

AHP250

Commercial Heat Pump Water Heating Systems

AIR SOURCE HEAT PUMP



DESIGNED ★ ENGINEERED ★ ASSEMBLED

USA



AHP250

Specifications



Operating Conditions	Model Number	AHP250		
	Recovery Rate [†]	340 Gal/hr		
	Compressor Type	Reciprocating		
	Refrigerant	R134a		
	Max Water Temperature	160° F		
	Ambient Operating Range (CWP)	40° F - 120° F (35°F-120°F)		
	Min Ambient Exposure	(CWP) 33° F (-13° F)		
	Max Working Water Pressure ^{††}	150 psig		
Multi-Pass Unit Sizing	Water Connections		2" FPT Copper	
	Water Flow Rate		33GPM	
	Condenser Pressure Drop ^{†††}		18.9 ft Head	
	External Head Pressure Allowed by Unit ^{††††}		6.1 ft Head	
Single-Pass Unit Sizing	Water Connections		1½" FPT Copper	
	Average Water Flow Rate		25 GPM	
	Condenser Pressure Drop ^{†††}		15.1 ft Head	
	External Head Pressure Allowed by Unit ^{††††}		17.4 ft Head	
Unit Specifications	Air Flow Rate		8,000 CFM	
	Dry Weight		2,100 lbs	
	Operating Weight		2,175 lbs	
	Model	Dimensions (L x W x H)	Standard Sound Rating	
		84½" x 54 ¾" x 70"	64 dB (Axial)/77.5 db (Blower)	
Power Requirements		Axial Fan		Blower Fan
Voltage		208-230/3/60	440-480/3/60	208-230/3/60 440-480/3/60
Compressor LRA		262	218	262 218
Total RLA (Compressor + Fan)		82.7	41.5	91.1 45.7
Wire & Disconnect Sizing ^{†††}	MCA	102	51	111 56
	MOCP	177	88	185 93
Heating Elements FLA		40.2	22.6	40.2 22.6

[†] Water heated from 50° F to 150° F with 75° F entering air temperature and 60 % relative humidity

^{††} 150 psi on dhw side w/integrated pump, 250 psi on dhw side w/out integrated pump.

^{†††} Single point electric service.

^{††††} Pressure drop for external pump applications at design flow rates.

^{†††††} Pressure drop allowed by integral circulator for external piping.

Legend

CWP: Cold Weather Package

LRA: Locked Rotor Amps

RLA: Rated Load Amps

MCA: Maximum Current Ampacity (used for wire sizing)

MOCP: Minimum Overcurrent Protection (minimum disconnect size to be used)

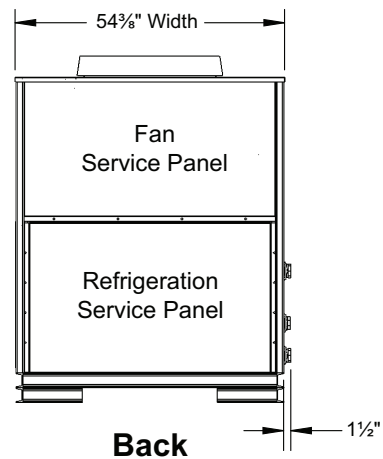
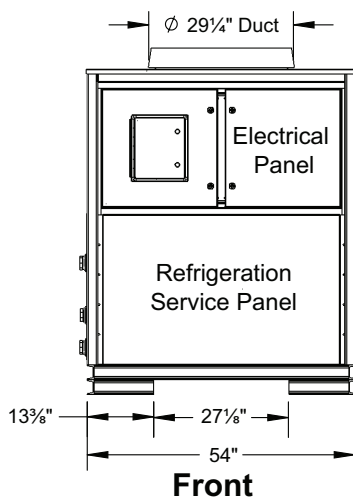
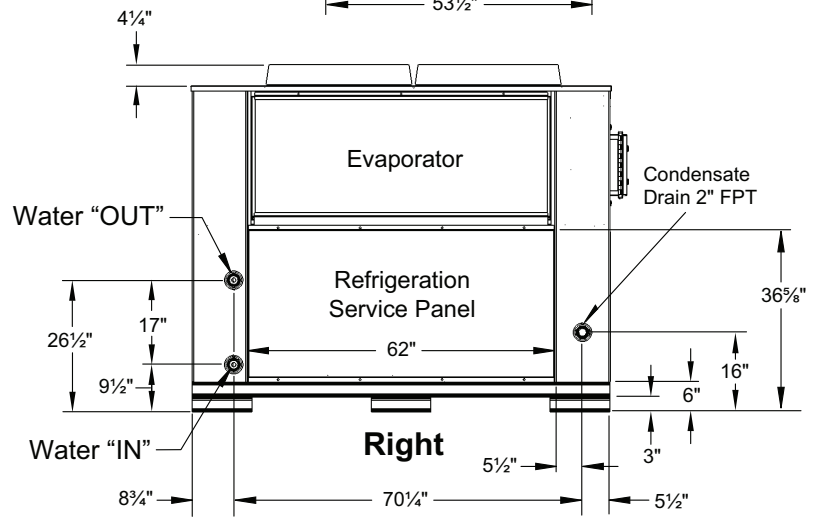
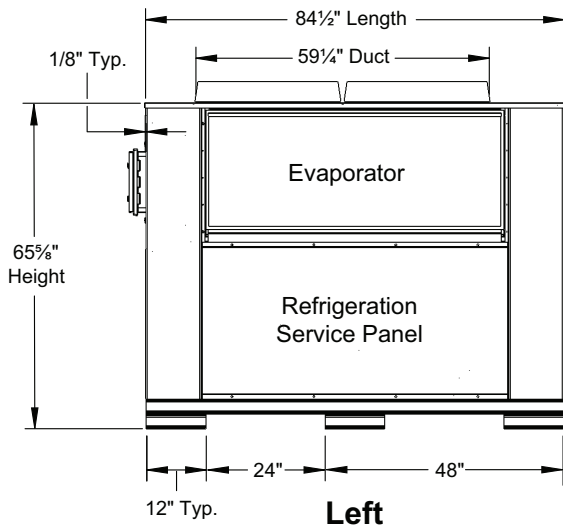
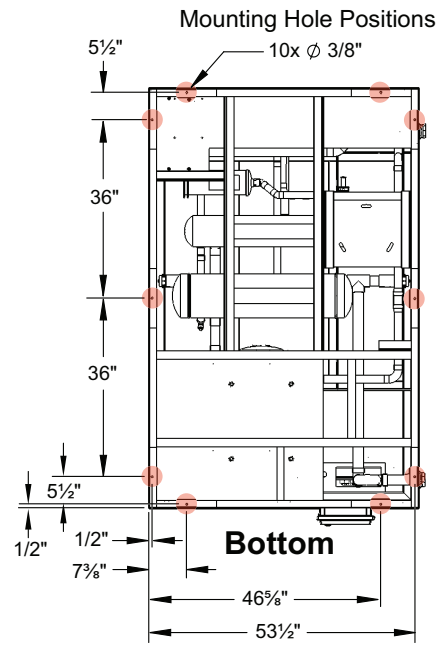
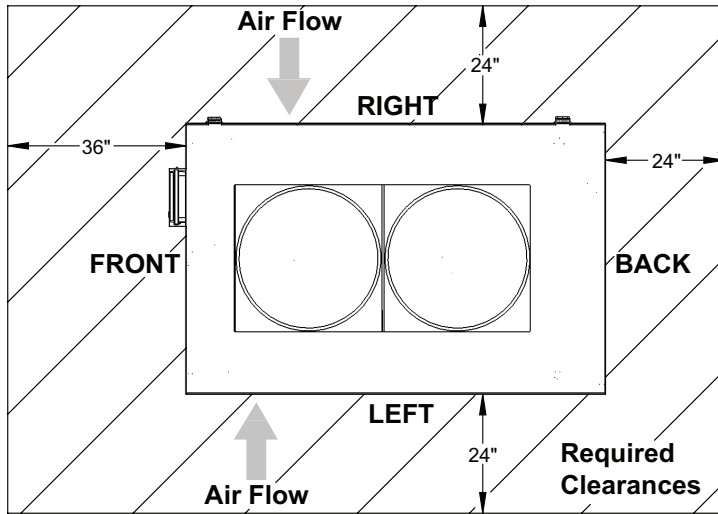
Performance Data

Entering Air Condition	Air Cooling Capacity (Btu/hr)	Entering Water Temp (°F)	Leaving Water Temp (°F)	Supply Heating Capacity (Btu/hr)	Axial Unit				Blower Unit			
					Power Input (kW)	Heating COP	Cooling COP	Combined COP	Power Input (kW)	Heating COP	Cooling COP	Combined COP
40°F 60% RH	169300	50	58	202000	11.56	5.1	4.3	9.4	13.39	4.4	3.7	8.1
	152700	60	68	187800	12.23	4.5	3.7	8.2	14.06	3.9	3.2	7.1
	141700	70	77	178900	12.87	4.1	3.2	7.3	14.70	3.6	2.8	6.4
	131300	80	87	170900	13.55	3.7	2.8	6.5	15.38	3.3	2.5	5.8
	122000	90	97	163600	14.14	3.4	2.5	5.9	16.14	3.0	2.2	5.2
	112400	100	106	155400	14.58	3.1	2.3	5.4	16.41	2.8	2.0	4.8
	105800	110	116	150500	14.65	3.0	2.1	5.1	16.48	2.7	1.9	4.6
	89700	120	125	133700	14.85	2.6	1.8	4.4	16.68	2.3	1.6	3.9
	80493	130	135	128079	15.74	2.4	1.5	3.9	16.78	2.2	1.4	3.4
50°F 60% RH	69911	140	145	119240	16.23	2.2	1.3	3.4	16.79	2.1	1.2	3.2
	196200	50	59	231500	12.14	5.6	4.7	10.3	13.97	4.9	4.1	9.0
	185600	60	69	223400	13.04	5.0	4.2	9.2	14.87	4.4	3.7	8.1
	172800	70	79	213700	14.18	4.4	3.6	8.0	16.01	3.9	3.2	7.1
	163400	80	88	207000	14.76	4.1	3.2	7.4	16.59	3.7	2.9	6.5
	152300	90	98	199300	15.82	3.7	2.8	6.5	17.65	3.3	2.5	5.8
	134200	100	108	183600	16.05	3.4	2.5	5.8	17.88	3.0	2.2	5.2
	127000	110	117	177600	16.81	3.1	2.2	5.3	18.64	2.8	2.0	4.8
	113600	120	127	165100	17.06	2.8	2.0	4.8	18.89	2.6	1.8	4.3
60°F 60% RH	102168	130	136	157732	18.20	2.5	1.6	4.2	18.94	2.4	1.6	3.7
	90286	140	146	148306	18.91	2.3	1.4	3.7	18.99	2.3	1.4	3.5
	234400	50	61	270800	12.61	6.3	5.4	11.7	14.44	5.5	4.8	10.3
	218400	60	70	258300	13.76	5.5	4.7	10.2	15.59	4.9	4.1	9.0
	207000	70	80	250300	14.66	5.0	4.1	9.1	16.49	4.4	3.7	8.1
	191500	80	100	239400	15.97	4.4	3.5	7.9	17.80	3.9	3.2	7.1
	188000	90	109	230100	16.99	4.0	3.2	7.2	18.82	3.6	2.9	6.5
	169200	100	107	223200	17.79	3.7	2.8	6.5	19.62	3.3	2.5	5.9
	154700	110	119	211200	18.51	3.3	2.4	5.8	20.34	3.0	2.2	5.3
70°F 60% RH	133000	120	128	197300	19.35	3.0	2.0	5.0	21.18	2.7	1.8	4.6
	125675	130	137	191686	20.56	2.7	1.8	4.5	21.5	2.6	1.7	4.1
	112042	140	147	181788	21.53	2.5	1.5	4.0	21.7	2.5	1.5	3.7
	275900	50	63	313600	13.00	7.1	6.2	13.3	14.83	6.2	5.5	11.7
	262000	60	72	303700	14.17	6.3	5.4	11.7	16.00	5.6	4.8	10.4
	247800	70	82	294200	15.55	5.5	4.7	10.2	17.38	5.0	4.2	9.1
	234400	80	92	285600	16.95	4.9	4.1	9.0	18.78	4.5	3.7	8.1
	220100	90	101	275900	18.31	4.4	3.5	7.9	20.15	4.0	3.2	7.2
	205800	100	111	265600	19.46	4.0	3.1	7.1	21.29	3.7	2.8	6.5
80°F 60% RH	185800	110	120	249300	20.57	3.6	2.6	6.2	22.40	3.3	2.4	5.7
	168600	120	130	235900	21.69	3.2	2.3	5.5	23.52	2.9	2.1	5.0
	156886	130	140	229150	23.14	2.9	2.0	4.9	24.14	2.8	1.9	4.5
	141738	140	149	218300	24.40	2.6	1.7	4.3	24.39	2.6	1.7	4.2
	326200	50	65	364100	12.51	8.5	7.6	16.2	14.34	7.4	6.7	14.1
	307400	60	74	352800	14.66	7.1	6.1	13.2	16.49	6.3	5.5	11.7
	294100	70	84	343200	16.35	6.2	5.3	11.4	18.18	5.5	4.7	10.3
	278700	80	93	333700	18.07	5.4	4.5	9.9	19.90	4.9	4.1	9.0
	264200	90	103	324500	19.61	4.8	3.9	8.8	21.44	4.4	3.6	8.0
90°F 60% RH	243900	100	113	310500	21.23	4.3	3.4	7.7	23.06	3.9	3.1	7.0
	223600	110	122	294000	22.58	3.8	2.9	6.7	24.41	3.5	2.7	6.2
	197700	120	131	272200	23.77	3.4	2.4	5.8	25.60	3.1	2.3	5.4
	187496	130	140	268414	25.81	3.0	2.1	5.2	25.86	3.0	2.1	5.1
	169835	140	150	255979	27.41	2.7	1.8	4.6	26.18	2.9	1.9	4.5
	338500	50	67	385100	11.86	9.5	8.4	17.9	13.69	8.2	7.2	15.5
	324200	60	76	369000	15.05	7.2	6.3	13.5	15.49	7.0	6.1	13.1
	308500	70	85	354800	16.83	6.2	5.4	11.6	17.47	6.0	5.2	11.1
	280100	80	95	341100	18.76	5.3	4.4	9.7	19.44	5.1	4.2	9.4
90°F 60% RH	260950	90	104	320500	20.40	4.6	3.7	8.4	21.33	4.4	3.6	8.0
	231500	100	113	306500	21.87	4.1	3.1	7.2	23.07	3.9	2.9	6.8
	208900	110	122	295300	23.14	3.7	2.6	6.4	24.57	3.5	2.5	6.0
	197700	120	131	272000	24.04	3.3	2.4	5.7	25.77	3.1	2.2	5.3
	182629	130	140	165761	26.63	2.9	2.0	4.9	26.24	3.0	2.0	5.0
	157707	140	150	246271	28.32	1.5	1.6	3.2	26.66	1.6	1.7	4.5

In view of ongoing product improvements, design and specification are subject to change without notice. Lochinvar Water Heating Systems can accept no responsibility for possible errors in catalogs, brochures or any other printed material.

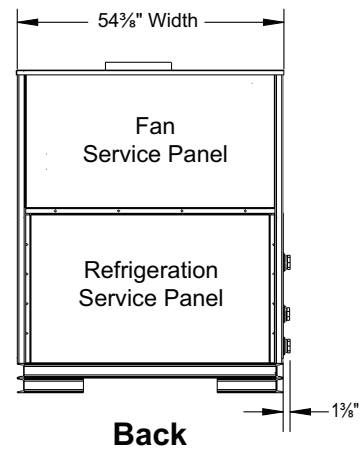
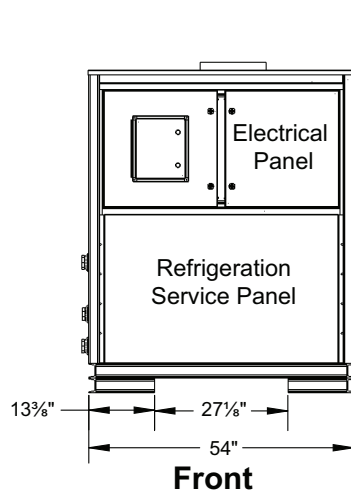
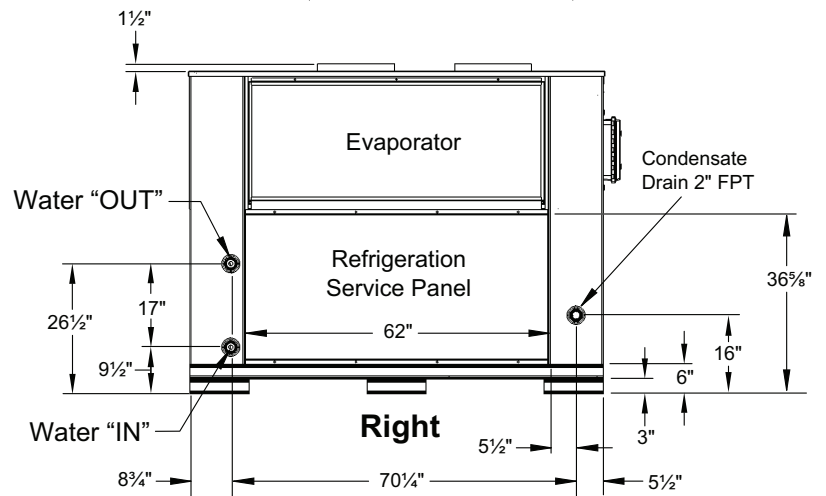
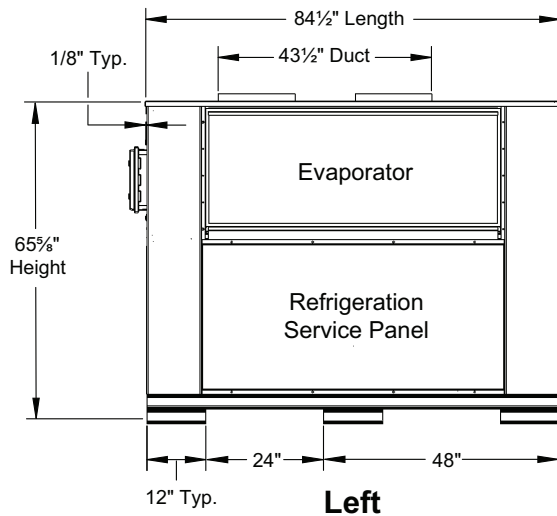
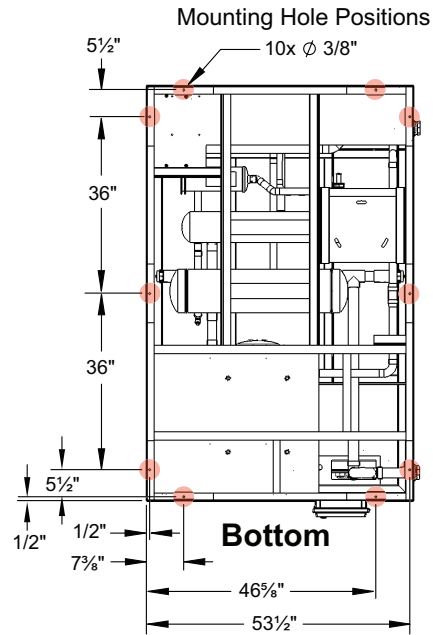
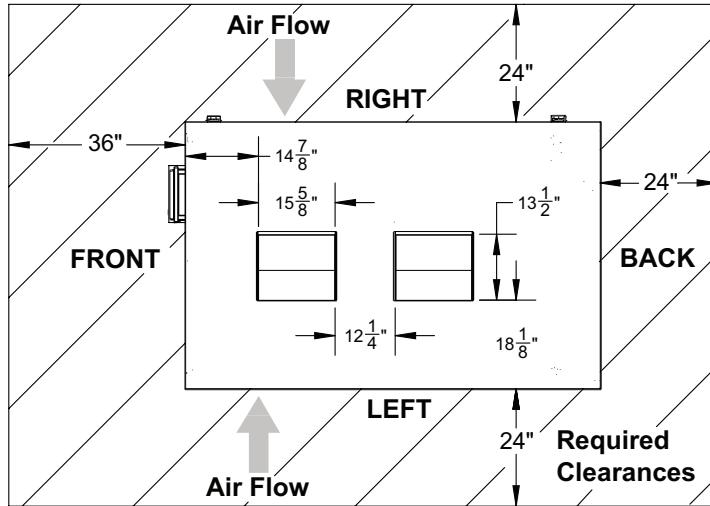
Axial Unit Dimensions

Note: All Tolerances +/- 1/8"



Blower Unit Dimensions

Note: All Tolerances +/- 1/8"



NOTE: 36" electrical service clearance per NEC 110.26(A)(1) Working Spaces for "Condition 1". Check with local codes for additional requirements.



AHP250-03 (replace AHP250-02 10/22)

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