

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

# Raytherm™ Residentials

Hydronic Heating Boilers

Models 42-180

## Applications

- Radiant Heating
- Hydronic Space Heating
- Snow Melting

## High Efficiency

Heating efficiencies meet or exceed NAECA standards.

## Factory Installed Circulator and Bypass

Thermostatically-controlled circulator maintains proper flow through the boiler. As a packaged system, installation is fast and easy.

## Electronic Ignition

Intermittent pilot ignition improves system efficiency by using fuel only when there is a call for heat.

## Compact, Lightweight Design

Even the largest model slips easily into tight spaces.

## Easy to Plumb, Easy to Service

Inlet and outlet water piping, gas connection, wiring and controls are all up front for easy access.

## Safe Operation

Built-in manual reset safety sensors shut down the boiler in the event of a flame roll-out or flue gas spillage. Normal working pressure is 125 PSI max.

## Fast Response Temperature Sensor

Electronic solid state auto-reset control shuts down the boiler in the event of over-heating caused by a low-flow condition.

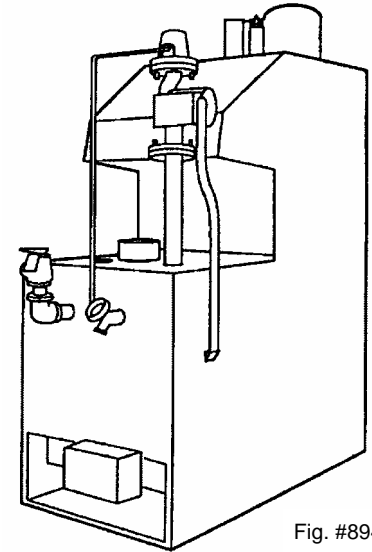


Fig. #8942

## Heat Exchanger

- ASME Inspected and Stamped 160 PSIG
- National Board Approved
- Glass-lined Cast Iron Headers
- Copper Finned Tubing
- ASME Steel Tube Sheet
- Silicone O-Rings
- 30 PSIG ASME Pressure Relief Valve
- Temperature and Pressure Gauge
- Cast Iron Pump – 120 VAC, Mounted
- Bypass Assembly

## Non-Ferrous Options

- All Bronze Pump, 120 VAC, Mounted
- Bronze Fittings

## Controls

- 120V, 60Hz, 1 Ph Power Supply
- 120/24V Transformer
- Pilot
  - Electronic, Intermittent Ignition (IID) - Standard
  - Standing (Thermocouple) - Models 90, 135 and 180 only
- 100% Pilot Shut-off/Lockout (IID only)
- High Limit Control
- Operating Limit Control
- Flow Sensor
- Flue Gas Spillage Sensor
- Flame Rollout Sensor
- Automatic Vent Damper

## Gas Control Train

- Fuel
  - Natural Gas
  - Propane Gas
- Firing Mode
  - On/Off - Models 42-66
  - Two-stage Firing - Models 90-180
- Combination Gas Valve
  - Manual Shut-off
  - Redundant Valve Features
  - Gas Pressure Regulator

## Construction

- Indoor Construction
- Enclosed Front Controls
- Stainless Steel Burners
- Polytuf Powder Coat Finish
- Built-in Draft Diverter
- Certified for combustible flooring

### AFUE Ratings\*

Model	AFUE
0042	84
0066	83
0090	83
0135	83
0180	83

\*Tested with IID ignition and vent damper

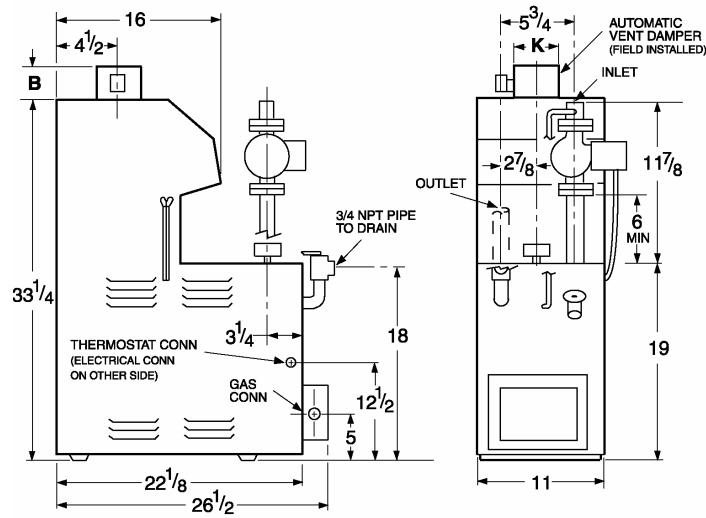


Raypak

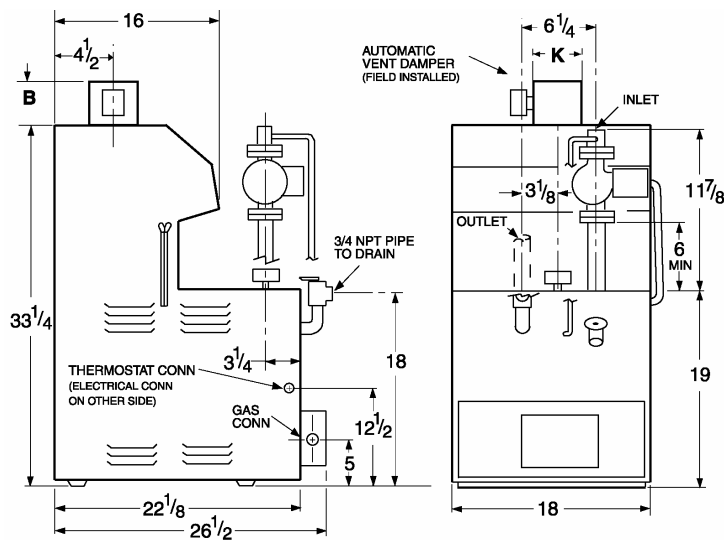
# Raypak Residential Hydronic Heating Boilers

Model \_\_\_\_\_

**Models 42, 66 & 90**



**Models 135 & 180**



Model <sup>1</sup>	Input MBTUH <sup>2</sup>	Heating Capacity MBTUH	Net I=B=R Rating MBTUH	Piping Connections		B	K Vent Diameter	Approx. Shipping Weight (lbs)	Clearances			
				Water NPT	Gas NPT				Front	Other Sides	Top	Flue Vent
0042	42	35	30	1"	1/2"	5-1/2"	4"	95	4"	6"	16"	6"
0066	66	54	47	1"	1/2"	5-3/4"	5"	105	4"	6"	16"	6"
0090	90	74	64	1"	1/2"	5-3/4"	5"	105	Alcove	6"	16"	6"
0135	135	109	95	1-1/4"	1/2"	6-1/4"	6"	135	Alcove	6"	16"	6"
0180	180	148	129	1-1/4"	1/2"	8"	7"	140	Alcove	6"	16"	6"

**Notes:**

- Standard models, use "H-" prefix (e.g., H-0042); Non-ferrous models, use "HB-" prefix (e.g., HB-0042)
- Per Section 11.1.2 of the National Fuel Gas Code, derate the appliance firing rate 4% per 1,000 feet above sea level for installations above 2,000 feet.

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