Utica Boilers MAHF-125 Submittal

Engineer:_____

Project Name:_____

Project Location:_____

Contractor:_____

APPLICATION:
Modulating Gas fired water boiler for indoor installation. Approved for closet or alcove installations. For use with natural or liquefied petroleum (LP/Propane) fuel gases. All boilers are factory assembled with controls and wiring and test fired to ensure dependable performance. Boiler shall be certified for Direct Vent applications only.

CERTIFICATION AND APPROVALS:
Stainless Steel heat exchanger is manufactured and tested in accordance with American Society of Mechanical Engineers (ASME) and certified by Canadian Standards Association (CSA), AHRI, NRCAN. Registered with National Board BPVI, and Massachusetts Board. Stainless steel heat exchanger is tested for maximum allowable working pressure of 50 psig in accordance with ASME boiler and pressure vessel code, section IV, rules for construction of heating boilers. A 30 psig safety relief valve is shipped standard.

BOILERS INCLUDE:

- Boiler is equipped with dedicated connection to an optional Indirect hot water tank and an internal automatic 3 way diverting valve to allow Domestic Hot Water Priority operation.
- Boiler includes factory installed and wired 2 speed circulator pump.
- Primary/Secondary manifold with quick connections supplied.
- Digital Boiler Control:
  - ▶ Control is Self Commissioning, auto adjusts to fuel type and self-calibrates at start-up for correct fuel/air mixture. Control continuously monitors flame signal and adjusts the gas valve during normal operation for maximum efficiency.
  - ▶ Control system is PCB integral controller with LCD digital/graphical display.
  - ▶ Control can sense and display water temperature and indicate when boiler is in central heating or domestic water mode.
  - ▶ Control can accept an optional Outdoor Air sensor and has field adjustable reset curves.
  - ▶ Control displays Error Codes and Diagnostic information.

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- Boiler Combustion System:
  - The Gas valve is a modulating valve capable of firing from 125,000 BTU input down to 22,000 BTU input in Heat mode (5.7:1 turn down).
  - Induced draft blower is variable speed controlled by the PCB.
  - Burner is constructed of Iron-Chromium stainless steel.
  - Ignition system shall incorporate a Direct Spark Igniter and a separate Flame Sensing rod.

- Heat Exchanger:
  - Boiler's primary heat exchanger is constructed of Iron-Chromium stainless steel.

- Electrical
  - 120 volts AC, 60 Hertz, 1-phase; less than 15 amps.
  - Low voltage terminal strip for Thermostat, Outdoor Air Sensor, Indirect Tank sensor.

- Warranty
  - Factory Standard Warranty is 10 years on heat exchanger, one year on parts.
  - Warranty is extended to 10 years on heat exchanger, two years parts plus two years labor upon warranty registration and completion of contractor registration.

- Optional Equipment
  - Outdoor Air Sensor Kit
  - Indirect Tank Sensor Kit
  - Coaxial and Two-pipe venting components

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Size	Boiler Input Rate (MBH)[1]		Heating Capacity (MBH)[1][2]	Net AHRI Rating, Water (MBH)[1][3]	AFUE[2]
	Maximum	Minimum			
MAHF-125	125	22	113	98	95.0

[1]1000 Btu/hr (British Thermal Units Per Hour)
[2]Heating Capacity and AFUE (Annual Fuel Utilization Efficiency) are based on DOE (Department of Energy) test procedures.
[3]Net AHRI Ratings based on piping and pickup allowance of 1.15. Contact Technical Support before selecting boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.
*Max CH Supply temp 176° F (80°C) for MAHF-125 *Max DHW temp 140° F (60° C)

MAHF-125	
Minimum Clearances for Servicing	
Top	8.66 in / 220.00 mm
Bottom	0 in / 0 mm
Left Side	12.00 in / 305.00 mm
Right Side	1.77 in / 45.00 mm
Front	17.71 in / 450.00 mm
Flue Terminal Size Coaxial System	4.00 in (100.00 mm) / 2 in (50 mm)
Flue Terminal Size 2-Pipe Flue System	3.14 in NPT
Flue Terminal Protruding	4.52 in / 115.00 mm

MAHF-125	
Central Heating (Sealed System)	
Max System Pressure	30.00 psi / 2.06 bar
Min System Pressure	7.25 psi / 0.50 bar
Max System Temperature	176°F / 80°C
Pressure Relief Valve Setting	30.00 psi / 2.06 bar
Flow Connection	1¼" /31.8 mm Sweat Connection
Return Connection	1¼" /31.8 mm Sweat Connection
Relief Valve Connection	3/4" NPT
Recommended Operating System Pressure	21.7 psi / 1.5 bar

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Venting

Coaxial Venting Connects directly to the top of the boiler	
2-Pipe Venting - Optional Kit Using polypropylene - 80 mm venting	
2-Pipe Venting - Optional Kit Using CPVC UL1738/S626 - 3” venting	

Total Vent Equivalent Lengths - Account for fittings as listed in the table		
Coaxial -60/100 mm 	**2-pipe - 80 mm Polypropylene** 	**2-pipe - 3” CPVC UL1738/S636** 
Total =32.8 feet (10 m)	*Air intake must not exceed 42.9 feet (15m)* Total allowed for Air Intake + Exhaust Flue = 196.8 feet (60 m)	*Air intake must not exceed 42.9 feet (15m)* Total allowed for Air Intake + Exhaust Flue = 196.8 feet (60 m)
Coaxial Fittings 90° elbows = 3.28 feet (1.0 m) 45° elbows = 1.64 feet (0.50 m)	**Polypropylene 80 mm Fittings** 90° elbows = 1.64 feet (0.50 m) 45° elbows = .82 feet (0.25 m)	**CPVC 3” Fittings** 90° elbows = 1.64 feet (0.50 m) 45° elbows = .82 feet (0.25 m)

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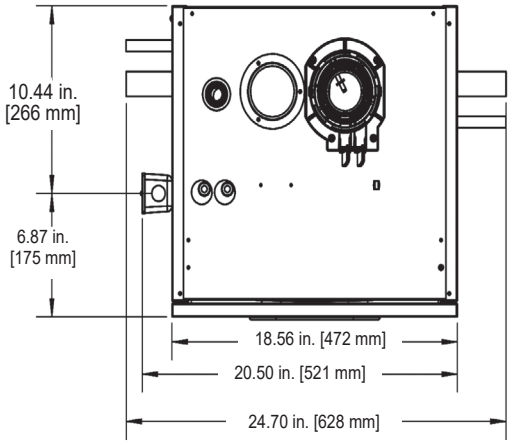
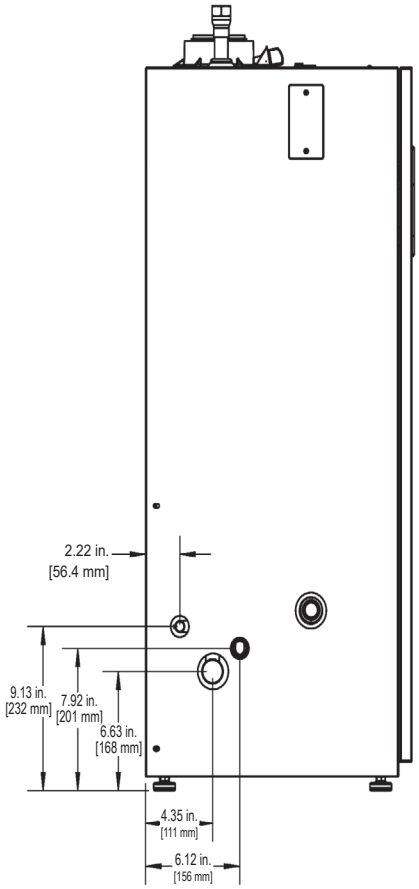
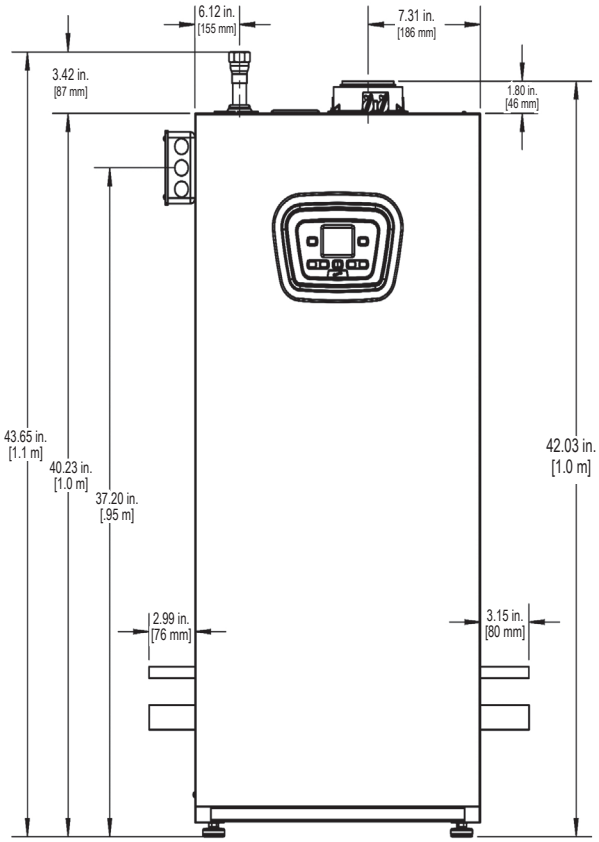
Top View All Models



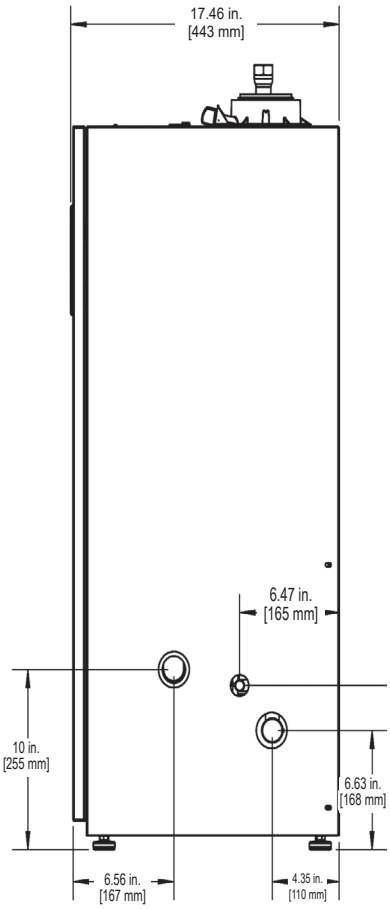
Left Side View All Models



Front View All Models



Right Side View All Models



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