

AHP125

Commercial Heat Pump Water Heating Systems

AIR SOURCE HEAT PUMP



DESIGNED ★ ENGINEERED ★ ASSEMBLED

USA



AHP125

Specifications

Operating Conditions	Model Number	AHP125
	Recovery Rate [†]	174 Gal/hr
	Compressor Type	Scroll
	Refrigerant	R134a
	Max Water Temperature	160° F
	Ambient Operating Range	40° F - 120° F
	Max Working Water Pressure	100 psig



Multi-Pass Unit Sizing	Water Connections				1½” FPT Copper				
	Water Flow Rate				28 GPM				
	Condenser Pressure Drop				14.37 ft Head				
	External Head Pressure Allowed by Unit				4.27 ft Head / 50 ft run of 1½” pipe				
Single-Pass Unit Sizing	Water Connections				1” FPT Copper				
	Average Water Flow Rate				12.5 GPM				
	Condenser Pressure Drop				3.79 ft Head				
	External Head Pressure Allowed by Unit				6.89 ft Head / 50 ft run of 1” pipe				
Unit Specifications	Air Flow Rate				4,500 CFM				
	Dry Weight				1,200 lbs				
	Operating Weight				1,240 lbs				
	Model		Dimensions (L x W x H)		Ext. Static Pressure (in H ₂ O)		Standard Sound Rating		
	Axial		84 ³ / ₈ " x 37 ³ / ₈ " x 36 ¹ / ₈ "		N/A		87 dB		
	Blower		84 ³ / ₈ " x 34 ³ / ₈ " x 36 ¹ / ₈ "		1.76		87 dB		
Power Requirements	Voltage	Compressor LRA	Total RLA ⁺⁺ (Compressor + Fan)		Wire and Disconnect Sizing ⁺⁺⁺				
					MCA		MCOP / MFS		
			Axial	Blower	Axial	Blower	Axial	Blower	
	208-230/3/60		300	56.3	61.4	69	74	70	80
	440-480/3/60		150	28.2	30.9	34	37	35	40
	575/3/60		109	24.7	26.8	30	32	35	35

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

†† Axial fan is standard, high-static blower is optional.

††† Single point electric service

Legend

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

Model	Entering Air Condition	Air Cooling Capacity (Btu/hr)	Entering Water Temp (°F)	Leaving Water Temp (°F)	Supply Heating Capacity (Btu/hr)	Power Input (kW)
AHP125 - Axial	40°F 60% RH	75400	50	57	92000	5.27
		74300	60	67	91700	5.49
		71600	70	76	90900	6.05
		68400	80	86	89900	6.7
		65200	90	96	89200	7.44
		61600	100	106	88500	8.29
		57500	110	116	88000	9.34
		53200	120	126	87700	10.5
		48600	130	136	87500	11.80
		45300	140	146	86400	12.02
	50°F 60% RH	90400	50	58	107600	5.75
		88500	60	68	106800	6.33
		85300	70	78	105500	7.06
		81800	80	87	104200	7.72
		78000	90	97	103000	8.57
		74100	100	107	102000	9.57
		69600	110	117	100900	10.7
		64800	120	127	100000	11.95
		59800	130	137	99200	11.95
		54300	140	147	98400	13.45
	60°F 60% RH	107000	50	59	124800	5.62
		104000	60	69	123200	6.03
		100000	70	79	121100	6.59
		96200	80	89	119600	7.26
		92000	90	98	117900	8
		87200	100	108	116100	8.88
		82200	110	118	114500	9.87
		77000	120	128	113200	11
		71400	130	138	112000	12.3
		65300	140	148	110900	13.75
	70°F 60% RH	127500	50	60	146200	5.88
		123000	60	70	143400	6.38
		118500	70	80	140800	6.94
		114000	80	90	138500	7.59
		109000	90	100	136100	8.34
		103500	100	110	133500	9.2
		98000	110	119	131400	10.18
		92000	120	129	129200	11.3
		85500	130	139	127100	12.6
		78700	140	149	125100	14
	80°F 60% RH	148500	50	62	169100	6.44
		145000	60	72	166700	6.76
		140000	70	82	163600	7.32
		134500	80	91	160300	7.97
		128500	90	101	156900	8.71
		122000	100	111	153300	9.56
		115500	110	121	150100	10.55
		108500	120	131	146900	11.65
		101500	130	140	144300	12.95
		93800	140	150	141500	14.35
	90°F 60% RH	167300	50	64	191200	7.38
		166500	60	74	190300	7.5
		160800	70	83	186500	7.71
		152400	80	93	178500	8.36
		140250	90	103	171500	9.07
		131400	100	112	167900	9.88
		120200	110	122	160800	10.8
		114000	120	131	152700	11.9
		110000	130	141	149500	13.1
		100000	140	151	146300	14.5

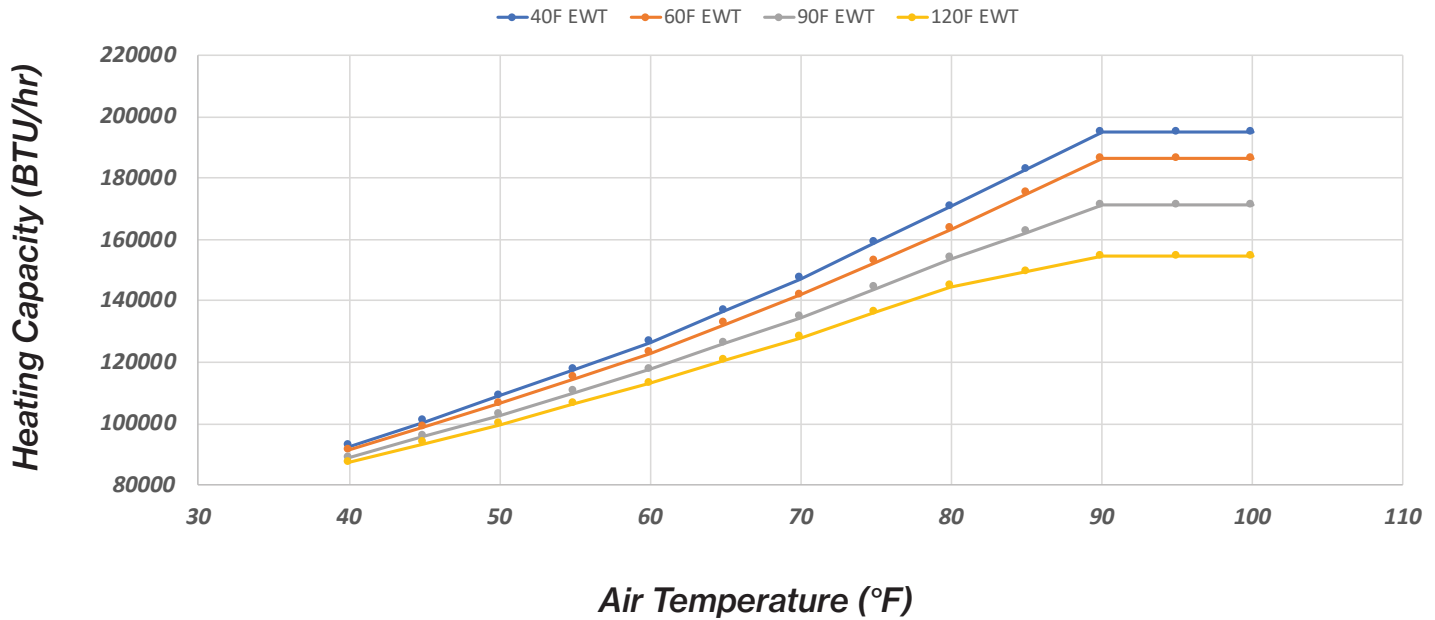
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Model	Entering Air Condition	Air Cooling Capacity (Btu/hr)	Entering Water Temp (°F)	Leaving Water Temp (°F)	Supply Heating Capacity (Btu/hr)	Power Input (kW)
AHP125 - Blower	40°F 60% RH	75400	50	57	92000	6.51
		74300	60	67	91700	6.73
		71600	70	76	90900	7.29
		68400	80	86	89900	7.94
		65200	90	96	89200	8.68
		61600	100	106	88500	9.53
		57500	110	116	88000	10.58
		53200	120	126	87700	11.74
		48600	130	136	87500	13.04
		45300	140	146	86400	14.30
	50°F 60% RH	90400	50	58	107600	6.68
		88500	60	68	106800	6.99
		85300	70	78	105500	7.57
		81800	80	87	104200	8.297
		78000	90	97	103000	8.96
		74100	100	107	102000	9.81
		69600	110	117	100900	10.81
		64800	120	127	100000	11.94
		59800	130	137	99200	13.19
		54300	140	147	98400	14.69
	60°F 60% RH	107000	50	59	124800	6.86
		104000	60	69	123200	7.27
		100000	70	79	121100	7.83
		96200	80	89	119600	8.5
		92000	90	98	117900	9.24
		87200	100	108	116100	10.12
		82200	110	118	114500	11.11
		77000	120	128	113200	12.24
		71400	130	138	112000	13.54
		65300	140	148	110900	14.99
	70°F 60% RH	127500	50	60	146200	7.12
		123000	60	70	143400	7.62
		118500	70	80	140800	8.18
		114000	80	90	138500	8.83
		109000	90	100	136100	9.58
		103500	100	110	133500	10.44
		98000	110	119	131400	11.42
		92000	120	129	129200	12.54
		85500	130	139	127100	13.84
		78700	140	149	125100	15.24
	80°F 60% RH	148500	50	62	169100	7.68
		145000	60	72	166700	8
		140000	70	82	163600	8.56
		134500	80	91	160300	9.21
		128500	90	101	156900	9.95
		122000	100	111	153300	10.8
		115500	110	121	150100	11.79
		108500	120	131	146900	12.89
		101500	130	140	144300	14.19
		93800	140	150	141500	15.59
	90°F 60% RH	167300	50	64	191200	8.62
		166500	60	74	190300	8.75
		160800	70	83	186500	8.95
		152400	80	93	178500	9.6
		140250	90	103	171500	10.31
		131400	100	112	167900	11.12
		120200	110	122	160800	12.04
		114000	120	131	152700	13.14
		110000	130	141	149500	14.34
		100000	140	151	146300	15.74

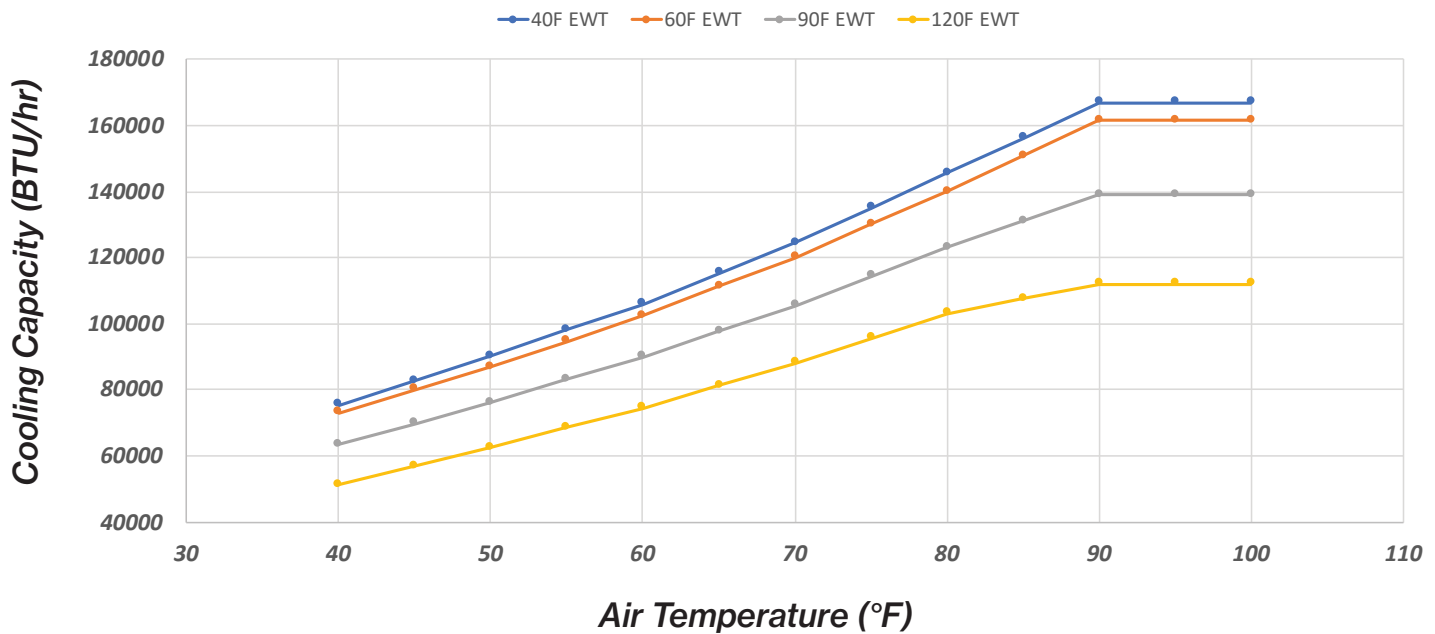
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Performance Graphs

Heating Capacity vs. Air Temperature



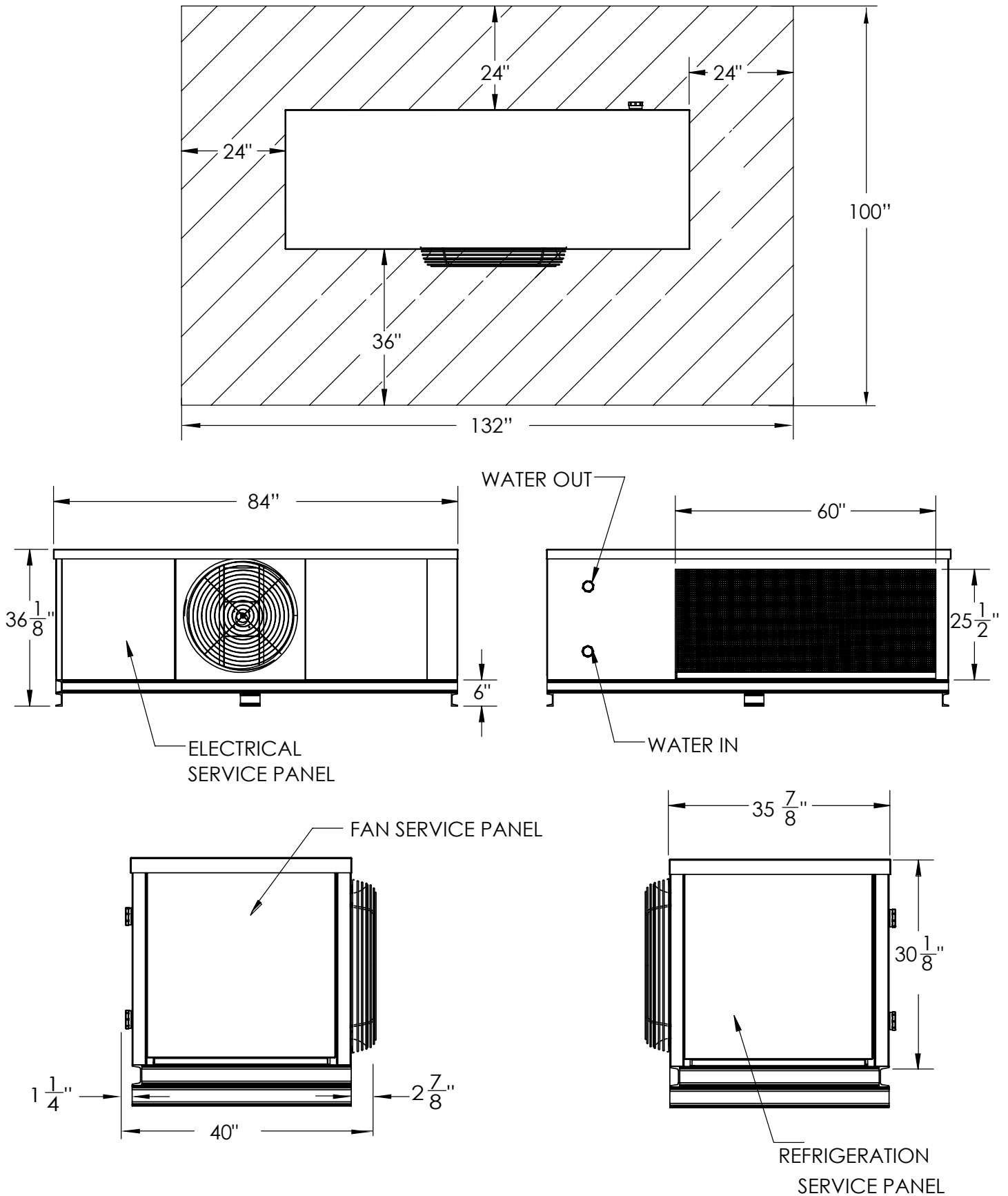
Cooling Capacity vs. Air Temperature



Water heated from 50°F to 150°F with 75°F dry bulb, 60% RH ambient air

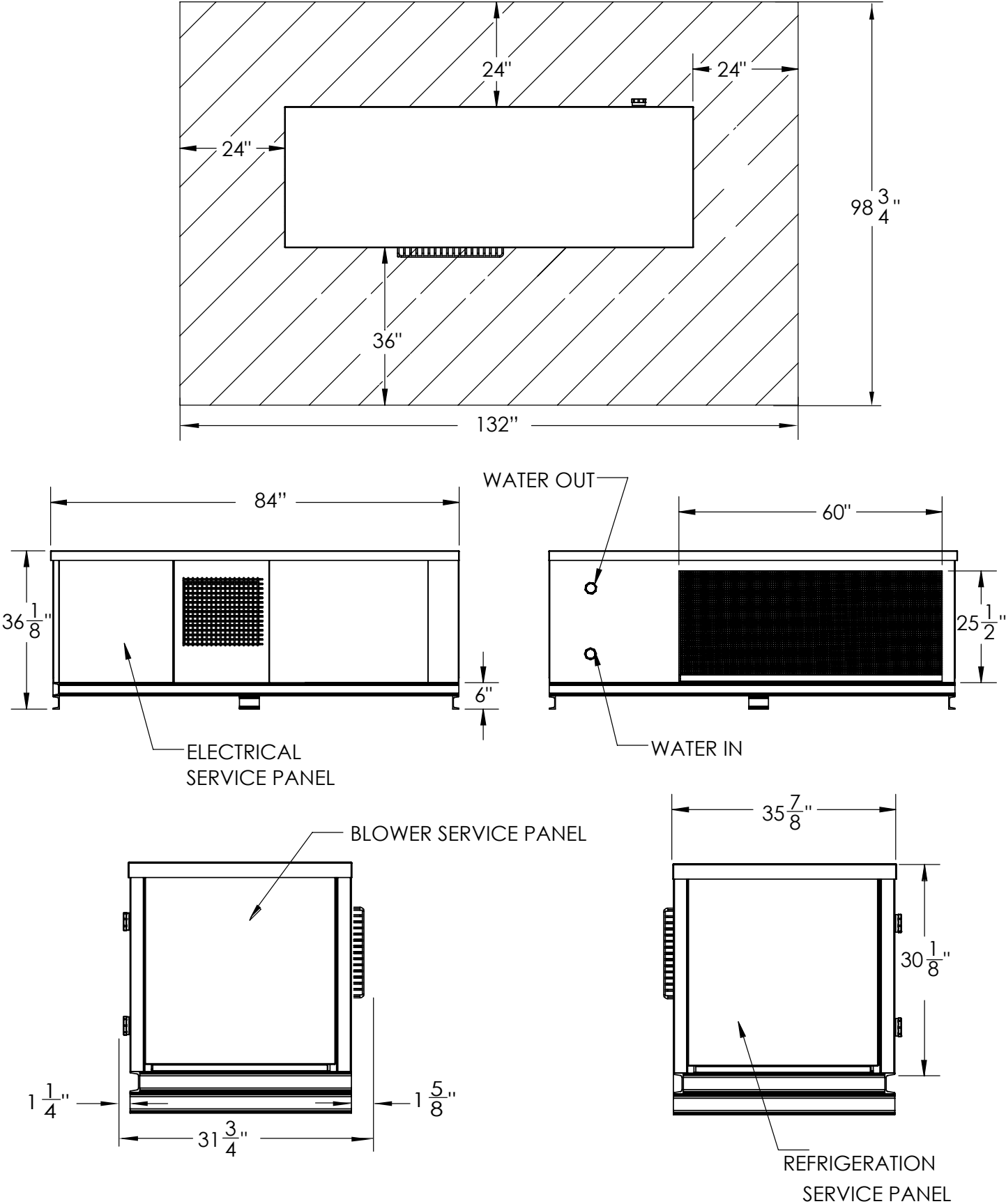
Dimensions

Axial Model



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

Blower Model



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



AHP125-01

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