

MHP0810R

Commercial Heat Pump Water Heating Systems

MODULAR WATER SOURCE HEAT PUMP



DESIGNED ★ ENGINEERED ★ ASSEMBLED

USA



MHP0810R

Specifications

Operating Conditions	Model Number	MHP0810R
	Nominal DOE Capacity	836,400
	Nominal DOE Performance	4.1 COP
	Recovery Rate ¹	1,991 Gal/hr
	Compressor Type	Scroll
	Refrigerant	R513A
	Factory Charge	38.5 lbs. x 3
	Max Water Temperature	160° F
	Source Water Range	35° F - 120° F
	Min. Ambient Exposure	33° F
	Max Working Water Pressure	150 psig (DHW); 300 psig (Source)



Multi-Pass Unit Sizing	DHW & Source Water Connections			2" FPT x 6	
	DHW Condenser Flow Rate			108 GPM	
	DHW Water Circuit Condenser Pressure Drop ²			7.4 ft Head	
	DHW Water Circuit Cv Value ²			20	
	Source Evaporator Water Flow Rate			144 GPM	
	Source Water Circuit Pressure Drop			11.1 ft. Head	
	Source Water Circuit Cv Value			22	
	External Head Pressure Allowed by Unit			18.7 ft Head	
	Min Cold Cycle Volume ⁵			119 Gallons	
	Min. Warm Cycle Volume ⁶			334 Gallons	
	Min. Tank Recovery ⁷			835 Gallons	
Single-Pass Unit Sizing	DHW & Source Water Connections			2" FPT x 6	
	DHW Condenser Water Flow Rate			66 GPM	
	DHW Water Circuit Condenser Pressure Drop ²			16.9 ft Head	
	DHW Water Circuit Cv Value ²			8	
	Source Evaporator Water Flow Rate			144 GPM	
	Source Evaporator Pressure Drop			11.1 ft Head	
	Source Water Circuit Cv Value			22	
	DHW External Head Pressure Allowed by Unit			19.5 ft Head	
	Min. Cold Water Cycle Volume ⁵			119 Gallons	
Unit Specifications	Dry Weight			3,440 lbs	
	Operating Weight			3,559 lbs	
	Sound Pressure ⁴			TBD	
	Dimensions (L x D x H)			110 ⅛" x 39 ¼ " x 74 ¼"	
Power Requirements	Voltage	Compressor LRA	RLA Per Compressor	Wire and Disconnect Sizing	
				MCA	MOCP
	208-230/3/60	605	263	283	350
	440-480/3/60	272	133	143	175
	575/3/60	238	91	98	125

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

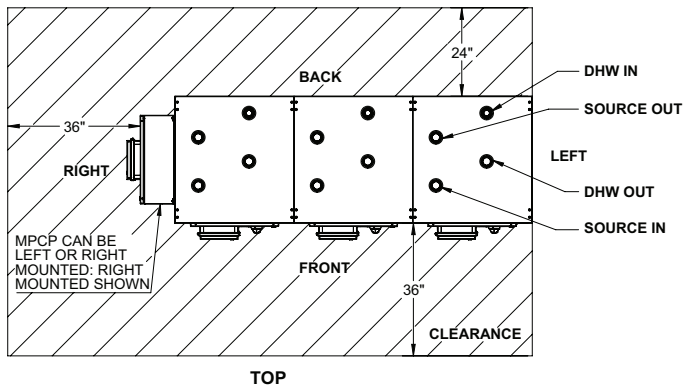
Performance Test Conditions: 50 EWT, 140 LWT, 100% Water Source Side

Entering Source Water Temp (°F)	Supply Heating Capacity (Btu/hr)	Source Cooling Capacity (Btu/hr)	Power Input (kW)	Heating COP	Cooling COP	Combined COP
90°F	841,200	610,890	67.5	3.7	2.7	6.3
80°F	760,900	535,708	66	3.4	2.4	5.8
70°F	680,700	460,626	64.5	3.1	2.1	5.2
60°F	601,900	388,479	62.6	2.8	1.8	4.6
50°F	523,200	316,433	60.6	2.5	1.5	4.1
40°F	456,600	261,092	57.3	2.3	1.3	3.7

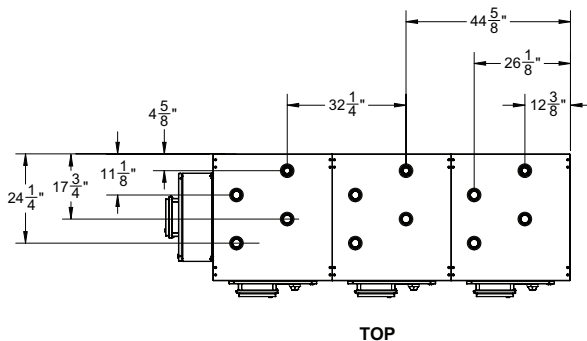
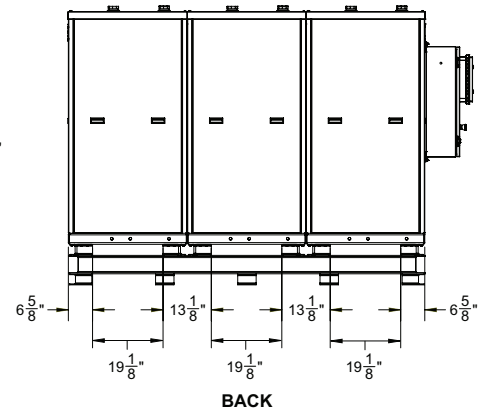
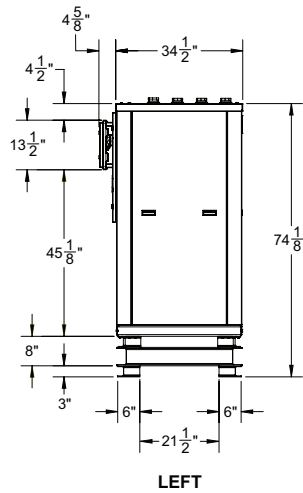
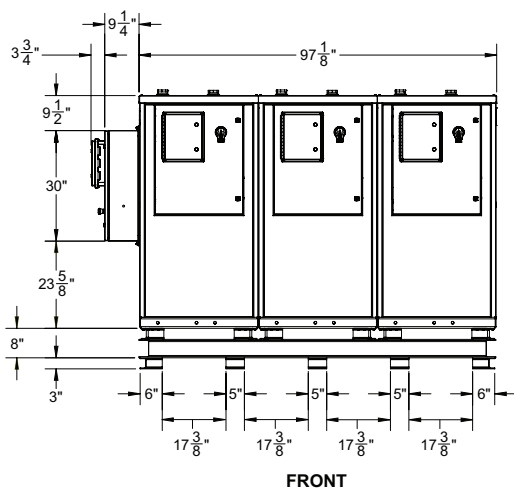
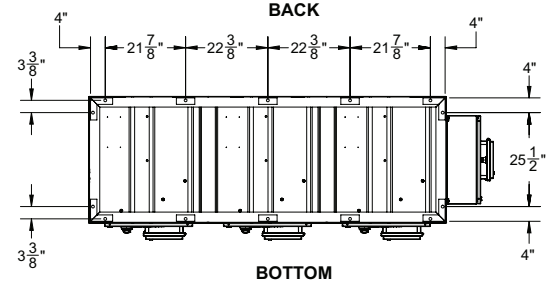
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Dimensions

Water Connections and Required Clearances



Anchor Locations



Notes: Certified to UL60335-1, UL60335-2-40, CSA C22.2 60335-1, CSA 60335-2-40 (LC16116-1) Control Panel: UL508A Short Circuit Current Rating (SCCR) 100, Compressor Horsepower 25 HP, 1000 hrs. Salt Spray Resistance Cabinet/Evap

1. Recovery rate at 80° F source 100% water, DHW 50 EWT 140 LWT
2. Water Circuit Pressure Drop and Heat Pump Cv value apply to external pump applications
3. Pressure drop allowed by internal circulator for external piping, at design flow rate
4. Sound pressure recorded 3' from unit face, 3' from ground
5. Cold Cycle volume is the volume below the cold trigger sensor. Cold in water over 70° F will need more volume.
6. Warm Cycle volume is the volume of water below the warm/recirc trigger sensor.
7. Tank volume is based on individual project demands, but cannot be lower than minimum value.

Contact factory for accurate sizing.



MHPo81oR-01 New

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