

Job: \_\_\_\_\_  
Engineer: \_\_\_\_\_  
Contractor: \_\_\_\_\_  
Prepared By: \_\_\_\_\_ Date: \_\_\_\_\_  
Model: \_\_\_\_\_ Indoor/Outdoor: \_\_\_\_\_

# Raytherm® - Type WH

Water Heaters  
Commercial

Models 514-824

## EFFICIENT

- ▶ 82% thermal efficiency – highest of any atmospheric water heater available today

## THERMAL SHOCK PROOF

- ▶ Twenty-year warranty against thermal shock damage up to 150°F differential
- ▶ Maximum outlet temperature: 210°F

## LIGHTWEIGHT

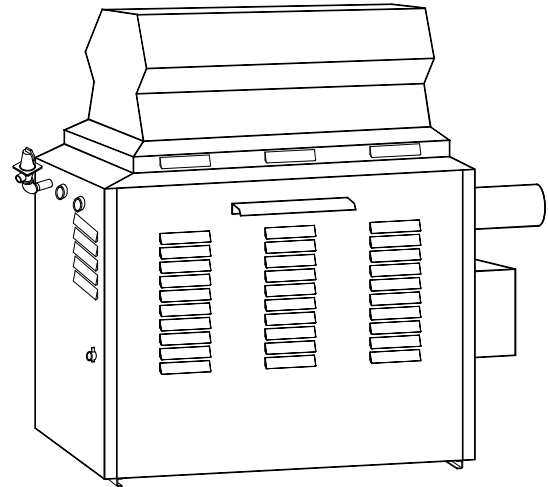
- ▶ A floor load of 70 lbs./sq. ft. or less

## HIGH RECOVERY

- ▶ Cuts fuel costs substantially because the standby and radiation losses associated with tank-type water heaters are eliminated

## LOW WATER OPERATING TEMPERATURE

- ▶ Operates with water temperature as low as 105°F without condensing



Proudly Assembled in the USA

### Heat Exchanger

- ASME Inspected and Stamped 160 PSIG
- National Board Approved
- Headers
  - ☐ Bronze – Standard
  - ☐ A-2 Glass-lined Cast Iron
- Fin Tubing
  - ☐ Copper – Standard
  - ☐ A-3 Cupro-Nickel
- ASME Steel Tube Sheet
- Silicone O-Rings
- ASME Pressure Relief Valve
  - 125 PSIG – Standard
  - ☐ 150 PSIG – Optional
- Temperature and Pressure Gauge
- Water Connections
  - ☐ Left Hand – Standard
  - ☐ A-6 Right Hand
- Two-pass Flow Configuration
- Pump – Optional
  - ☐ Mounted, 1/2 HP, 120 VAC, 1Ø, 60 Hz

### Controls

- 120V, 60Hz, 1 Ph Power Supply
- 120/24V Transformer
- 100% Pilot Shut-off/Lockout
- Electronic, Intermittent Ignition (IID) Pilot
- High Limit Control, Manual Reset – 200°F
- On/Off Switch
- Flow Switch
- Economaster II Pump Time Delay

### Gas Control Train

- Manual Main Gas Shut-off Cock
- Main Gas Pressure Regulator
- Redundant Safety Shut-off Valve
- Control Valve
- Firing Mode
  - ☐ On/Off (WH1)
  - ☐ 2-stage Firing (WH3)
  - ☐ Mechanical Modulation (WH2) (110 - 170°F Outlet)
- Fuel
  - ☐ Natural Gas
  - ☐ Propane Gas

### Construction

- Front Controls
- Stainless Steel Burners
- PolyTuf Powder Coat Finish
- Design Certified ANSI Z21.10.3/ CSA 4.3
- CSA Low Lead Certified ≤ .25% Lead
- Vent Selection
  - ☐ D-10 Drafthood (Indoor)
  - ☐ D-2 Power Vent, Loose
  - ☐ D-11 Stackless Top (Outdoor)
- Base – Optional
  - ☐ J-1 Combustible Floor Shield

### Temperature Controls

- ☐ B-2 Single-Stage Tankstat (100-180°F)
- ☐ B-3 2-Stage Tankstat (100-180°F)
- ☐ B-26 2-Stage Digital
- ☐ B-21 4-Stage Digital

### Additional Safety Controls

- ☐ F-9 Low Water Cut-off Probe
- ☐ I-3 High Limit Control, Auto Reset, 180°F
- ☐ S-1 Low Gas Pressure Switch, Manual
- ☐ S-2 High Gas Pressure Switch, Manual
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_

### Regulatory Agency Requirements

- ☐ CSD-1 Safety Controls
- ☐ \_\_\_\_\_



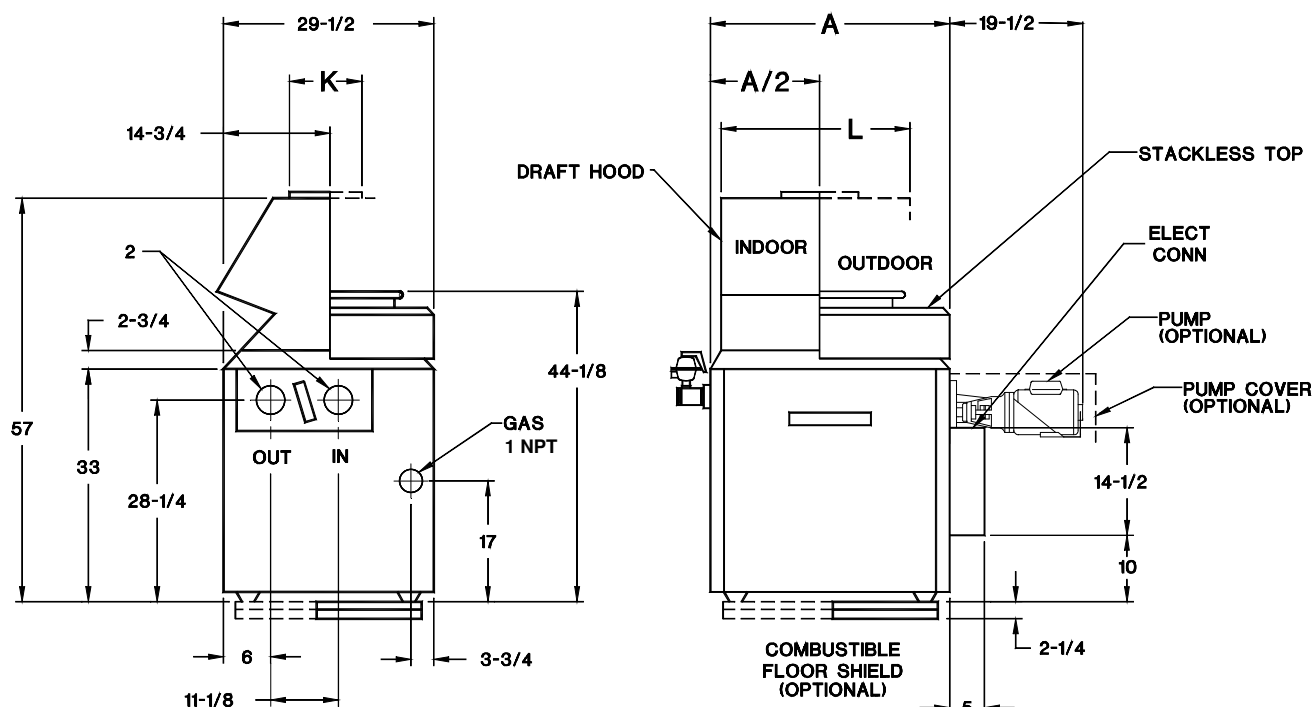
**Raypak®**

A Rheem® Company

# Raytherm - Type WH

## Models 514-824

Model \_\_\_\_\_



MODELS WH 514-824

| Model No.                         | Indoor      |              | Outdoor     |              | Dimensions (Inches) |             |        | Electrical Rating (Amps) |         | Shipping Weight (Lbs.) – Approx. |         |
|-----------------------------------|-------------|--------------|-------------|--------------|---------------------|-------------|--------|--------------------------|---------|----------------------------------|---------|
|                                   | MBTUH Input | MBTUH Output | MBTUH Input | MBTUH Output | Width A             | Flue Dia. K | L      | W/O Pump                 | W/ Pump | Less Pump                        | W/ Pump |
| <input type="checkbox"/> WH - 514 | 511.5       | 419.4        | 511.5       | 419.4        | 32-3/4              | 10          | 25-3/8 | < 4                      | < 12    | 475                              | 530     |
| <input type="checkbox"/> WH - 624 | 627.0       | 514.0        | 627.0       | 514.0        | 37-1/2              | 12          | 29-1/2 |                          |         | 485                              | 540     |
| <input type="checkbox"/> WH - 724 | 726.0       | 595.0        | 726.0       | 595.0        | 41-5/8              | 12          | 34-1/4 |                          |         | 635                              | 690     |
| <input type="checkbox"/> WH - 824 | 825.0       | 676.5        | 825.0       | 676.5        | 45-3/4              | 14          | 38-1/2 |                          |         | 645                              | 700     |

NOTE: Ratings shown are for elevations up to 2,000 feet. For elevations over 2,000 feet, reduce ratings at the rate of 4% for each 1,000 feet above sea level.

### HEATER RATES OF FLOW AND PRESSURE DROPS

| Model No.                         | 20° ΔT |         | 30° ΔT |         | 40° ΔT |         |
|-----------------------------------|--------|---------|--------|---------|--------|---------|
|                                   | GPM    | ΔP (ft) | GPM    | ΔP (ft) | GPM    | ΔP (ft) |
| <input type="checkbox"/> WH - 514 | 42     | 1.9     | N/A    | N/A     | N/A    | N/A     |
| <input type="checkbox"/> WH - 624 | 51     | 3.0     | N/A    | N/A     | N/A    | N/A     |
| <input type="checkbox"/> WH - 724 | 60     | 4.4     | 40     | 2.0     | N/A    | N/A     |
| <input type="checkbox"/> WH - 824 | 68     | 6.0     | 45     | 2.6     | N/A    | N/A     |

N/A – Not Applicable

### HEATER RECOVERY RATES

| Model No.                         | Temperature Rise |      |      |      |      |      |       |
|-----------------------------------|------------------|------|------|------|------|------|-------|
|                                   | 20°F             | 30°F | 40°F | 50°F | 60°F | 80°F | 100°F |
| Gallons Per Hour                  |                  |      |      |      |      |      |       |
| <input type="checkbox"/> WH - 514 | 2541             | 1695 | 1271 | 1016 | 847  | 635  | 508   |
| <input type="checkbox"/> WH - 624 | 3115             | 2077 | 1558 | 1246 | 1038 | 779  | 623   |
| <input type="checkbox"/> WH - 724 | 3606             | 2404 | 1803 | 1442 | 1202 | 902  | 721   |
| <input type="checkbox"/> WH - 824 | 4100             | 2733 | 2050 | 1640 | 1367 | 1025 | 820   |

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