Typical Specifications For
Modulating MicoFlame – Domestic Hot Water Supply
Models MF(N),(P)W 2010 – 4000, Non-Condensing
Models MF(N),(P)W 2012 – 4002, Condensing

The water heater shall be a CAMUS MicoFlame model _____ having an input rating of _____ Btu (kw) /hr. and _____Btu (kw)/hr output for domestic hot water and shall be operated on Natural gas or L.P. gas. The water heater shall be capable of firing down to 40% of rated input for models 2010 – 4000.

The water heater shall be design/certified by CSA International and shall meet the requirements of ANSI Z21.10.3b-2008 & CSA 4.3b-2008. The water heater shall be optionally vented as a Category I conventional appliance or a category II condensing 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 high heat temperature Stainless Steel with knitted metal fiber to provide modulating firing rates. The burner shall provide equal distribution of heat through the entire heat exchanger. A window view port shall be provided for visual inspection of the water heater during firing. Maximum input per burner shall be 1,000,000 BTU/hr.

Heat Exchanger:
The heat exchanger shall be suitable for a 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 controls to include factory mounted hi-limit and operator controls, on/off switch and 24 VAC class 2 transformer and light display package. The SmartFlame 78-0017 electronic modulating control to be accurate to 1^{o}F (0.5^{o}C) .The control shall also provide readouts of inlet/outlet temperatures and delta T as well as accumulated run hours. The control shall have 8 preset modes to allow operation of the heater as hydronic heating, DHW or remote operation through an analog 0-10VDC signal.

On/off switch and full diagnostic light package are included. Flow switch is included loose.

Firing Mode:
The heater shall operate as a fully modulating unit with a 5:2 turn down ratio.

Gas Train:
The gas train shall consist of a one to one air/gas ratio control valve, dual main valve seats, a pilot valve and pilot regulator.

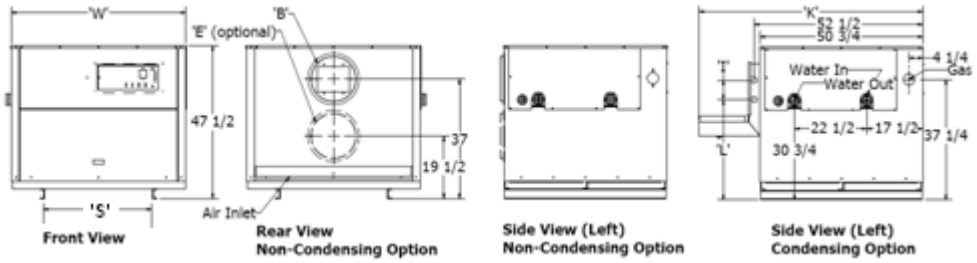
Ignition Module:
The ignition module shall provide for proved ignition of intermittent pilot and continuous retrial. Trial for ignition shall be a minimum of 15 seconds with 5 minutes between retrials.

External Jacket and Fasteners:
The external jacket shall be of stainless and enameled steel panels assembled with crimptite non-strip self tap screws.

SUBMITTAL DATA SHEET – MICOFLAME

Engineer: _____ | Job Location: _____ | Date: _____
Prepared by: _____ | Buyer's Name: _____ | Quote #: _____
Job Name: _____ | Buyer's Address: _____

Model 2010 – 4000 Non-Condensing, 2012 - 4002 Condensing



* 60 Ft. Equivalent, Appliance may be provided with two openings that can be combined into this size.

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

Venting

Model	'B' Dia. Venting** Outdoor	'B' Dia. Venting** Sidewall or Condensing*	'B' Dia. Venting** Standard	'E' Dia. 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

Input & Output Range

Model	Input Range [kBTU /hr x 100]	Input Range [kW]	Non-Condensing Input [BTU/hr]	Non-Condensing Input [kW]	Non-Condensing Output [BTU/hr]	Non-Condensing Output [kW]	Condensing Output [BTU/hr]	Condensing Output [kW]
2010/ 2012	800 - 2000	234.2 – 585.6	2,000,000	585.6	1,700,000	497.8	1,900,000	556.3
2500/ 2502	1000 - 2500	292.8 – 732.0	2,500,000	732.0	2,125,000	622.2	2,375,000	695.4
3000/ 3002	1200 - 3000	351.4 - 878.4	3,000,000	878.4	2,550,000	746.6	2,850,000	834.5
3500/ 3502	1400 - 3500	409.9 - 1024.8	3,500,000	1024.8	2,975,000	871.1	3,325,000	973.6
4000/ 4002	1600 - 4000	468.5 – 1171.2	4,000,000	1171.2	3,400,000	995.5	3,800,000	1,112.6

Heat Exchanger Head Loss & Flow

Model	20°F USGPM	20°F ΔP-ft.	30°F USGPM	30°F ΔP-ft.	35°F USGPM	35°F 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

Dimensions and Specifications

Model	'I'	'K'	'L'	'W'	'S'	Water Connection	Approx. Weight Gas Connection	Approx. Weight Non-Condensing [lbs.]	Approx. Weight 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

Recovery Capacity

Model	100°F Rise GPH	56°C Rise LPH	80°F Rise GPH	44°C Rise LPH	60°F Rise GPH	33°C Rise LPH
2010/2012	2037	7711	2546	9639	3395	12851
2500/2502	2546	9638	3183	12047	4243	16063
3000/3002	3055	11564	3819	14456	5092	19274
3500/3502	3565	13495	4456	16869	5942	22492
4000/4002	4074	15422	5093	19277	6790	25703

Model	50°F Rise GPH	28°C Rise LPH	40°F Rise GPH	22°C Rise LPH	20°F Rise GPH	11°C Rise LPH
2010/2012	4074	15422	5093	19277	10185	38554
2500/2502	5092	19275	6365	24094	12730	48188
3000/3002	6110	23129	7638	28911	15275	57822
3500/3502	7130	26990	8913	33737	17825	67475
4000/4002	8148	30844	10185	38554	20370	77109

***** Maximum flow recommended. Temperature rise may be higher than shown. Contact factory for recommendation**

Model # _____ # Of Units _____ Type of Gas _____

Total Input _____BTU/hr Flow _____USGPM @ Allowable Pressure Drop _____ft.

Total Output _____BTU/hr Recovery Rate _____USGPH @ _____^{0}F