

Brute® FT



Hydronic Combination Boiler

BFTCF | Floor Standing, Combination

Boiler / Water Heater

Indoor, Sizes 199



Submittal Data

Date:

Project #:

Engineer:

Prepared By:

Bid Date:

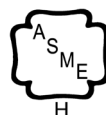
Project Name:

Location:

Contractor:

Standard Equipment

- High condensing efficiency 95.3% AFUE
- ASME 30 psi (207 kPa) working pressure
- ASME "H" stamp
- Stainless steel fire tube heat exchanger with welded construction
- Integral stainless steel mini boiler tank serves as low loss header and indirect DHW tank
- Low lead compliant
- Boiler pump wired and mounted inside jacket
- Full modulation 100% to 10% (10:1 turndown)
- Electronic PID modulating control
- Large user interface and display
- Receptacle for condensate pump (2A max)
- Supply and return boiler sensors
- Low water cutoff
- Smart DHW priority
- Bonus TT connection for high temp zone
- Accepts 0-10VDC temp setpoint signal
- Connection for DHW recirculation pump
- Outdoor reset (w/ sensor)
- Customizable freeze protection
- Anti-short cycle
- Direct spark ignition
- Manual reset high limit
- Sealed combustion chamber
- Pre-mix ceramic fiber burner
- Natural gas with propane conversion kit included
- Horizontal or vertical direct vent
- Concentric or two-pipe venting options
- Vent and air pipe lengths of up to 100 equivalent feet (each)
- Vent with PVC, CPVC, stainless steel, or polypropylene
- Built-in condensate trap and drain, priming not required
- 3-in-1 brass pipe adapter (for air vent, PRV, optional LWCO)
- 30 psi (207 kPa) pressure relief valve
- Removable and cleanable inlet air filter
- Inlet DHW filter
- Adjustable leveling feet
- Three service panels
- Gas leak detection
- Automatic air vent
- Pressure gauge
- Boiler water pressure switch
- Blocked vent pressure switch
- Blocked condensate pressure switch
- Burner site glass
- 10-Year limited warranty



Boiler Data

Number of Units:

Fuel

☐ Natural*

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

Field Installed Accessories

- ☐ Domestic Water Recirculation Sensor
- ☐ Neutralizer & Pump (fits inside and plugs into boiler cabinet)
- ☐ Horizontal Concentric 2" PVC Termination
- ☐ Horizontal Concentric 3" PVC Termination
- ☐ Concentric Flush-Mount 2" Vent Terminal
- ☐ Concentric Flush-Mount 3" Vent Terminal
- ☐ Appliance Adaptor for Stainless Steel Concentric Vent
- ☐ Appliance Adaptor/Starter Kit for Polypropylene Concentric Vent
- ☐ Polypropylene Offset Kit
- ☐ Polypropylene to Stainless Steel Adaptor
- ☐ Polypropylene Telescopic Concentric and 90° Elbow Kit
- ☐ 2" Vent/Air Pipe Screen*

*Note that boiler is shipped with two 3" screens

Sizing Data

Model	Input		AHRI Certified Heating Capacity		Net AHRI Rating	AHRI Certified AFUE		Gas Conn. Size	Heating Supply & Return Conn. Size	DHW Conn. Size	DHW Recirc Conn. Size	Shipping Weight	
	MBH	kW	MBH	kW	MBH	kW	%	inches	inches	inches	inches	lbs	kg
<input type="checkbox"/> BFTCF199	199	58	182	53	158	46	95.3	3/4 NPT	1-1/2 NPT	3/4 NPT	3/4 NPT	143	65

- NOTES:**
1. For other boiler ratings:
Boiler Horsepower: $HP = \frac{Output}{33,475}$ Radiation Surface: $EDR \text{ sq. ft.} = \frac{Output}{150}$
2. The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15.

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
BFTCF199	9.9	38	7.7	29	4.8	18	0.5 1.9

Clearances

APPLIANCE SURFACE	SUGGESTED SERVICE ACCESS CLEARANCE	
	INCHES	CM
Left Side	6	15
Right Side	6	15
Top	24	61
Back	1	2.5
Front	18	46
Bottom	0	0

Electrical Data

Size	Boiler		
	Volts	Phase	Amps
BFTCF199	120	Single	4

Minimum 15A circuit required.

Maximum 2A draw allowed on convenience receptacle.

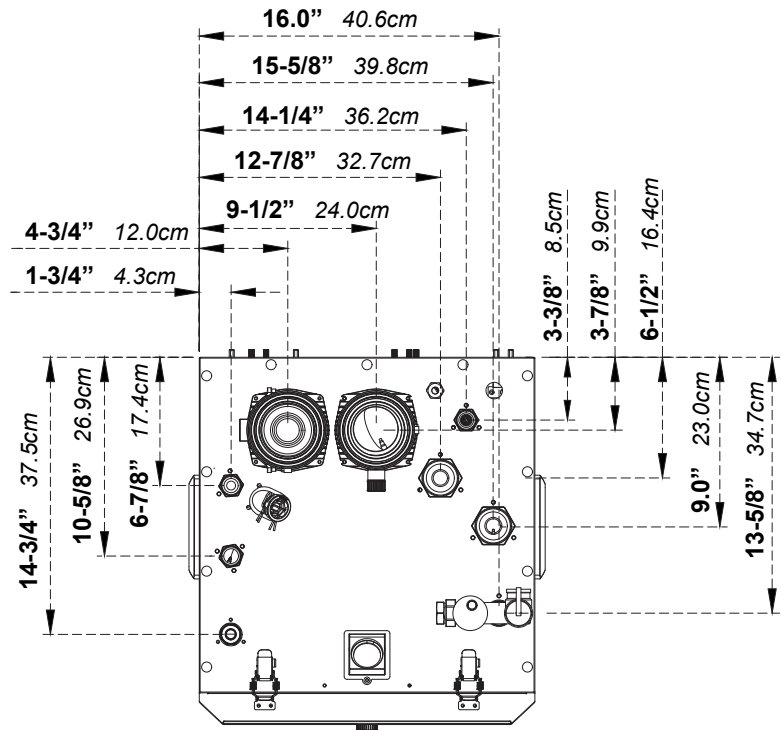
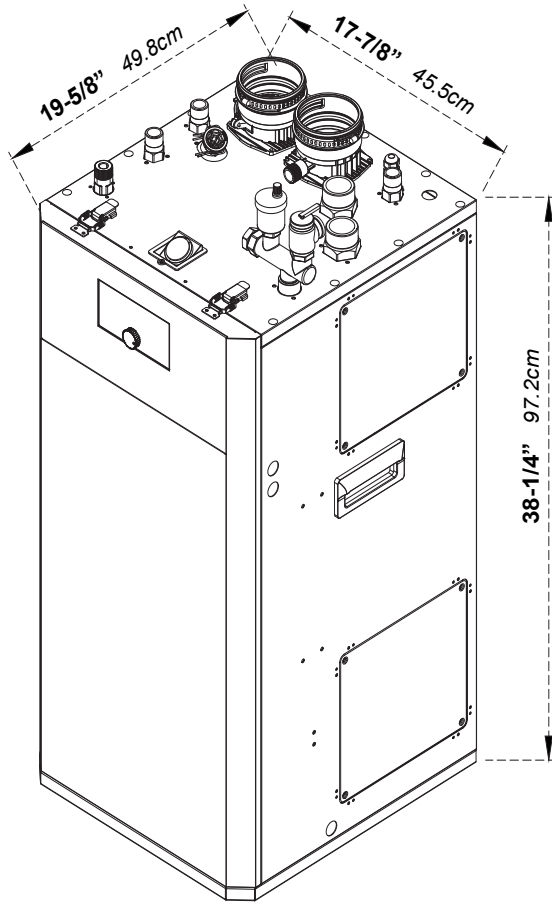
Vent System

SIZE	INTAKE / EXHAUST Max Equivalent Vent and Air Pipe Length (each)					
	STANDARD 2-PIPE			STANDARD 2-PIPE		
	DIA.	FT.	m	DIA.	FT.	m
BFTCF199	2" *	50	15.2	3"	100	30.5

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

Dimensional Data

Brute® FT Floor, Hydronic Combination Boiler



Description	Size
Gas Supply	3/4" NPT
Heating Water Outlet	1-1/2" NPT
Heating Water Inlet	1-1/2" NPT
Domestic Water Inlet	3/4" NPT
Domestic Water Outlet	3/4" NPT
Recirculation Water Inlet	3/4" NPT
Air Vent	1" NPT
Air Intake Collar	3"
Exhaust Vent	3"
Boiler drain	1/2" NPT
Condensate Line	1/2" (no NPT)

