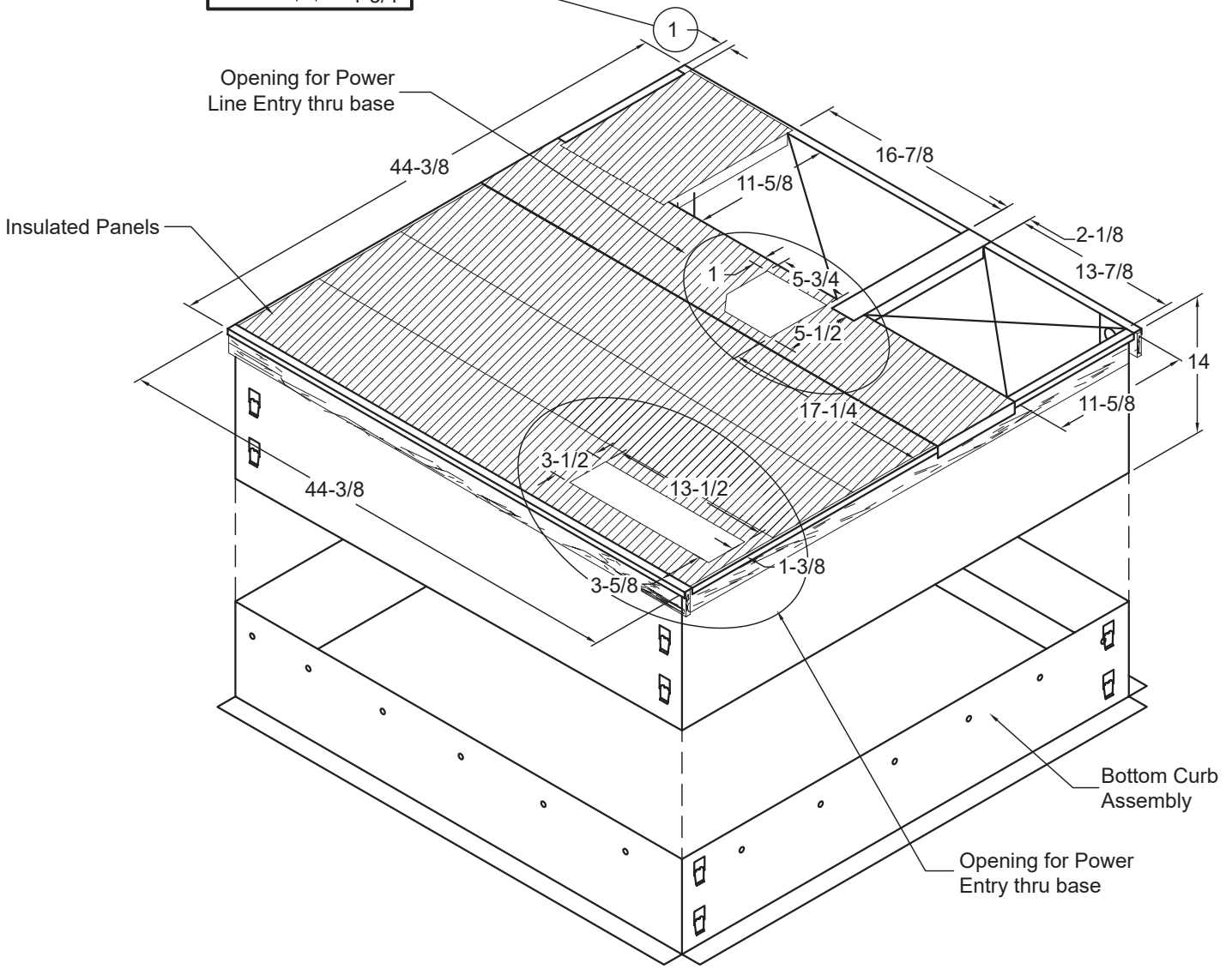
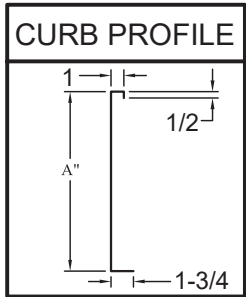


NOTE - Roof deck may be omitted within confines of curb.

**ADJUSTABLE CURB DIMENSIONS - SMALL BASE**

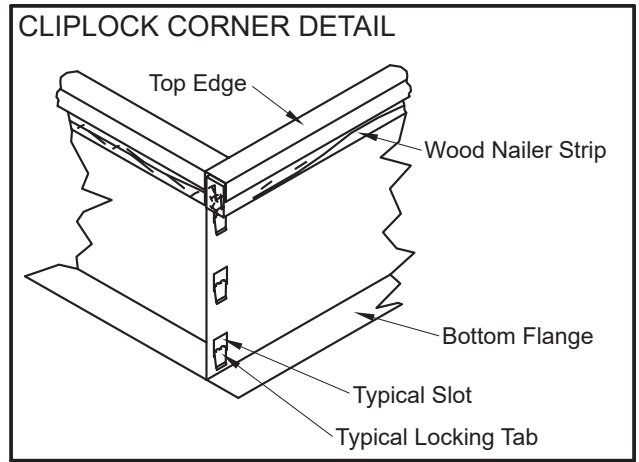


NOTE: See Cliplock 1000 installation instructions for complete assembly and installation procedures and requirements.

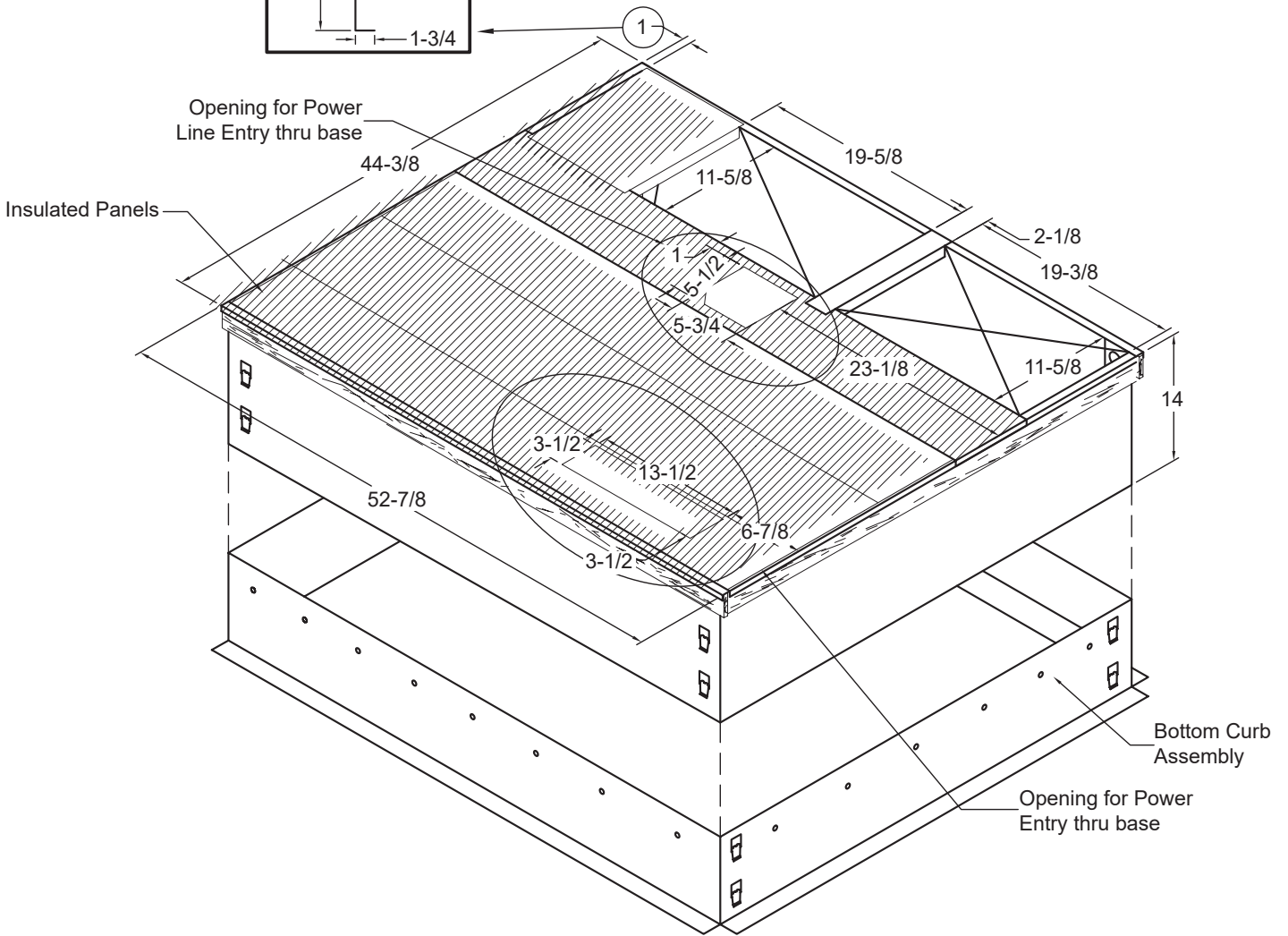
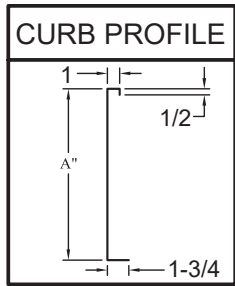


NOTE - Roof deck may be omitted within confines of curb.

ADJUSTABLE CURB DIMENSIONS - LARGE BASE



NOTE: See Cliplock 1000 installation instructions for complete assembly and installation procedures and requirements.



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

**ACCESSORIES**

Description	Where Used	Kit Number
Electric Heater 5KW	All	MHK05P
Electric Heater 7.5KW	All	MHK07P
Electric Heater 10KW	All	MHK10P
Electric Heater 15KW	30, 36, 42, 48, 60	MHK15P
Electric Heater 20KW	42, 48, 60	MHK20P



For MRCOOL customer service or tech support please call: 1-(270)-366-0457

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