



**Typical Specifications For:  
MicoFlame Grande Hydronic Heating Boilers  
Models MFH 2010, Through MFH 4000**

The heating boiler shall be a CAMUS MicoFlame model \_\_\_\_\_ having an input rating of \_\_\_\_\_ Btu (kw) /hr. and \_\_\_\_\_ Btu (kW)/hr output for hydronic heating.

The heating boiler shall be design/certified by CSA International and shall meet the requirements of ANSI Z21.13 & CSA 4.9. The heating boiler shall be optionally vented as a Category I conventional appliance or a category III appliance.

**Combustion Chamber:**

The combustion chamber shall be fully enclosed by high temperature fiberboard refractory, which is of modular interlocking construction for ease of replacement.

**Burner:**

The burner shall be constructed of rugged low maintenance metal fiber supported in a steel casing. The burner shall provide equal distribution of heat through the entire heat exchanger. Maximum input per burner shall be 1,000,000 Btu/hr.

**Heat Exchanger:**

The heat exchanger shall be suitable for a maximum allowable working pressure (M.A.W.P.) of 160 psig (1100 kPa) and shall be of a two pass design employing integrally finned 7/8" copper tubes . All castings shall be bronze. A pressure relief valve of \_\_\_\_\_ lb/hr shall be furnished with the heater. There shall be ready access to the heat exchanger to permit internal and external inspection and cleaning of the tubes.

**Controls:**

Standard SmartFlame 780014 combination limit/operator control accurate to 1<sup>0</sup>F (0.5<sup>0</sup>C). The control shall also provide readouts of boiler target, differential and inlet/outlet temperatures as well as accumulated runtime. On/off switch, and full diagnostic light package shall be provided. The complete control package shall be mounted on the front panel with hinged door for easy access to all control modules. A flow switch shall be provided loose. The control shall have 8 preset modes to allow operation of the heater as hydronic heating with outdoor reset, DHW or remote enable.

**Firing Mode:**

The heater shall operate as on/off, two-stage, three stage or four-stage.

**Gas Train:**

The gas train shall consist of a combination control incorporating a main manual gas valve, dual main valve seats, a pilot valve and pilot regulator.

**Ignition Module:**

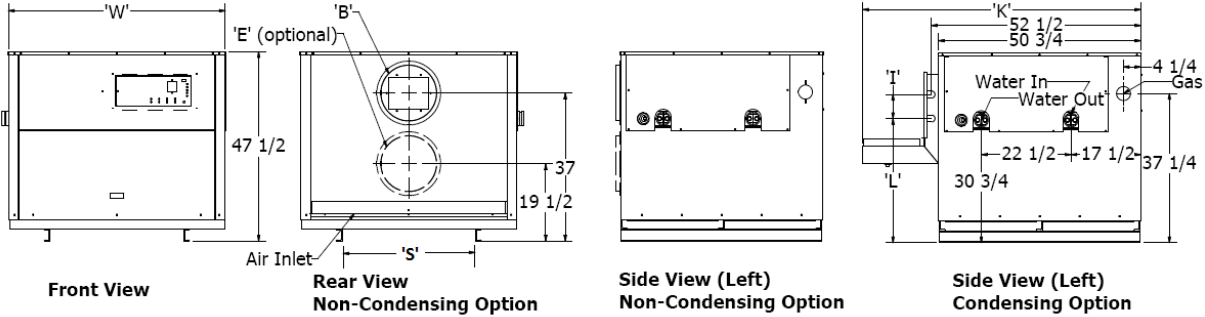
The ignition module shall provide for intermittent ignition and continuous retrieval. Trial for ignition shall be 15 seconds with 5 minutes between retrievals. Each ignition module shall control a maximum input of 1,000,000 Btu/hr.

**External Jacket and Fasteners:**

The external jacket shall be of stainless and enameled steel panels assembled with crimpite non-strip self tap screws.

# SUBMITTAL DATA SHEET – MICROFLAME GRANDE

Engineer: \_\_\_\_\_ Job Location: \_\_\_\_\_ Date: \_\_\_\_\_  
 Prepared by: \_\_\_\_\_ Buyer's Name: \_\_\_\_\_ Quote #: \_\_\_\_\_  
 Job Name: \_\_\_\_\_ Buyer's Address: \_\_\_\_\_



### Dimensions and Specifications

Model	'I'	'K'	'L'	'W'	'S'	Water Connection <sup>†</sup>	Approx. Weight		
							Gas Connection	Non-Condensing [lbs.]	Condensing [lbs.]
2010/2012	6	68	34 5/8	54 5/8	33 3/8	3	1 1/2	1,585	1,635
2500/2502	6	72	34 5/8	78 7/8	58	3	2	1,675	1,745
3000/3002	6	72	34 5/8	78 7/8	58	3	2	1,750	1,820
3500/3502	6	72	34 5/8	103	81 3/4	4	2 1/2	2,000	2,070
4000/4002	6	72	34 5/8	103	81 3/4	4	2 1/2	2,200	2,270

<sup>†</sup> Note water connections are 3" grooved at header

### Venting

Model	'B' Dia. Venting*			'E' Dia.
	Outdoor	Sidewall or Condensing	Standard	Air Inlet**
2010/2012	12	12	14	12
2500/2502	14	14	16	14
3000/3002	14	14	16	14
3500/3502	16	16	18	16
4000/4002	16	16	18	16

\*Non-condensing models are shipped with standard vent opening size unless sidewall venting is specified

\*\*Appliance may be provided with two openings that can be combined into this size.

### Input & Output

Model	Input [BTU/hr]	Input [kW]	Non-Condensing		Condensing	
			Output [BTU/hr]	Output [kW]	Output [BTU/hr]	Output [kW]
2010/2012	2,000,000	585.6	1,700,000	497.8	1,900,000	556.3
2500/2502	2,500,000	732.0	2,125,000	622.2	2,375,000	695.4
3000/3002	3,000,000	878.4	2,550,000	746.6	2,850,000	834.5
3500/3502	3,500,000	1,024.8	2,975,000	871.1	3,325,000	973.6
4000/4002	4,000,000	1,171.2	3,400,000	995.5	3,800,000	1,112.6

### Heat Exchanger Head Loss & Flow

Model	20°F		30°F		35°F	
	USGPM	ΔP-ft.	USGPM	ΔP-ft.	USGPM	ΔP-ft.
2010/2012	170	5.1	113	2.4	97	1.8
2500/2502	200*	8.2	141	4.3	121	3.3
3000/3002	200*	8.2	170	6.2	146	4.5
3500/3502	200*	10.2	198	10.2	170	7.7
4000/4002	200*	10.2	200*	10.2	194	9.8

Model # \_\_\_\_\_ # Of Units \_\_\_\_\_ Type of Gas \_\_\_\_\_

Total Input _____ BTU/hr	Flow _____ USGPM	Allowable Pressure Drop _____ ft.
Total Output _____ BTU/hr	Recovery Rate _____ USGPH	@ _____ °F

Optional Accessories \_\_\_\_\_