

Brute® FT



Residential Hydronic Combination Boiler

Date:

Project #:

Engineer:

Prepared By:

Bid Date:

BMFTCF | Floor Standing, Combination

Boiler / Water Heater
Indoor, Size 199



Submission Data

Project Name:

Location:

Contractor:

Standard Equipment

- High condensing efficiency 95% AFUE
- Low pressure drop, fire tube heat exchanger design
- Full modulation 100% down to 10% of full fire (10:1 turndown)
- Sealed combustion chamber
- Pre-mix ceramic fiber burner
- Low NOx system exceeds the most stringent regulations for air quality – 17ppm NOx
- Horizontal or vertical direct vent
- Vent and air pipe lengths of up to 100 equivalent feet (each)
- Stainless steel heat exchanger with finned aluminum core fire tubes, welded construction
- ASME 30 psi (207kPa) working pressure heat exchanger
- ASME "H" stamp
- Inlet DHW filter
- Vent with PVC, CPVC or Polypropylene
- Natural gas or propane
- 30 psi (207kPa) ASME pressure relief valve
- Low lead compliant
- Gas leak detection
- Stainless Steel DHW indirect tank storage heat exchanger with priority for on-demand hot water
- Boiler pump wired and mounted inside jacket
- Built-in condensate trap and drain, priming not required
- Automatic air vent
- Pressure gauge
- Boiler water pressure switch
- Blocked vent pressure switch
- Blocked condensate pressure switch
- Burner site glass
- Electronic PID modulating control
- Direct spark ignition
- Customizable Freeze Protection
- Anti-short cycling
- Large user-interface and display
- Accepts external (0-10VDC) temperature setpoint signal
- Outdoor reset (sensor included)
- Outdoor air reset curve
- Manual reset high limit
- Wall mount bracket
- Field convertible between natural gas and propane
- 10-Year limited warranty

Boiler Data

Number of Units:

Fuel

Natural*

Options

Low Water Cut-off (shipped loose)

*Boilers shipped set up for use with Natural Gas and includes a Propane conversion kit.



Sizing Data

Model	Input		Output		AFUE	Gas Conn. Size inches	Heating Supply & Return Conn. Size inches	DHW Conn. Size inches	Shipping Weight	
	BTU/h	kW	BTU/h	kW					lbs	kg
BMFTCF 199	199,000	58	189,050	55	95%	3/4 NPT	1 NPT	3/4 NPT	242	110

NOTES:

- For other boiler ratings:

Boiler Horsepower: $HP = \frac{\text{Output}}{33,475}$ Radiation Surface: $EDR \text{ sq. ft.} = \frac{\text{Output}}{150}$

Domestic Hot Water Capacity

Model	35°F Rise		45°F Rise		77°F Rise		Stored DHW	
	GPM	l/m	GPM	l/m	GPM	l/m	Gallons	liters
BMFTCF 199	9.9	38	7.7	29	4.8	18	3.0	11.3

Clearances

APPLIANCE SURFACE	SUGGESTED SERVICE ACCESS CLEARANCE	
	INCHES	CM
Left Side	6	15
Right Side	26	64
Top	15	38
Back	5/8	1.6
Front	40	101
Bottom	0	0

Electrical Data

Size	Boiler		
	Volts	Phase	Amps
BMFTCF 199	120	Single	6

* Minimum 15A circuit required

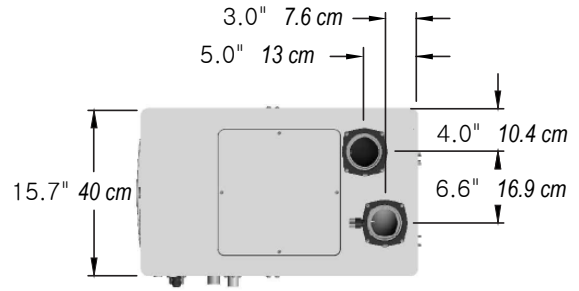
Vent System

	INTAKE / EXHAUST Max Equivalent Vent and Air Pipe Length (each)					
	STANDARD 2-PIPE			STANDARD 2-PIPE		
	DIA.	FT.	m	DIA.	FT.	m
BMFTCF199	2" *	50**	15.2	3"	100	30.5

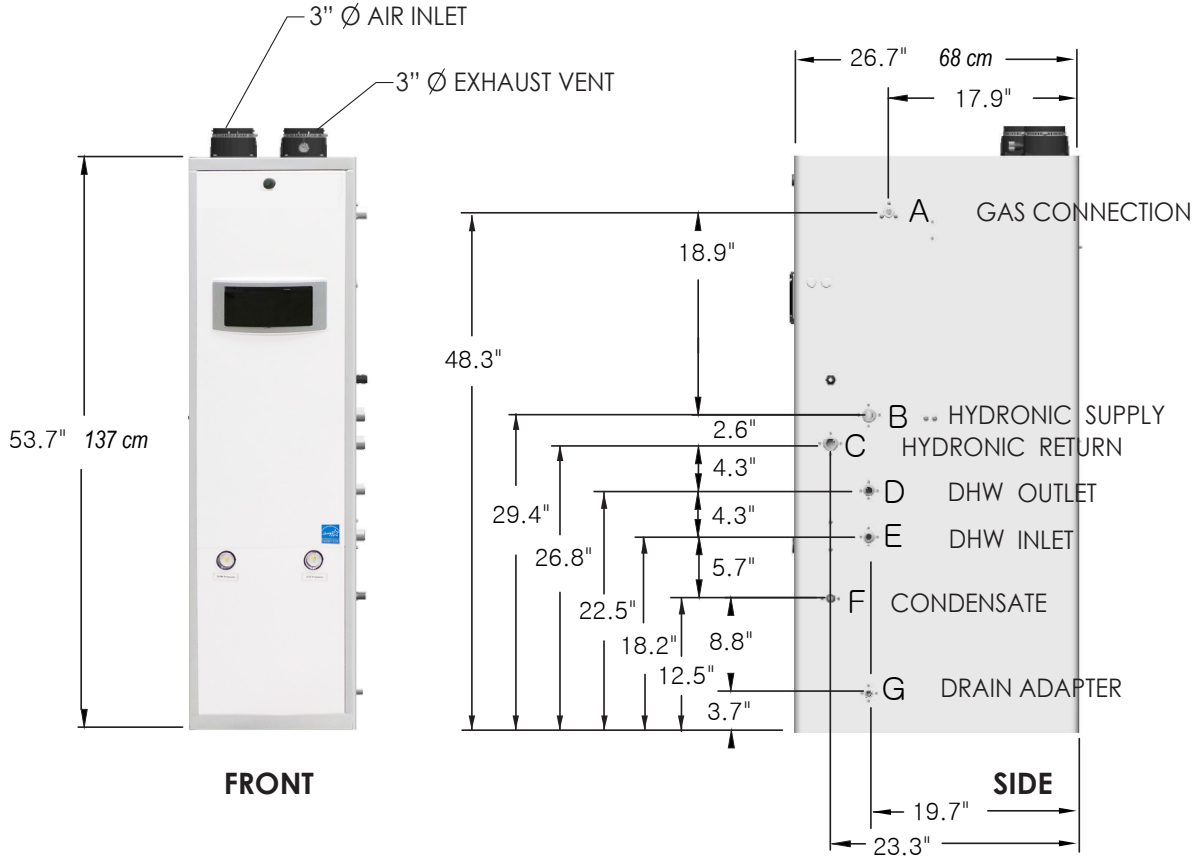
* Must use 3x2 adaptor within 1ft (3cm) of boiler. Reference the Installation and Operation Manual for more details.

**Propane models are limited to 25 equivalent feet of 2" vent.

BMFTCF 199



TOP



FRONT

SIDE

	Description	Diameter
A	Gas Connection	3/4" NPT
B	'CH supply' Connection	1" NPT
C	'CH return' Connection	1" NPT
D	'DHW outlet' Connection	3/4" NPT
E	'DHW inlet' Connection	3/4" NPT
F	Condensate	1/2" NPT
G	Drain	1/2" NPT