

# Brute® FT



# Residential Hydronic Boiler

MFTHW | Wall Mounted Boiler

Indoor Sizes 100, 140, 199

## Submittal Data



Date:

Project #:

Engineer:

Prepared By:

Bid Date:

Project Name:

Location:

Contractor:

## Standard Equipment

- Stainless steel heat exchanger with finned aluminum core fire tubes
- ASME "H" stamp
- ASME 30 psi (207kPa) working pressure
- 95% AFUE
- Full modulation:
  - 10:1 turndown (140 & 199)
  - 5:1 turndown (100)
- Boiler pump wired and mounted
- 30 psi (207kPa) ASME pressure relief valve
- Pressure gauge
- Sealed combustion chamber
- Pre-mix ceramic fiber burner
- Low NOx system exceeds the most stringent regulations for air quality
- Horizontal or vertical direct vent
- Vent and air pipe lengths up to 100 equivalent feet (each)
- Electronic PID modulating control
- Cascade up to 20 units
- Large user-interface and display
- Outdoor reset (sensor included)
- 0-10VDC external setpoint connections
- Manual reset high limit
- Customizable Freeze Protection
- Direct spark ignition
- Gas leak detection
- Built-in condensate trap and drain
- Automatic air vent
- Boiler water pressure switch
- Blocked vent pressure switch
- Blocked condensate pressure switch
- Burner site glass
- Wall mount bracket
- Screens for vent and air pipe
- Propane conversion kit
- 10-Year limited heat exchanger warranty
- 5-Year limited parts warranty

## Boiler Data

Number of Units:

## Field Installed Accessory Kits

- Piping Manifold Kit
- Neutralizer Kit
- Cascade Kit

Horizontal Concentric Vent/Air Termination

- 2"
- 3"

Concentric Flush-Mount Vent/Air Termination

- 2"
- 3"



## Sizing Data

Model	Input		AHRI Certified Heating Capacity		Net AHRI Rating		AHRI Certified	Modulation	Gas	Water	Shipping Weight	
	MBH	kW	MBH	kW	MBH	kW	AFUE		Conn Size	Conn Size	lbs	kg
MFTHW100	100	29	93	27	81	24	95.0%	20-100% (5:1)	¾" NPT	1" NPT	98	44
MFTHW140	140	41	129	38	112	33	95.0%	10-10% (10:1)	¾" NPT	1" NPT	102	46
MFTHW199	199	58	181	53	157	46	95.0%	10-10% (10:1)	¾" NPT	1" NPT	118	54

For other boiler ratings:

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

The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15

## Clearances

Appliance Surface	Clearance from Combustibles and Non-combustible Surfaces	Suggested Service Clearance
TOP	9 in (23 cm)	18 in (46 cm)
BACK	0 in (0 cm)	0 in (0 cm)
FRONT	24 in (61 cm)	40 in (101 cm)
SIDE	3 in (7 cm)	8 in (20 cm)
BOTTOM	12 in (30 cm)	24 in (61 cm)

## Electrical Data

Size	Boiler			Max Power Consumption
	Volts	Phase	Amps	
MFTHW (all sizes)	120	Single	4	160W

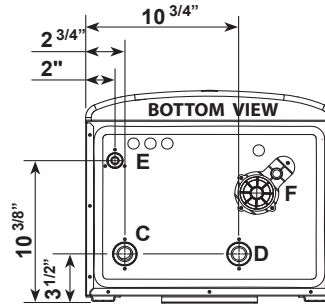
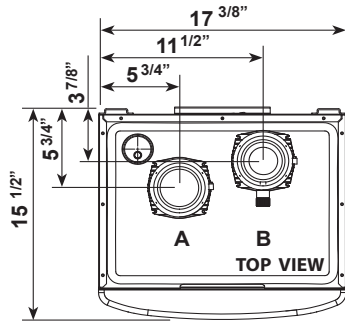
Minimum 15A circuit required

## Vent System

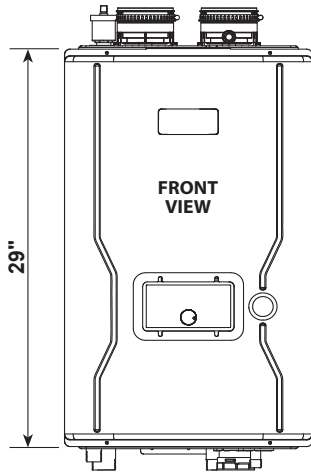
INTAKE / EXHAUST Max Equivalent Vent and Air Pipe Length (each)						
SIZES	STANDARD 2-PIPE			STANDARD 2-PIPE		
	DIA.	FT.	m	DIA.	FT.	m
(all sizes)	2"*	50	15.2	3"	100	30.5

\* Must use 3x2 adapter within 1ft (30 cm) of boiler. Reference the Installation and Operation Manual for more details.

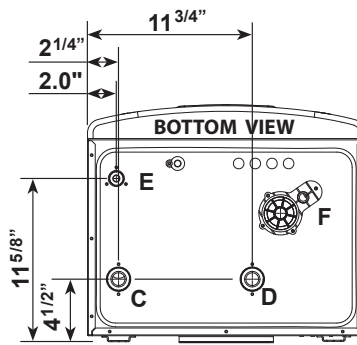
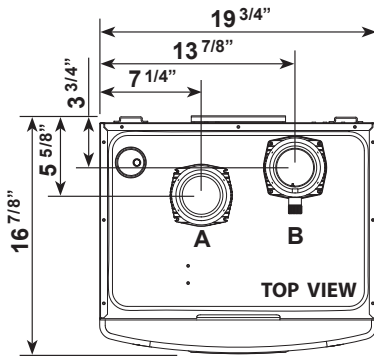
**Dimensional  
Data**



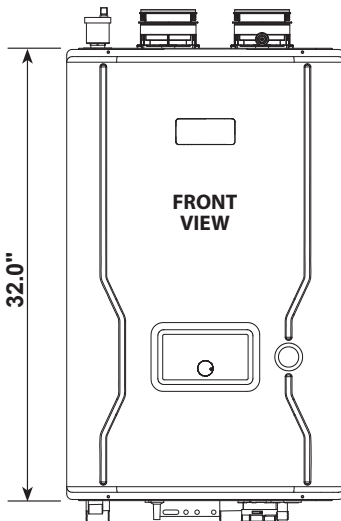
**MFTHW 100 / 140**



	Description	Diameter
A	Air Intake Collar	3"
B	Vent Pipe Collar	3"
C	'CH' Supply Adapter	1 1/4"
D	'CH' Return Adapter	1 1/4"
E	Gas Inlet Adapter	3/4"
F	Condensate Line	1/2"



**MFTHW 199**



	Description	Diameter
A	Air Intake Collar	3"
B	Vent Pipe Collar	3"
C	'CH' Supply Adapter	1 1/4"
D	'CH' Return Adapter	1 1/4"
E	Gas Inlet Adapter	3/4"
F	Condensate Line	1/2"

