

# Brute FT



# Residential Hydronic Combination Boiler

Date:

Project #:

Engineer:

Prepared By:

Bid Date:

BMFTCW | Wall Mounted Combination

Boiler / Water Heater

Indoor, Sizes 140, 199



## Submittal Data

Project Name:

Location:

Contractor:

## Standard Equipment

- High condensing efficiency 95% AFUE
- Low pressure drop, fire tube heat exchanger design
- Full modulation
  - 140MBH: 100% down to 20% of full fire (5:1 turndown)
  - 199MBH: 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
- 5-Year parts 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
BMFTCW 140	140,000	41	133,000	39	95%	3/4 NPT	1 NPT	3/4 NPT	111	50
BMFTCW 199	199,000	58	189,050	55	95%	3/4 NPT	1 NPT	3/4 NPT	130	59

### NOTES:

1. For other boiler ratings:

Boiler Horsepower:  $HP = \frac{\text{Output}}{33,475}$       Radiation Surface: EDR 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
BMFTCW 140	7.1	27	5.5	21	3.2	12	0.33	1.25
BMFTCW 199	9.8	37	7.7	29	4.8	18	0.66	2.5

## Clearances

APPLIANCE SURFACE	SUGGESTED SERVICE ACCESS CLEARANCE	
	INCHES	CM
Left Side	8	20
Right Side	8	20
Top	18	46
Back	5/8	1.5
Closet, Front	3	8
Front	40	101
Bottom	24	61
Vent	1	3

## Electrical Data

Sizes	Boiler		
	Volts	Phase	Amps
140 and 199	120	Single	4

\* Minimum 15A circuit required

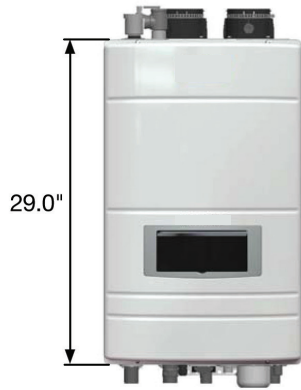
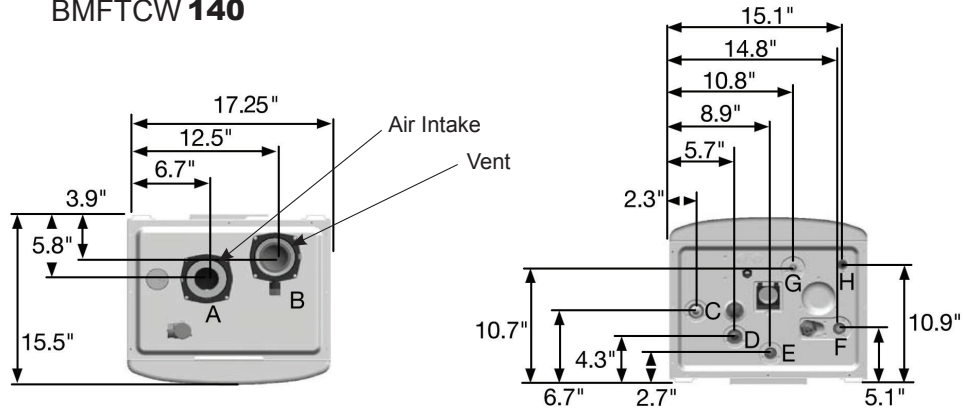
## Vent System

SIZES	INTAKE / EXHAUST Max Equivalent Vent and Air Pipe Length (each)					
	STANDARD 2-PIPE			STANDARD 2-PIPE		
	DIA.	FT.	m	DIA.	FT.	m
140 and 199	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.

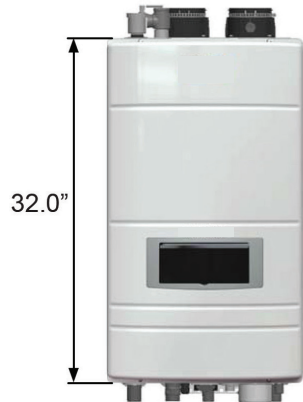
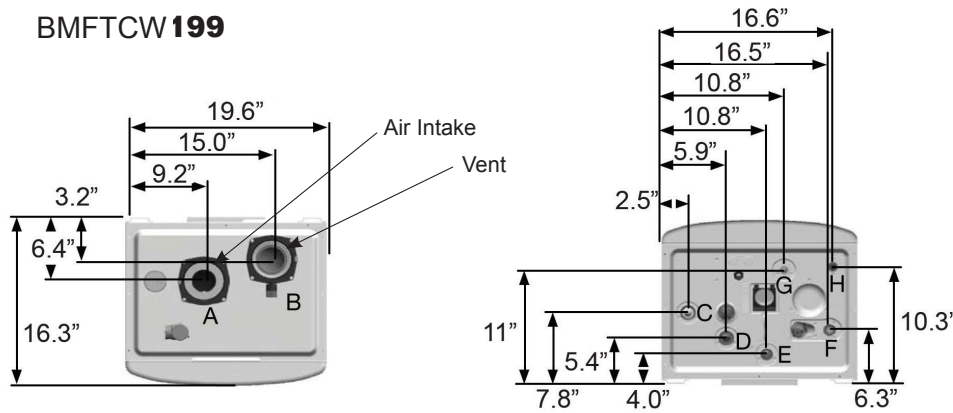
\*\*Propane models are limited to 25 equivalent feet of 2" vent.

**Dimensional Data** BMFTCW 140



	Description	Diameter
A	Air Intake collar	3"
B	Vent Pipe Collar	3"
C	'CH' Supply	1" NPT
D	'CH' Return	1" NPT
E	'DHW' Outlet	3/4" NPT
F	'DHW' Inlet	3/4" NPT
G	Gas Inlet	3/4" NPT
H	Condensate Line	1/2" NPT

**BMFTCW 199**



	Description	Diameter
A	Air Intake collar	3"
B	Vent Pipe Collar	3"
C	'CH' Supply	1" NPT
D	'CH' Return	1" NPT
E	'DHW' Outlet	3/4" NPT
F	'DHW' Inlet	3/4" NPT
G	Gas Inlet	3/4" NPT
H	Condensate Line	1/2" NPT

