

Job: _____
 Engineer: _____
 Contractor: _____
 Prepared By: _____
 Model: _____ Date: _____

Raytherm® - Type H

Hydronic Heating Boilers
 Commercial

Models 2100-4001 (Indoor)

EFFICIENT

- ▶ 82% 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

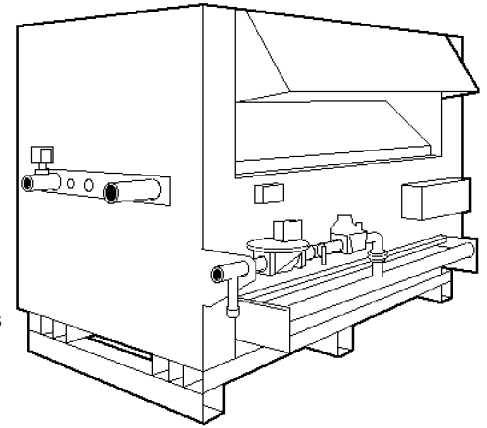
- ▶ A floor load of 70 lbs./sq. ft. or less

HIGH RECOVERY

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

LOW WATER OPERATING TEMPERATURE

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



Proudly Assembled in the USA

Heat Exchanger

- ASME Inspected and Stamped 160 PSIG
- National Board Listed
- 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 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)
- Fuel
 - Natural Gas
 - Propane Gas
- Design Certified ANSI Z21.13/ CSA 4.9

Construction

- CSA Low Lead Certified ≤ .25% Lead
- Front Controls
- Stainless Steel Burners
- Polytuf Powder Coat Finish
- Built-in Draft Diverter
- Draft Inducer
 - Motorized Draft Inducer – Option D-2

Temperature Controllers

- B-6 Two-Stage (H3)
- B-35 4-20 mA (H2)
- B-__ TempTracker Mod+ Hybrid, 2-16 Boilers (All)
- B-40 Motorized Modulation (H2)
- B-41 Motorized Modulation, Outdoor reset (H2)
- B-__ Two-stage Digital (H3)
- B-__ Four-stage Digital (H9)
- B-60 Stage Interface (H3/H9)

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

- _____
- _____

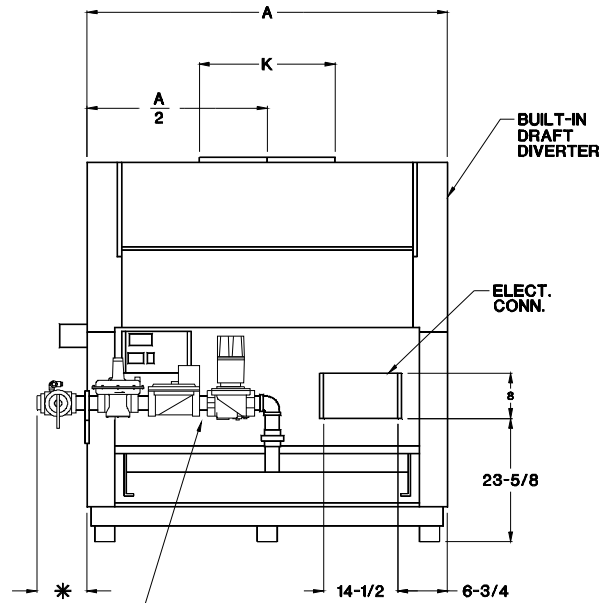
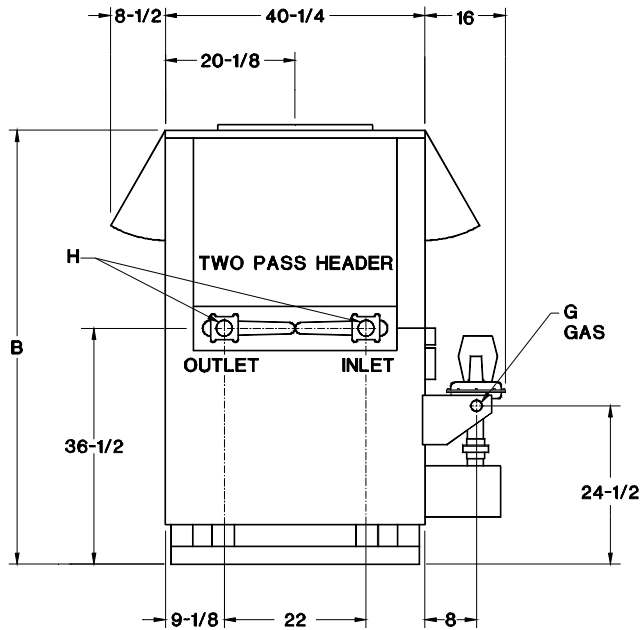


Raypak®

A Rheem® Company

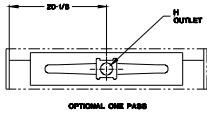
Raytherm - Type H Hydronic Heating Boilers

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 Natural and Propane Gas		Dimensions (inches)					Electrical Rating	Approx. Shipping Weight (Lbs.)
	Input	Output	Width A	Overall Height B	Gas Conn. G	Water Conn. H	Flue Dia K		
H-2100	2100	1722	61.0	68-1/4	*	3**	24	Less than 8.0 amps without pump at 120VAC	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		Minimum Flow			Maximum Flow			
	GPM	ΔP FT	GPM	ΔP FT	GPM	ΔP FT	GPM	ΔP FT	GPM	ΔP FT	ΔT	GPM	ΔP FT	ΔT	
TWO-PASS	H-2100			174	11.2	116	5.1			90	3.2	38	200	14.8	17
	H-2500					138	7.8	103	4.4	103	4.4	40	200	15.8	21
	H-3001	Exceeds Maximum Flow				166	11.6	124	6.7	124	6.7	40	200	16.7	25
	H-3500					191	16.2	145	9.5	145	9.5	40	200	17.5	29
	H-4001							166	13.0	166	13.0	166	13.0	40	200
ONE-PASS	H-2100	344	14.0							180	4.0	19	400	18.0	9
	H-2500	400	18.8	205	5.3	Less than Minimum Flow				180	4.1	23	400	18.8	10
	H-3001			246	7.8			180	4.3	27	400	19.5	12		
	H-3500			287	11.0			191	5.0	180	4.5	32	400	20.5	14
	H-4001			328	14.8	219	6.8	180	4.7	36	400	21.5	16		

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