Job:

# XTherm® - Type H

## Heating Boilers

## Models 1005A-2005A

Engineer:

Contractor:

Prepared By:       Date:

Model:       Indoor/Outdoor:

96% Thermal Efficiency at Full Rate

100% Factory Fire Tested

VERSA IC® Modulating Controller with 7” color touchscreen display

Raymote™ remote connectivity provided standard

Full Electronic Modulation, Constant Ratio 7:1 Turndown

Full Safety Diagnostics with History

Status Display Lights

Cascade up to 4 Heaters – No External Sequencer Required

Modbus RTU BMS Port

Maximum Outlet Water Temperature: 235°F

Minimum Inlet Water Temperature: 50°F

Limited Twenty-Five-Year Thermal Shock Warranty

Limited Ten-Year Primary Heat Exchanger Warranty

Proudly Assembled in the USA

Limited Ten-Year Secondary Heat Exchanger Warranty

#### 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

* Manual Air Bleed
* T&P Gauge
* Secondary Stainless Steel Condensing Heat Exchanger – U stamped
* Stainless Steel Evaporator Plate
* Boiler Pump: 120V, 1∅, 60Hz;

Cast Iron – Standard

Bronze – Option

#### Control

* 120V, 60Hz, 1Ø, Power Supply
* 120/24V 60Hz Transformer
* VERSA IC®
* 7” color HD touchscreen display
* Raymote™ Wi-Fi remote connectivity
* Ignition Module

3-Try – Standard

C-6 Single-Try – Optional

* Remote Flame Sensor
* Fixed High Limit, Manual Reset, 240°F
* On/Off Power Switch
* Flow Switch
* Blocked Vent Pressure Switch
* Freeze Protection
* Alarm Dry Contact

\* Requires 200ºF Manual Reset High Limit & 180ºF Max Setpoint

* Pump Outputs – Pilot Duty
* DHW Indirect
* System
* Programmable Pump Time Delays
* Modulating Temperature Control; 7:1 turndown
* Water Temperature Sensors (7)
* Cold Water Protection – Built In
* Blocked Condensate Switch
* Modbus RTU BMS Port (Up to 115K Baud Rate, see Cat. No. 5000.73)

B-85 BMS Gateway, Modbus RTU to Modbus TCP, N2 Metasys, BACnet IP, or BACnet MS/TP

B-86 BMS Gateway, Modbus RTU to LonWorks

#### Burner

* Hot Surface Ignition (HSI)
* Radially Fired Knitted Burner

#### Gas Train

* Fuel

Natural Gas

Propane (Grade HD-5)

* Dual-Seat Combination Valve
* Manual Shut Off Firing Valve

#### 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

D-11 Outdoor or Indoor, Vertical

D-15 Indoor, Horizontal

* Extractor – Optional, Cat II

By others

Not required

#### Options

D-32\* PVC Vent Adapter

(Includes 162ºF Manual Vent Limit) (Factory installed only)

D-33 Centrotherm™ Polypropylene Vent Adapter (Includes 180ºF

Manual Vent Limit) (shipped loose)

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 Treatment Kit

#### Additional Options or Accessories

#### 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-39\* EMS 4-20 mA Remote Setpoint Interface Module

B-62\* BACnet MS/TP Interface Module (\*only used with B-36 to B-38)

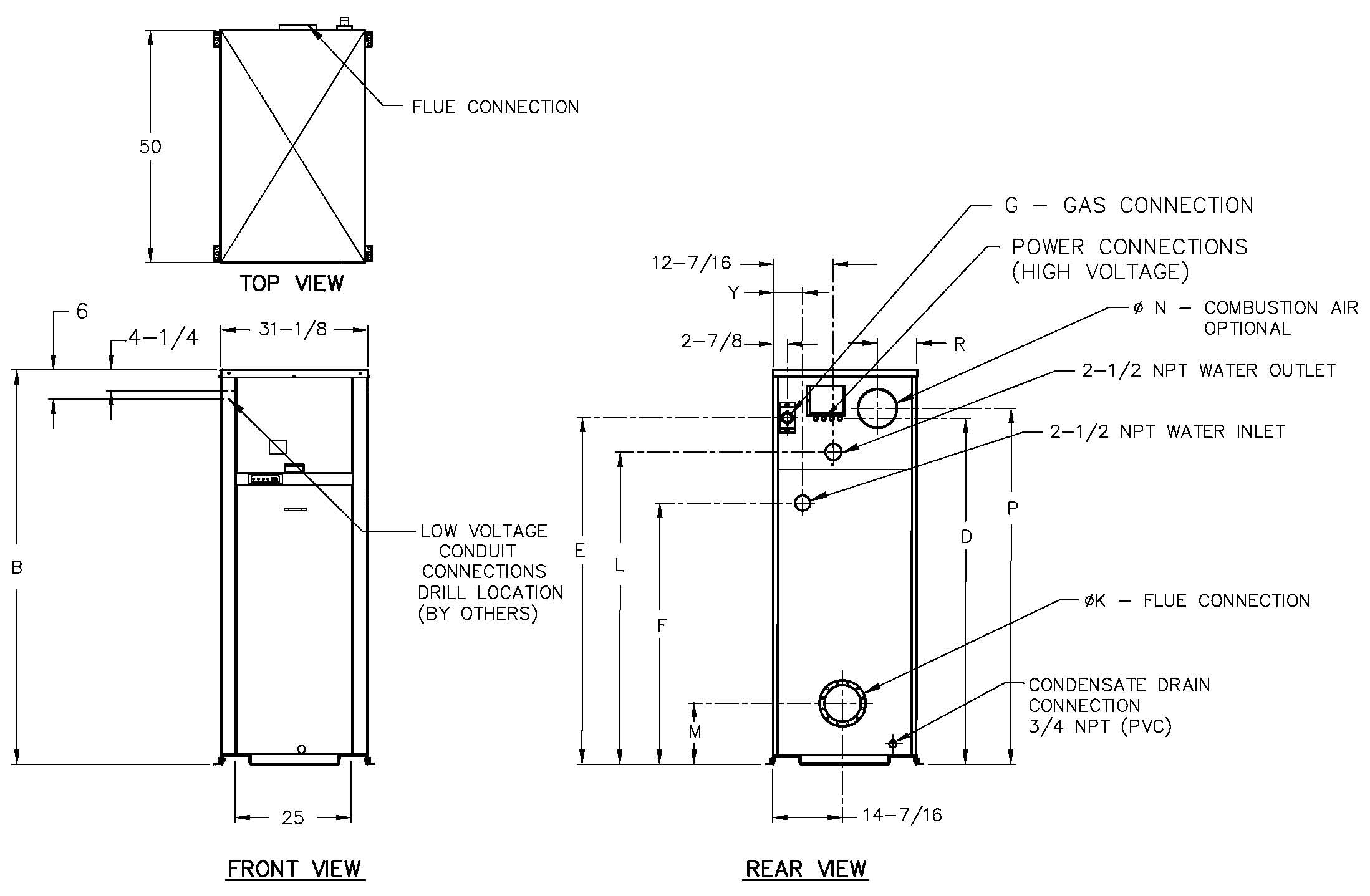
XTherm – Type H

Models 1005A-2005A Model

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

**CLEARANCES (in.)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Front** | **Rear** | **Right** | **Left** | **Top** | **Floor** | **Vent** |
| **Certified Minimum** | 24 | 12 | 1 | 1 | 0 | 0 | 1 |
| **Minimum Service** | 24 | 36 | 24 | 1 | 10 | N/A | N/A |



|  |  |  |
| --- | --- | --- |
| Model | Amp Draw\*\* | |
| Boiler † | Pump † |
| 1005A | 12\*\* | 10 |
| 1505A | 12\*\* | 14 |
| 2005A | 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.)** |
| **B Height** | **D** | **E** | **F** | **G\* NPT** | **K**  **Flue Ø** | **L** | **M** | **N C/A Ø** | **P** | **R** | **Y** |
| **Input** | **Output** |
| 1005A | 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 |
| 1505A | 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 |
| 2005A | 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 (ºF)** | **Model 1005A** | | | **Model 1505A** | | | **Model 2005A** | | |
| **Supply Temp1 (ºF)** | **Minimum Pipe Size2** | | **Supply Temp1 (ºF)** | **Minimum Pipe Size2** | | **Supply Temp1 (ºF)** | **Minimum Pipe Size2** | |
| **<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 |

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

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