

# WHP125R

## Commercial Heat Pump

### Water Heating Systems

**WATER SOURCE HEAT PUMP**



DESIGNED ★ ENGINEERED ★ ASSEMBLED

**USA**



# WHP125R

## Specifications

|                      |                            |                                   |
|----------------------|----------------------------|-----------------------------------|
| Operating Conditions | Model Number               | WHP125R                           |
|                      | Recovery Rate <sup>1</sup> | 233 Gal/hr                        |
|                      | Nominal DOE Capacity       | 137,160 BTU/h                     |
|                      | Nominal DOE Performance    | 4.4 COP                           |
|                      | Compressor Type            | Scroll                            |
|                      | Refrigerant                | R513A                             |
|                      | Factory Charge             | 14 lbs.                           |
|                      | 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<br>Unit Sizing  | DHW & Source Water Connections                      |                |      | 1 ½" FPT Copper                                          |      |
|                            | DHW Water Flow Rate                                 |                |      | 20 GPM                                                   |      |
|                            | DHW Pressure Drop <sup>2</sup>                      |                |      | 8.4 ft Head                                              |      |
|                            | DHW Water Circuit Cv Value <sup>2</sup>             |                |      | 11.0                                                     |      |
|                            | Source Water Flow Rate                              |                |      | 23 GPM                                                   |      |
|                            | Source Water Circuit Pressure Drop                  |                |      | 13.9 ft Head                                             |      |
|                            | Source Water Circuit Cv Value                       |                |      | 9.0                                                      |      |
|                            | External Head Pressure Allowed by Unit <sup>3</sup> |                |      | 13.4 ft Head                                             |      |
|                            | Min Cold Cycle Volume <sup>5</sup>                  |                |      | 61 Gal.                                                  |      |
|                            | Min. Warm Cycle Volume <sup>6</sup>                 |                |      | 171 Gal.                                                 |      |
|                            | Min. Tank Recovery <sup>7</sup>                     |                |      | 427 Gal.                                                 |      |
| Single-Pass<br>Unit Sizing | DHW & Source Water Connections                      |                |      | 1½" FPT Copper                                           |      |
|                            | DHW Design Flow Rate                                |                |      | 12.0 GPM                                                 |      |
|                            | DHW Water Circuit Pressure Drop <sup>2</sup>        |                |      | 7.1 ft Head                                              |      |
|                            | DHW Water Circuit Cv Value <sup>2</sup>             |                |      | 7.0                                                      |      |
|                            | Source Water Flow Rate                              |                |      | 23 GPM                                                   |      |
|                            | Source Water Circuit Pressure Drop                  |                |      | 13.9 ft Head                                             |      |
|                            | Source Water Circuit Cv Value                       |                |      | 9.0 ft Head                                              |      |
|                            | External Head Pressure Allowed by Unit <sup>3</sup> |                |      | 9.7 ft Head                                              |      |
|                            | Min Cold Cycle Volume <sup>5</sup>                  |                |      | 61 Gal.                                                  |      |
| Unit<br>Specifications     | Dry Weight                                          |                |      | 649 lbs                                                  |      |
|                            | Operating Weight                                    |                |      | 667 lbs                                                  |      |
|                            | Sound Pressure <sup>4</sup>                         |                |      | 63.9 dB Front; 66.8 dB Left; 65.9 dB Right; 65.7 dB Rear |      |
|                            | Dimensions (L x W x H)                              |                |      | 52" x 31" x 40"                                          |      |
| Power<br>Requirements      | Voltage                                             | Compressor LRA | RLA  | Wire and Disconnect Sizing                               |      |
|                            |                                                     |                |      | MCA                                                      | MOCP |
|                            | 208-230/3/60                                        | 300            | 52.0 | 64                                                       | 110  |
|                            | 440-480/3/60                                        | 150            | 25.0 | 30                                                       | 50   |

## Performance Data

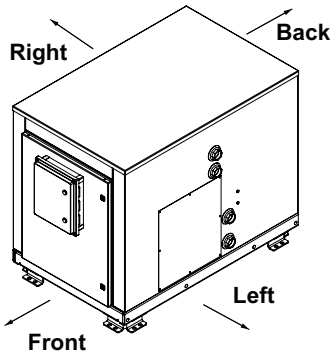
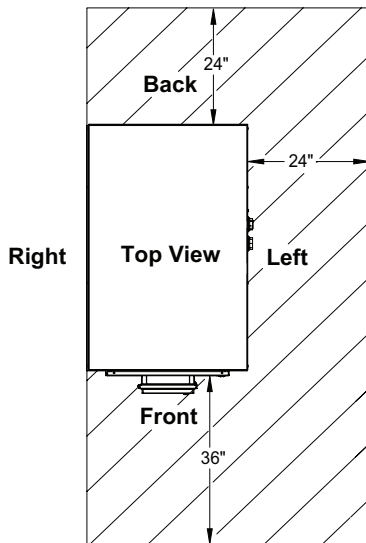
Performance Test Conditions: 50 EWT, 140 LWT, 100% Water Source Side

| 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                           | 143,600                          | 108,456                          | 10.3             | 4.1         | 3.1         | 7.2          |
| 80A°F                           | 129,000                          | 93,515                           | 10.4             | 3.6         | 2.6         | 6.3          |
| 70A°F                           | 114,400                          | 78,574                           | 10.5             | 3.2         | 2.2         | 5.4          |
| 60A°F                           | 99,700                           | 64,898                           | 10.2             | 2.9         | 1.9         | 4.7          |
| 50A°F                           | 85,000                           | 51,221                           | 9.9              | 2.5         | 1.5         | 4            |
| 40A°F                           | 77,200                           | 45,468                           | 9.3              | 2.4         | 1.4         | 3.9          |

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.

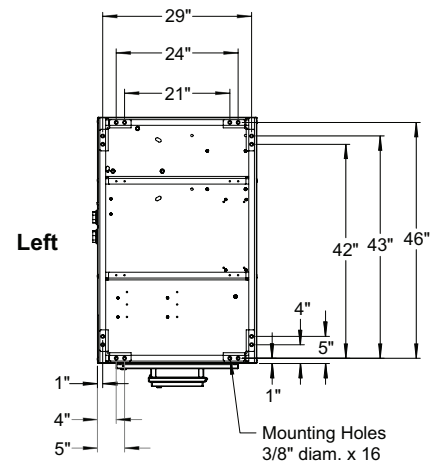
## Dimensions

### Clearances

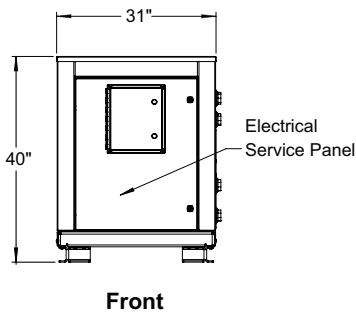


R513A Unit

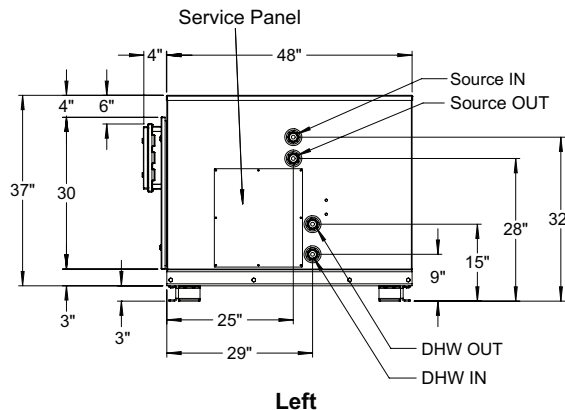
### Anchor Locations



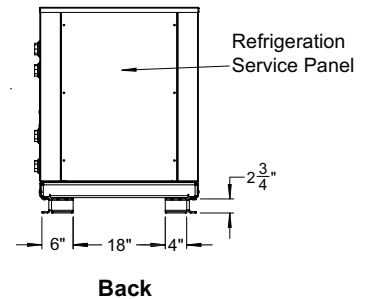
Bottom



Front



Left



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 Deg 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)



WHP125R-01 New

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9/2024 Printed in U.S.A.