

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

# Raytherm<sup>®</sup> - Type H

Low NOx

## Hydronic Heating Boilers Models 181-401 - Outdoor

### LOW NOx

- ▶ Less than 40 nanograms per joule

### EFFICIENT

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

### THERMAL SHOCK PROOF

- ▶ Twenty-year warranty against thermal shock damage up to 150°F differential
- ▶ Maximum operating temperature: 230°F

### LIGHTWEIGHT

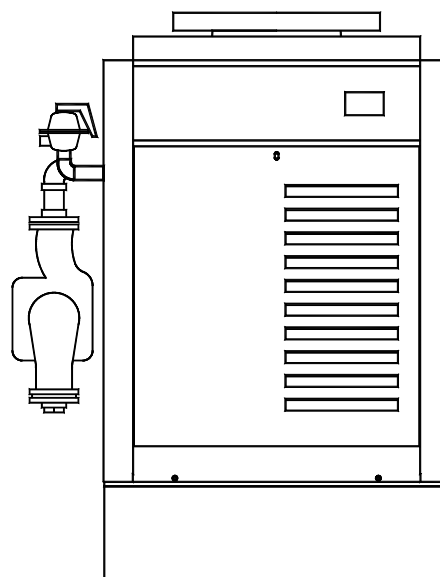
- ▶ A floor load of 70 lbs./sq. ft. or less

### HIGH RECOVERY

- ▶ Cuts fuel costs substantially because the standby and radiation losses normal to other boilers and tank-type water heaters are eliminated

### LOW WATER OPERATING TEMPERATURE

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



### Heat Exchanger

- ASME Inspected and Stamped 160 PSIG
- National Board Approved
- Headers
  - ☐ Cast Iron Glass-lined – Standard
  - ☐ Bronze – Option A-1
- Finned Tubing
  - ☐ Copper – Standard
  - ☐ Cupro Nickel – Option A-3
- ASME Steel Tube Sheet
- Silicone O-Rings
- 45 PSIG ASME Pressure Relief Valve
- Temperature and Pressure Gauge, Shipped Loose
- Water Connections
  - ☐ Left Hand – Standard
  - ☐ Right Hand – Option A-6
- Flow Configuration – Two-pass
- Pump – Optional
  - ☐ Mounted, 1/8 HP, 120 Volt, 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

### Controls (cont'd)

- On/Off Switch
- Flow Switch
- Economaster II Pump Time Delay

### Gas Train

- Natural Gas
- Manual Main Gas Shut-off Cock
- Main Gas Pressure Regulator
- Redundant Safety Shut-off Valve
- Control Valve
- Firing Mode
  - ☐ On/Off (H4)
  - ☐ Two-stage Firing (H3)
- Design Certified ANSI Z21.13

### Construction

- Stainless Steel, Fan Assisted Burners
- Front Controls
- Polytuf Powder Coat Finish
- Stackless Top
- 8" Base – Standard
- Vent Selection
  - ☐ Stackless Top – Option D-11
  - ☐ Power Vent, Loose – Option D-2

### Temperature Controls

- ☐ B-6 2-stage Aquastat – 100-200°F
- ☐ B-26 2-stage Digital Controller
- ☐ B-27 2-stage Digital Controller, Outdoor Reset
- ☐ Y-241 Electronic Sequencer, 1-4 stages
- ☐ Y-281 Electronic Sequencer, 1-8 stages

### Additional Safety Controls

- ☐ F-10 Low Water Cut-off Probe
- ☐ I-1 High Limit Control, Auto Reset
- ☐ S-1 Low Gas Pressure Switch, Manual
- ☐ S-2 High Gas Pressure Switch, Manual
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_

### Regulatory Agency Requirements

- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_

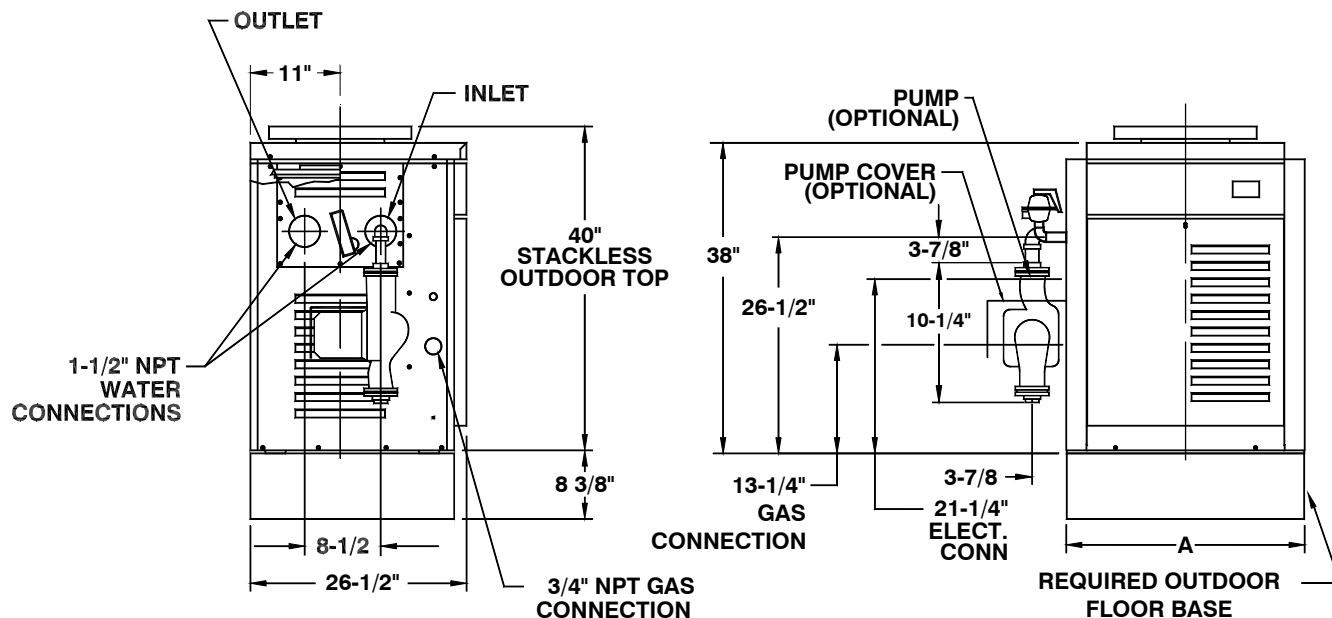


**Raypak<sup>®</sup>**  
A Rheem Company

# Raytherm - Type H Low NOx

## Hydronic Heating Boilers - Outdoor

Model \_\_\_\_\_



Model No.	MBTUH Input	MBTUH Output	Width A	Shipping Weight (Lbs.) - Approx.	
				No Pump	w/ Pump
H-181	181	145	18-1/4"	191	221
H-261	264	211	22-3/8"	214	244
H-331	334	267	25-3/4"	234	264
H-401	399	319	29-1/4"	253	283

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

### BOILER RATE OF FLOW AND PRESSURE DROP

Model No.	10° ΔT		20° ΔT		30° ΔT		40° ΔT	
	GPM	ΔP FT	GPM	ΔP FT	GPM	ΔP FT	GPM	ΔP FT
H-181	29	4.2	N/A	N/A	N/A	N/A	N/A	N/A
H-261	42	8.5	21	2.2	N/A	N/A	N/A	N/A
H-331	N/A	N/A	27	3.4	N/A	N/A	N/A	N/A
H-401	N/A	N/A	32	5.2	21	2.3	N/A	N/A

N/A – Not Applicable