

AHP185

Commercial Heat Pump Water Heating Systems

AIR SOURCE HEAT PUMP



DESIGNED ★ ENGINEERED ★ ASSEMBLED

USA



AHP185

Specifications

Operating Conditions	Model Number	AHP185
	Recovery Rate [†]	270 Gal/hr
	Compressor Type	Scroll
	Refrigerant	R134a
	Max Water Temperature	160° F
	Ambient Operating Range (CWP)	40° F - 120° F (35°F-120°F)
	Max Working Water Pressure ^{††}	150 psig



Multi-Pass Unit Sizing	Water Connections	2" FPT Copper
	Water Flow Rate	40 GPM
	Condenser Pressure Drop	15.73 ft Head
	External Head Pressure Allowed by Unit	2.04 ft Head / 50 ft run of 2" pipe

Single-Pass Unit Sizing	Water Connections	1½" FPT Copper
	Average Water Flow Rate	18.5 GPM
	Condenser Pressure Drop	3.60 ft Head
	External Head Pressure Allowed by Unit	14.24 ft Head / 50 ft run of 1" pipe

Unit Specifications	Air Flow Rate		4,500 CFM
	Dry Weight		1,350 lbs
	Operating Weight		1,410 lbs
	Model	Dimensions (L x W x H)	Standard Sound Rating
	Axial	72¾" x 45 ¼" x 43"	93 dB

Power Requirements		Standard Package			Cold Weather Package		
Voltage		208-230/3/60	440-480/3/60	575/3/60	208-230/3/60	440-480/3/60	575/3/60
Compressor LRA		505	225	180	505	225	180
Total RLA (Compressor + Fan)		81.3	36.5	30.5	81.3	36.5	30.5
Wire & Disconnect Sizing ^{†††}	MCA	100	45	37	160	75	63
	MOCP/MFS	110	50	40	175	45	70
Heating Elements FLA		N/A	N/A	N/A	50A	30A	25A

† 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 & 300 psi on source side.

††† Single point electric service

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)

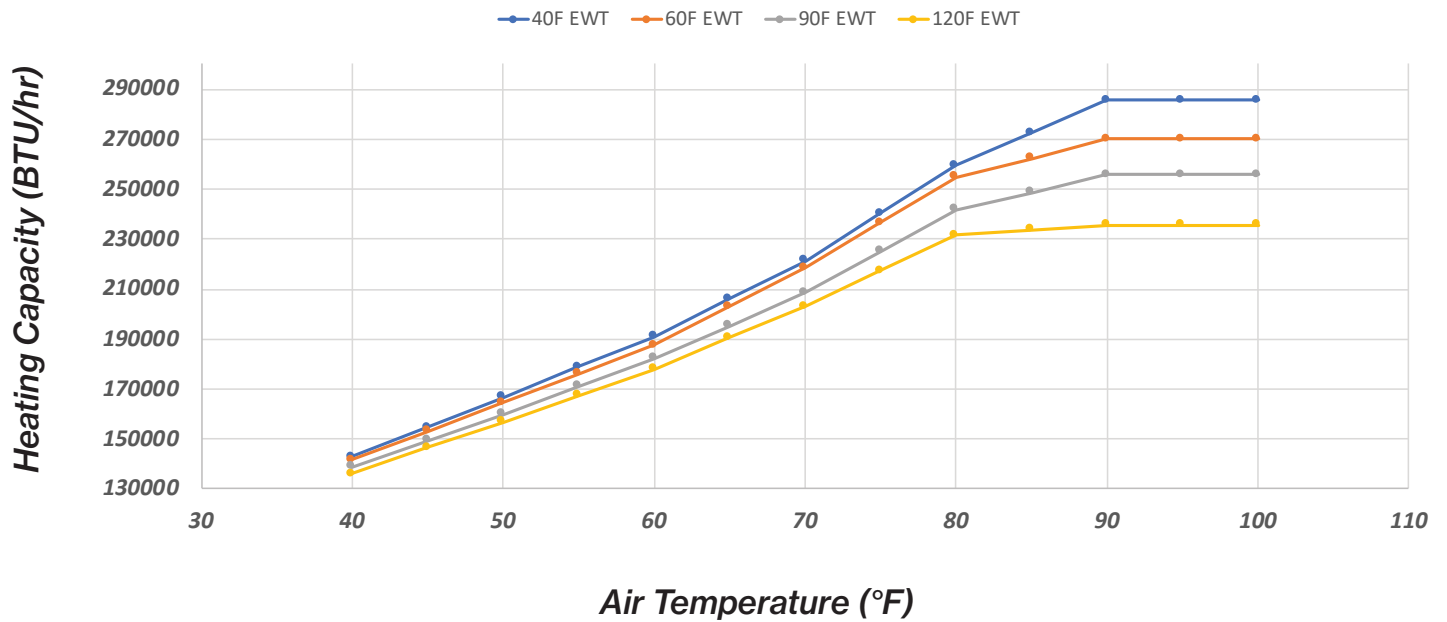
Performance Data

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)
AHP185- Axial	40°F 60% RH	113200	50	57	142500	8.15
		112000	60	67	141500	8.35
		109000	70	77	140500	8.9
		104000	80	87	139900	9.95
		99500	90	97	138800	11.1
		95500	100	107	138300	12.5
		90000	110	117	137500	13.9
		86500	120	127	136900	14.5
		83200	130	137	136400	15.80
		80100	140	147	135800	16.80
	50°F 60% RH	136600	50	58	165200	8.35
		132000	60	68	164500	8.5
		130000	70	78	163200	9.15
		125000	80	88	161800	10.2
		119000	90	98	159900	11.4
		113000	100	108	158300	12.7
		107000	110	118	158100	14.4
		100000	120	128	156900	15.5
		96500	130	138	157000	16.3
		93000	140	148	156200	17.5
	60°F 60% RH	160000	50	59	190200	8.6
		156000	60	69	188200	9
		152000	70	79	186400	9.5
		145000	80	89	184100	10.6
		140000	90	99	182200	11.8
		133000	100	109	181000	13.2
		126000	110	119	178800	14.8
		119000	120	129	177500	16.7
		114000	130	139	176800	17.8
		108000	140	149	176100	18.5
	70°F 60% RH	191000	50	61	220500	8.9
		186000	60	71	218500	9.2
		179000	70	81	214700	9.9
		171000	80	91	211500	11
		164000	90	101	208600	12.2
		157000	100	110	206400	13.6
		149000	110	120	203800	15.2
		142000	120	130	202400	17
		136000	130	140	201500	18.1
		131000	140	150	200100	19.4
	80°F 60% RH	221500	50	63	258200	9.1
		216000	60	73	254700	9.5
		207000	70	82	248500	10.4
		199000	80	92	245600	11.6
		194000	90	102	241656	12.8
		185000	100	112	237800	14.3
		176000	110	122	234600	16
		167000	120	132	231700	17.8
		159000	130	141	228500	18.8
		155000	140	151	224900	19.9
	90°F 60% RH	241000	50	64	275600	9.4
		234000	60	74	270000	9.7
		226000	70	83	266500	10.7
		217000	80	93	261000	11.8
		208000	90	103	255700	13.1
		195000	100	113	248400	14.5
		183000	110	122	241291	16.2
		170000	120	132	235700	18.1
		164000	130	142	232500	19.2
		159000	140	151	228600	20.3

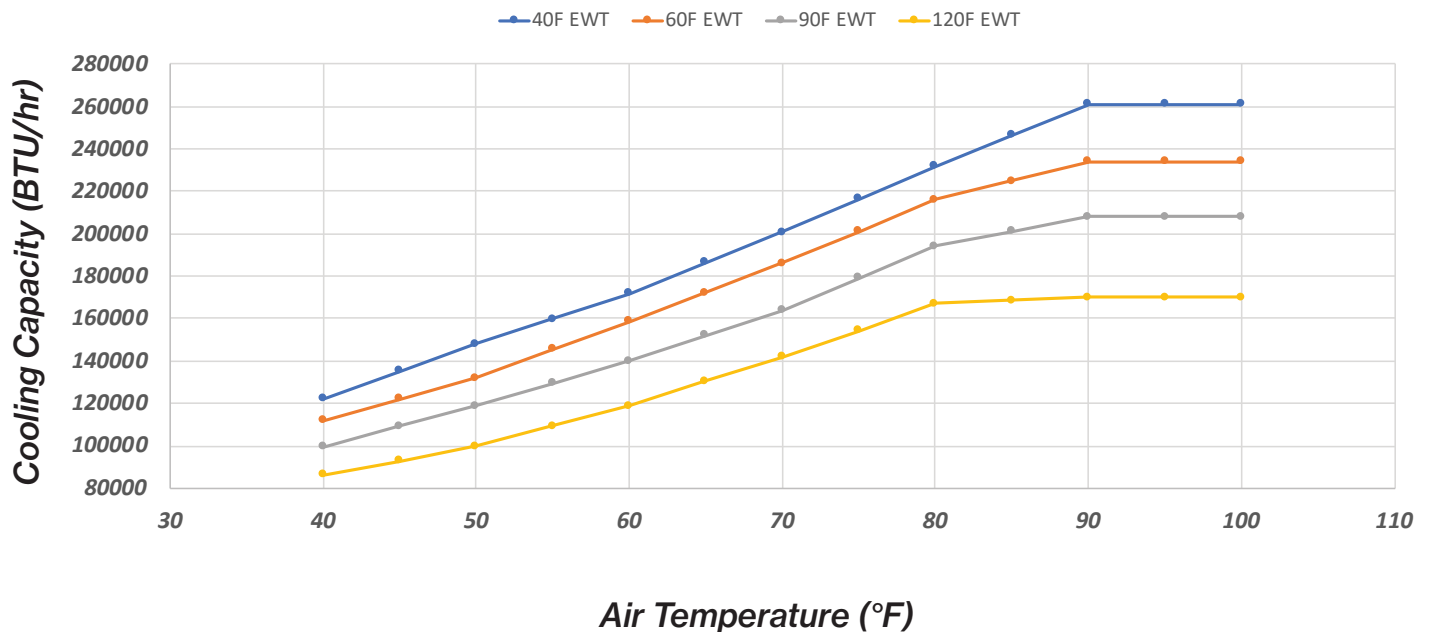
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Performance Graphs

Heating Capacity vs. Air Temperature



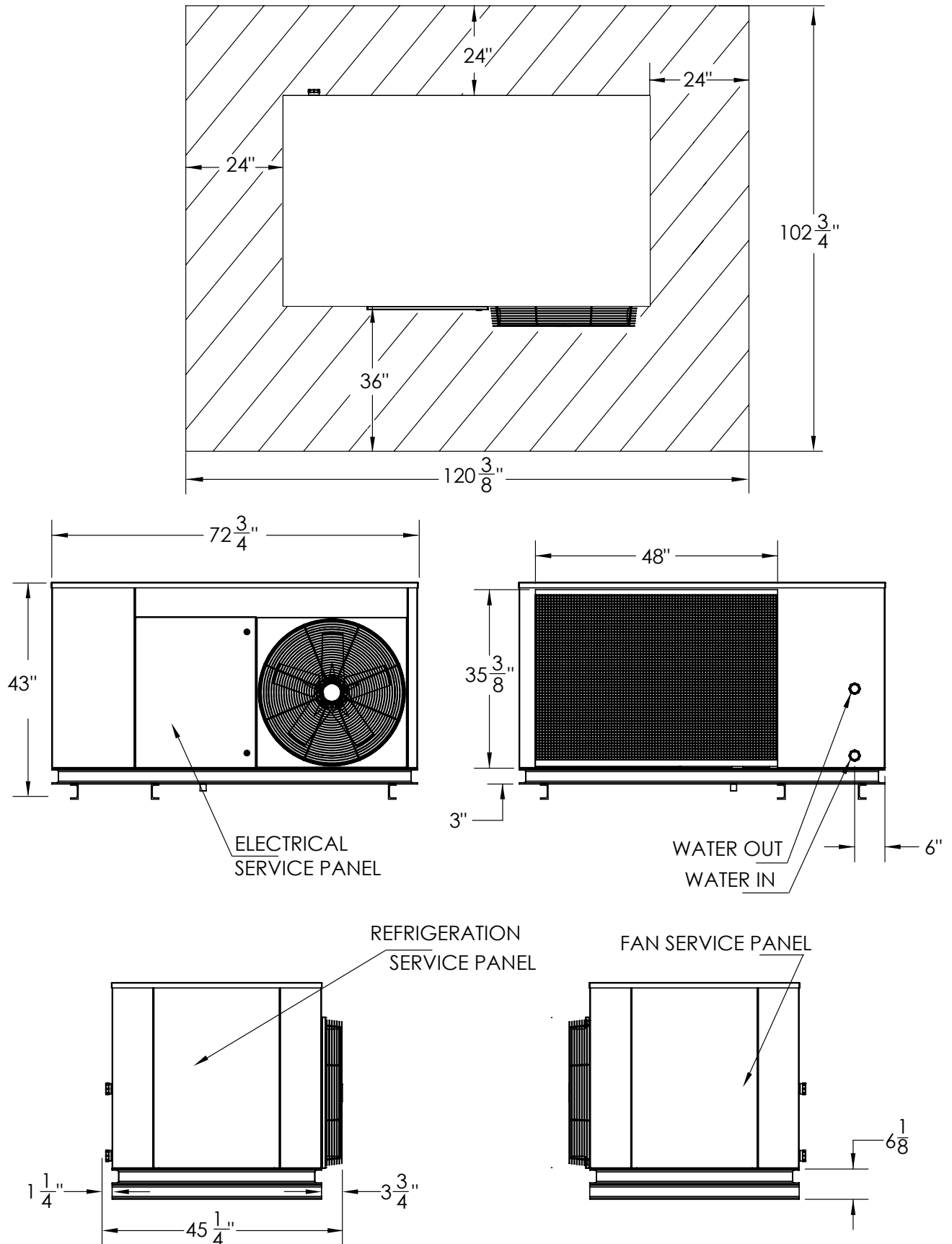
Cooling Capacity vs. Air Temperature



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.

NOTES: _____



AHP185-02 (replace AHP185-01 4-20)

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10/2022 Printed in U.S.A.