WHP185R
Commercial Heat Pump Water Heating Systems

WATER SOURCE HEAT PUMP

c LC US

DESIGNED ★ ENGINEERED ★ ASSEMBLED
USA

Lochinvar®

WHP185R

Specifications

Operating Conditions	Model Number	WHP185R
	Nominal DOE Capacity	201,940 BTU/hr
	Nominal DOE Performance	4.0 COP
	Recovery Rate [1]	343 Gal/hr
	Compressor Type	Scroll
	Refrigerant	R513A
	Factory Charge	23 lbs.
	Max Water Temperature	160° F
	Source Water Range	40° 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 Copper
	DHW Water Flow Rate	30.0 GPM
	DHW Pressure Drop [2]	6.5 ft Head
	DHW Water Circuit Cv Value [2]	18.0
	Source Water Flow Rate	33 GPM
	Source Water Circuit Pressure Drop	6.3 ft Head
	Source Water Circuit Cv Value	20.0
	External Head Pressure Allowed by Unit [3]	20.7 ft Head
	Min Cold Cycle Volume [5]	94 Gal.
	Min. Warm Cycle Volume [6]	263 Gal.
	Min. Tank Recovery [7]	657 Gal.

Single-Pass Unit Sizing	DHW & Source Water Connections	2” FPT Copper
	DHW Design Flow Rate	18.0 GPM
	DHW Water Circuit Pressure Drop [2]	11.9 ft Head
	DHW Water Circuit Cv Value [2]	8.0
	Source Water Flow Rate	33 GPM
	Source Water Circuit Pressure Drop	6.3 ft Head
	Source Water Circuit Cv Value	20.0 ft Head
	External Head Pressure Allowed by Unit [3]	11.0 ft Head
	Min Cold Cycle Volume [5]	94.0 Gal.

Unit Specifications	Dry Weight	938 lbs
	Operating Weight	970 lbs
	Sound Pressure [4]	67.0 dB Front; 66.1 dB Left; 69.3 dB Right; 71.1 dB Rear
	Dimensions (L x W x H)	52" x 31" x 40"

Power Requirements	Voltage	Compressor LRA		RLA		Wire and Disconnect Sizing			
						MCA		MOCP	
		Single-pass	Multi--pass	Single-pass	Multi-pass	Single-pass	Multi-pass	Single-pass	Multi-pass
	208-230/3/60	505	505	70	74	87	91	150	160
	440-480/3/60	225	225	33	34	40	42	70	70

Performance Data

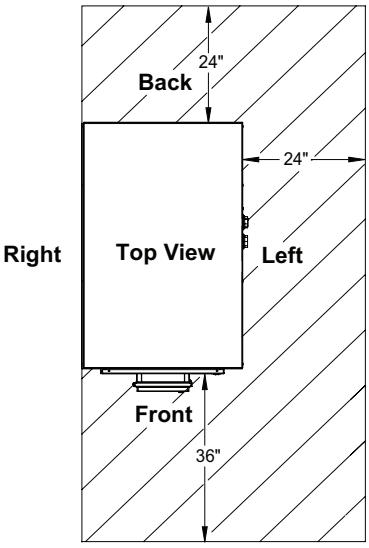
Performance Test Conditions: 50 EWT, 140 LWT, 100% Water Source Side

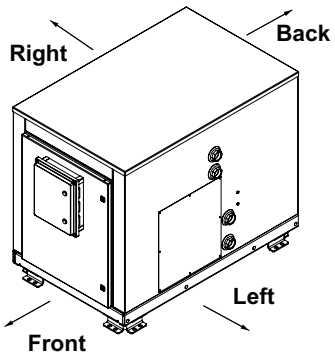
Entering Source Water Temp(˚F)	Supply Heating Capacity (Btu/hr)	Source Cooling Capacity (Btu/hr)	Power Input (kW)	Heating COP	Cooling COP	Combined COP
90A°F	220,800	163,478	16.8	3.9	2.9	6.7
80A°F	194,800	137,820	16.7	3.4	2.4	5.8
70A°F	168,900	112,261	16.6	3	2	5
60A°F	153,900	99,137	16.1	2.8	1.8	4.6
50A°F	138,900	86,014	15.5	2.6	1.6	4.3
40A°F	123,800	74,667	14.4	2.5	1.5	4

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.

Dimensions

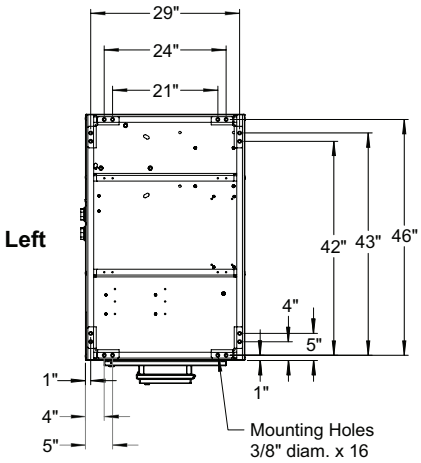
Clearances





R513A Unit

Anchor Locations



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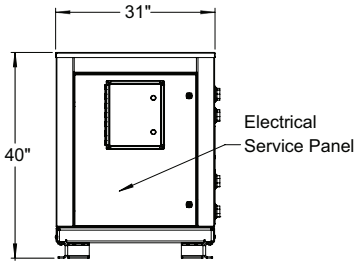
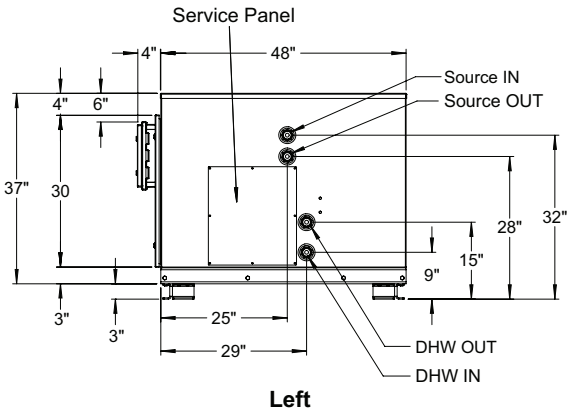


Front



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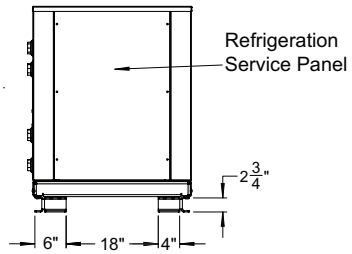

Back

Notes:Certified to UL60335-1, UL60335-2-40, CSA C22.2 60335-1, CSA 60335-2-40 (LC16116-1)
1. Recovery Rate at 80 Deg F source 100% water, DHW 50 EWT 140LWT
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 sizing.

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)

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