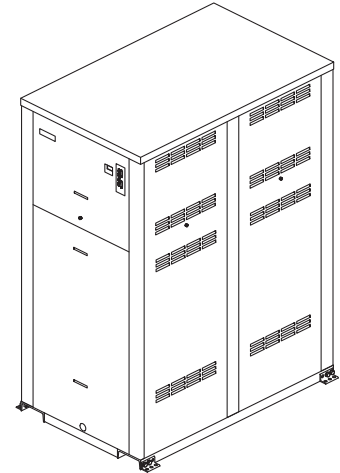


Job: \_\_\_\_\_  
 Engineer: \_\_\_\_\_  
 Contractor: \_\_\_\_\_  
 Prepared By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Model: \_\_\_\_\_ Indoor/Outdoor: \_\_\_\_\_

# XTherm™ - Type H

Heating Boilers  
 Models 1005-2005

- 96% Thermal Efficiency at Full Rate; Up to 99% at Part Load
- 100% Factory Fire Tested
- Maximum Outlet Water Temperature: 225°F
- Minimum Inlet Water Temperature: 50°F
- Full Safety Diagnostics with History
- Footprint: Less Than 10.8 ft<sup>2</sup>
- Limited Twenty-Five-Year Thermal Shock Warranty
- Limited Ten-Year Primary Heat Exchanger Warranty
- Limited Ten-Year Secondary Heat Exchanger Warranty
- Full Electronic Modulation, Constant Ratio 4:1 Turndown
- Modulating Controller with LCD Display
- Status Display Lights



Proudly Made in the USA

## Heat Exchanger

- Headers
  - Cast Iron – Standard
  - Bronze – Option A-1
- ASME H Stamped; 160 PSIG MAWP
- National Board Listed
- Fin Tubing
  - Copper – Standard
  - Cupro Nickel – Option A-3
- ASME Powder-Coated Tube Sheet
- Silicone High Temp O-Rings
- ASME Pressure Relief Valve
  - 60 PSIG – Standard
  - \_\_\_\_\_ PSIG – Optional
- 150 PSI Air Vent, Auto
- T&P Gauge, Shipped Loose
- Stainless Steel Secondary Heat Exchanger
- Stainless Steel Evaporator Plate
- Boiler Pump: 120V, 1Ø, 60Hz;
  - Cast Iron – Standard
  - Bronze – Option

## Control

- 120V, 60Hz, 1Ø, Power Supply
- 120/24V 60Hz Transformer
- Ignition Module
  - 3-Try – Standard
  - Single-Try – Option C-6
- Hot Surface Ignition (HSI)
- Remote Flame Sensor
- Fixed High Limit, Manual Reset, 240 °F
- On/Off Power Switch
- Flow Switch
- Blocked Vent Pressure Switch
- Combustion Air Proving Switch
- Freeze Protection
- Alarm Dry Contact
- Pump Switch

## Control (cont.)

- Pump Time Delay
- Diagnostics Panel with LCD Display, 2 lines, 20 characters
- Modulating Temperature Control
- Water Temperature Sensors (3)
- Cold Water Protection
- Blocked Condensate Switch

## Burner

- Ultra-Low NOx: Less than 20 PPM (Natural Gas Only)

## Gas Train

- Fuel
  - Natural Gas
  - Propane
- Zero Governor Regulator
- Dual-Seat Combination Valve
- Electronic Modulating Firing Mode (H7)

## Construction

- Indoor/Outdoor Construction
- Enclosed Front Controls
- PolyTuf Powder Coat Finish
- Rear Connections (Water, Gas, Vent, Electrical, Comb. Air, Cond. Drain)
- Combustion Air Filter
- Design Certified ANSI Z21.13/CSA 4.9
- Front Connection Low Voltage Wiring

## Venting

- Vent Termination, Cat IV
  - Outdoor or Indoor, Vertical – Option D-11
  - Indoor, Horizontal – Option D-15
- Extractor – Optional, Cat II
  - By others
  - Not required

## Multi-Boiler Digital Temp Controllers

- B-36 TempTracker Mod+ Hybrid, 2-4 Boilers, OA Reset
- B-37 TempTracker Mod+ Hybrid, 5-10 Boilers, OA Reset
- B-38 TempTracker Mod+ Hybrid, 11-16 Boilers, OA Reset
- B-45 Multi-Mod Platinum, 2-4 Boilers, OA Reset
- B-46 Multi-Mod Platinum EMS, 2-4 Boilers, OA Reset
- B-47 Multi-Mod Platinum BACNet, 2-4 Boilers, OA Reset
- B-48 Multi-Mod Expansion Module, 1-8 Additional Boilers

## Options

- D-32 PVC Vent Adapter (Includes 200°F Manual High Limit) Maximum return water temperature allowed 170°F.
- F-10 Low Water Cut-Off, Remote Probe
- I-1 High Limit, Auto Reset, Adj., 100-240°F
- I-2 High Limit, Manual Reset, Adj., 100-240°F
- S-1 Low Gas Pressure Switch, Manual Reset
- S-2 High Gas Pressure Switch, Manual Reset
- Z-12 Condensate Neutralizer Kit

## Regulatory Agency Requirements



**Raypak**  
 A Rheem Company

# XTherm – Type H

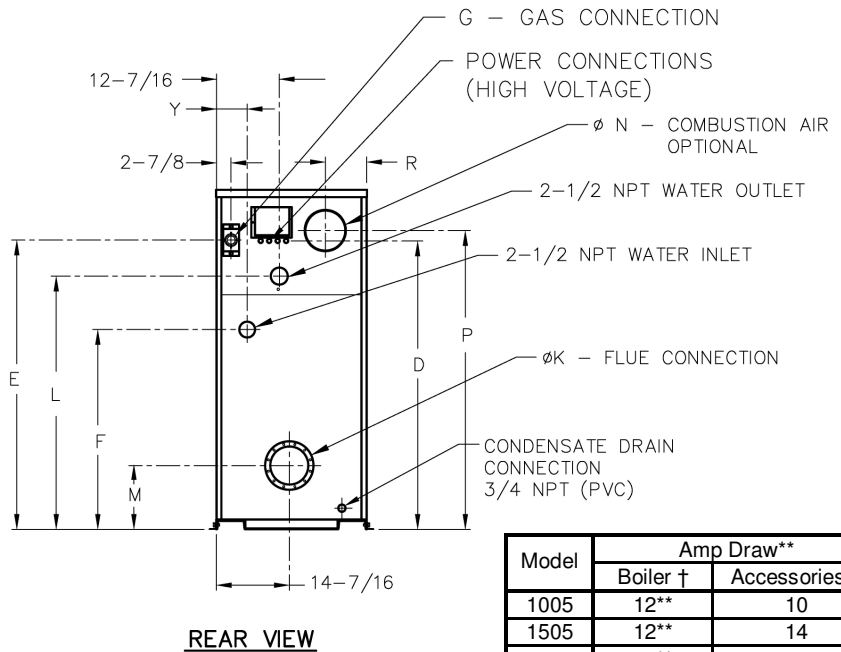
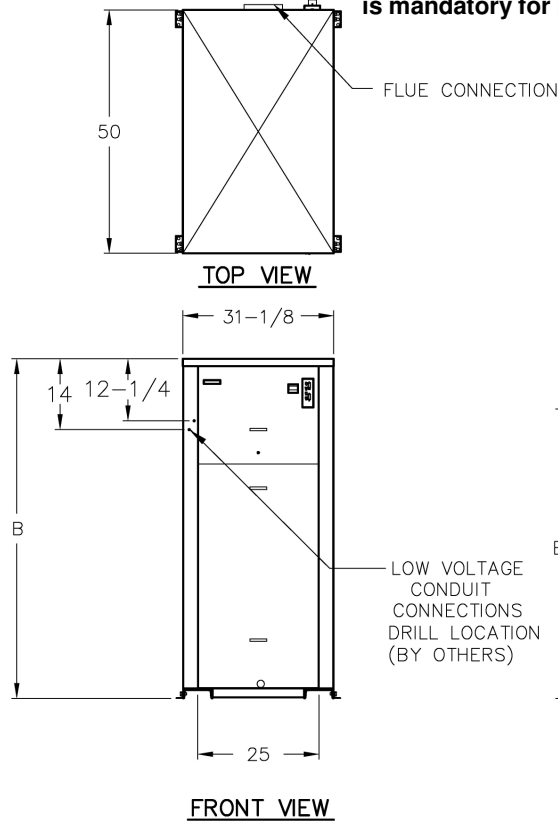
## Models 1005-2005

Model \_\_\_\_\_

**NOTE: Primary/Secondary plumbing is mandatory for proper operation.**

### CLEARANCES (in.)

	Front	Rear	Right	Left	Top	Floor	Vent
<b>Certified Minimum</b>	24	12	1	1	0	0	1
<b>Minimum Service</b>	24	36	24	1	10	N/A	N/A



Model	Amp Draw**	
	Boiler †	Accessories †
1005	12**	10
1505	12**	14
2005	18**	17

† Separate power connections are factory supplied and separate supply breakers must be field supplied.  
 \*\* Current draw is for boiler only (Supply breaker must have delayed trip).

Model (H7-)	MBTUH		Dimensions (in)											Ship Weight (Lbs.)	
	Input	Output	B Height	D	E	F	G* NPT	K Flue Ø	L	M	N C/A Ø	P	R		Y
1005	999	959	55-1/8	45	47-1/8	36-1/2	1-1/4	6	40-1/16	11-1/2	6	47-1/8	8-1/16	6-1/16	1065
1505	1500	1440	67-1/8	57	59-1/16	38-1/2	1-1/4	8	52-1/16	12-5/8	8	59-1/8	8-3/16	6-1/16	1234
2005	1999	1919	81-1/8	71	71-3/16	38-1/2	2	8	64-1/16	12-5/8	8	73-1/8	8-3/16	6-1/4	1461

Note: Ratings shown are for elevations up to 4,500 feet. For installations at elevations above 4,500 feet, please consult the factory for additional instructions.

\* For Propane Gas, all models are 1" NPT

System Return Temp (°F)	Model 1005				Model 1505				Model 2005			
	Supply Temp (°F)	Minimum Pipe Size <sup>2</sup>		Supply Temp (°F)	Minimum Pipe Size <sup>2</sup>		Supply Temp (°F)	Minimum Pipe Size <sup>2</sup>				
		<80' eq	80-200' eq		<80' eq	80-200' eq		<80' eq	80-200' eq			
60	138	2" NPT	2-1/2" NPT	147	2" NPT	2-1/2" NPT	154	2" NPT	2-1/2" NPT			
80	138	2" NPT	2-1/2" NPT	147	2" NPT	2-1/2" NPT	154	2-1/2" NPT	3" NPT			
100	138	2-1/2" NPT	3" NPT	147	2-1/2" NPT	3" NPT	154	2-1/2" NPT	3" NPT			
120	145	2-1/2" NPT	3" NPT	158	2-1/2" NPT	3" NPT	170	2-1/2" NPT	3" NPT			
140	165	2-1/2" NPT	3" NPT	178	2-1/2" NPT	3" NPT	190	2-1/2" NPT	3" NPT			
160	185	2-1/2" NPT	3" NPT	198	2-1/2" NPT	3" NPT	210	2-1/2" NPT	3" NPT			

<sup>1</sup> – Approximate high fire heater outlet temperature based on the standard heater pump and recommended connecting pipe size.

<sup>2</sup> – Minimum pipe size based on total equivalent feet of supply and return piping between the system loop and heater.