

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

# Raytherm<sup>®</sup> - Type H

Hydronic Heating Boilers  
 Commercial

Models 2100-4001 (Indoor)

## 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

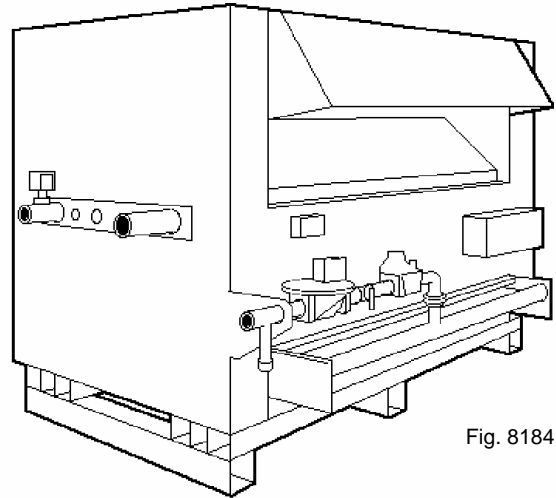


Fig. 8184

### Heat Exchanger

- ASME Inspected and Stamped 160 PSIG
- National Board Approved
- Headers
  - Glass-lined Cast Iron – Standard
  - Bronze – Option A-1
- Finned Tubing
  - Copper – Standard
  - Cupro Nickel – Option A-3
- ASME Steel Tube Sheet
- Silicone O-Rings
- 60 PSIG ASME Pressure Relief Valve
- Temperature and Pressure Gauge (Boiler)
- Water Connections
  - Left Hand – Standard
  - Right Hand – Option A-6
- Flow Configuration
  - Two-pass (Standard)
  - Single-pass (Cast Iron Only)

### 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
- High Limit Control, Auto Reset – Models 3001-4001
- 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 (H4)
  - Two-stage Firing (H3)
  - Four-stage Firing (H9)
  - Motorized Modulation (H2)
  - B-6000 (H6)
- Fuel
  - Natural Gas
  - Propane Gas
- Design Certified ANSI Z21.13/ CSA 4.9

### Construction

- Front Controls
- Stainless Steel Burners
- Polytuf Powder Coat Finish
- Built-in Draft Diverter
- Draft Inducer
  - Motorized Draft Inducer – Option D-2

### Temperature Controllers

- B-7 Modulating
- B-5 Modulating, Outdoor Reset
- B-6 Two-stage
- B-\_\_\_ Four-stage Digital
- Y-241 Electronic Sequencer, 1-4 Stages
- Y-281 Electronic Sequencer, 1-8 Stages

### Additional Safety Controls

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

### Regulatory Agency Requirements

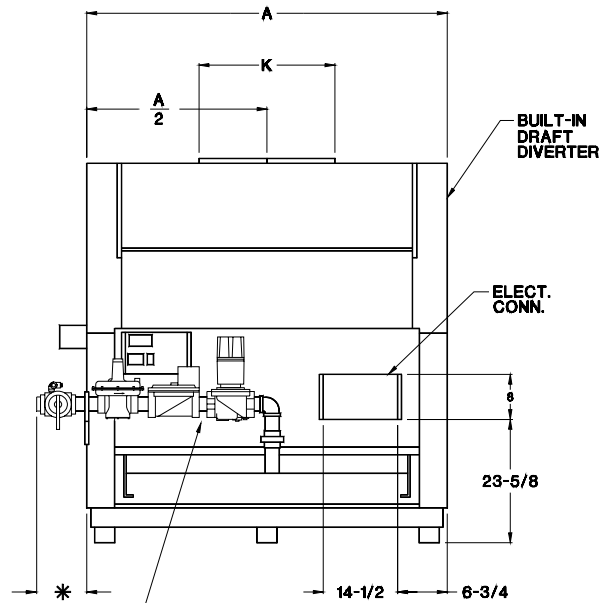
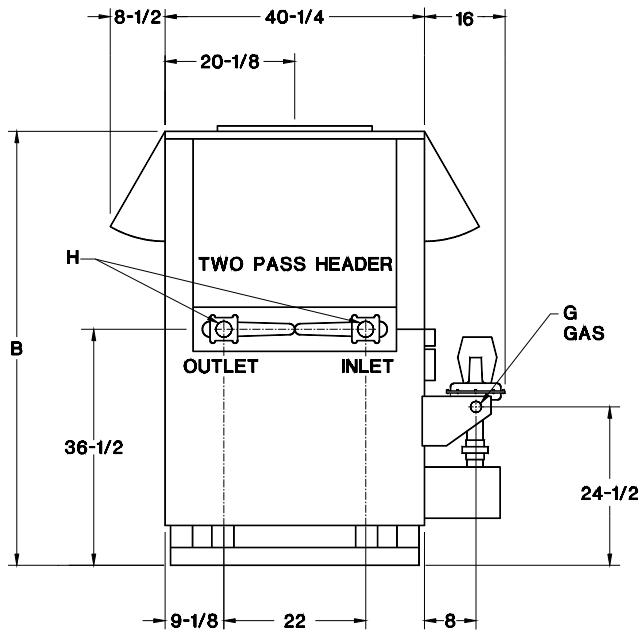
- \_\_\_\_\_
- \_\_\_\_\_



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

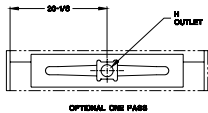
# Raytherm - Type H Hydronic Heating Boilers

Model \_\_\_\_\_



\* DIMENSION VARIES FOR EACH MODEL SIZE AND TYPE. CONSULT FACTORY FOR DETAILS.

GAS TRAIN ILLUSTRATED FOR REFERENCE ONLY. ACTUAL BOILER GAS CONTROLS MAY VARY FOR EACH MODEL SIZE AND TYPE. CONSULT FACTORY FOR DETAILS.



## MODELS H 2100 THRU 4001

Model No.	MBTUH		Dimensions (inches)					Approx. Shipping Weight (Lbs.)
	Natural Gas		Width	Overall Height	Gas Conn.	Water Conn.	Flue Dia.	
	Input	Output	A	B	G	H	K	
H-2100	2100	1722	61.0	68-1/4	*	3**	24	1400
H-2500	2499	2049	70.0	68-1/4	*	3**	26	1580
H-3001	3000	2460	81-1/4	68-1/4	2	3**	28	1750
H-3500	3500	2870	92-1/2	68-1/4	2	3**	30	1920
H-4001	4000	3280	103-3/4	68-1/4	2	3**	32	2100

NOTE: Ratings are for elevations up to 2,000 feet. For elevations over 2,000 feet, reduce ratings 4% for every 1,000 feet above sea level.

\* 1-1/2" or 2" contingent on boiler type code requirements  
\*\* 4" on one-pass option

## 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
TWO-PASS	H-2100	N/A	N/A	172	11.0	115	5.0	N/A	N/A
	H-2500	N/A	N/A	N/A	N/A	137	7.5	102	4.3
	H-3001	N/A	N/A	N/A	N/A	164	11.2	123	6.5
	H-3500	N/A	N/A	N/A	N/A	191	16.2	144	9.3
	H-4001	N/A	N/A	N/A	N/A	N/A	N/A	164	12.8
ONE-PASS	H-2100	344	14.0	N/A	N/A	N/A	N/A	N/A	N/A
	H-2500	N/A	N/A	205	5.3	N/A	N/A	N/A	N/A
	H-3001	N/A	N/A	246	7.8	N/A	N/A	N/A	N/A
	H-3500	N/A	N/A	287	11.0	191	5.0	N/A	N/A
	H-4001	N/A	N/A	328	14.8	219	6.8	N/A	N/A

N/A - Not Applicable

### NOTES:

- Values represent maximum flows and pressure drops for closed heating systems.
- Maximum acceptable flow through heat exchanger tubes is 200 GPM (two-pass); 400 GPM (one-pass)
- Single-pass heat exchangers are to be used only when flow rates exceed the allowable for two-pass

Raypak, Inc. ▪ 2151 Eastman Avenue, Oxnard, CA 93030 ▪ (805) 278-5300 ▪ Fax (800) 872-9725 ▪ www.raypak.com