

# Brute<sup>®</sup> FT



# Hydronic Boiler

BFTHW | Wall Mounted Boiler

Indoor Sizes 301, 399



Date:

Project #:

Engineer:

Prepared By:

Bid Date:

## Submittal Data

Project Name:

Location:

Contractor:

## Standard Equipment

- Stainless steel heat exchanger w/ finned aluminum core fire tubes
- ASME "H" stamp
- ASME 80 psi (551kPa) working pressure
- 95%+ AHRI certified thermal and combustion efficiencies
- Full Modulation:
  - 10:1 turndown (399)
  - 7.5:1 turndown (301)
- 30 psi (207kPa) ASME PRV
- Pressure gauge
- Sealed combustion chamber
- Pre-mix ceramic fiber burner
- Top & bottom water connections
- Top & bottom gas connections
- Wall mount bracket
- Available with floor stand
- Low NOx system exceeds the most stringent regulations for air quality
- Horizontal or vertical direct vent
- Vent and air pipe lengths up to 150 equivalent feet (each)
- Screens for air and vent pipe
- Large user-interface and display
- Electronic PID modulating control
- Cascade up to 4 units (mixing sizes is allowed)
- Direct spark ignition
- Outdoor reset (sensor included)
- Manual reset high limit
- Low water cutoff
- Customizable freeze protection
- Air filter
- Inlet air flue gas contamination sensor
- Built-in condensate trap and drain
- Automatic air vent
- Air pressure switch
- Burner site glass
- Propane conversion kit
- O-ring and gasket kit included
- 10-year limited heat exchanger warranty
- 5-year limited parts warranty

## Boiler Data

Model Number:

- BFTHW301NX Wall-Mounted Boiler
- BFTHW399NX Wall-Mounted Boiler
- BFTHW301NF Boiler with Floor Stand
- BFTHW399NF Boiler with Floor Stand

Number of Units:



## Field Installed Accessory Kits

<input type="checkbox"/> Condensate neutralizer	<input type="checkbox"/> Flush concentric vent/air terminal 3"	High altitude conversion kits (5001-10000 feet)
<input type="checkbox"/> Condensate neutralizer with pump	<input type="checkbox"/> Flush concentric vent/air terminal 4"	
<input type="checkbox"/> Cascade sensor	<input type="checkbox"/> Concentric vent/air terminal 3"	<input type="checkbox"/> Natural gas
<input type="checkbox"/> Cascade cable	<input type="checkbox"/> 4" vent/air pipe screen	<input type="checkbox"/> Propane
<input type="checkbox"/> DHW sensor		
<input type="checkbox"/> Mixing control sensor		

## Sizing Data

	Size	AHRI Certified Ratings												
		Input Rate		Turndown Ratio	Combustion Efficiency	Thermal Efficiency	Gross Output		Net AHRI Rating		Product Weight		Shipping Weight	
		MBH	kw				%	%	MBH	kw	MBH	kw	lbs	kg
<input type="checkbox"/>	<b>301 Boiler</b>	301	88	7.5:1	95.4	95.1	286	84	249	73	240	109	265	120
<input type="checkbox"/>	<b>399 Boiler</b>	399	117	10:1	95.9	95.4	379	111	330	97	250	114	275	125
<input type="checkbox"/>	<b>301 Boiler &amp; Stand</b>	301	88	7.5:1	95.4	95.1	286	84	249	73	275	125	310	141
<input type="checkbox"/>	<b>399 Boiler &amp; Stand</b>	399	117	10:1	95.9	95.4	379	111	330	97	285	129	320	145

## Clearances

	Boiler Hung on Wall			
	Clearance to Any Surface		Suggested Service Clearance	
	inches	cm	inches	cm
Front	1	2.5	18	46
Back	1	2.5	1	2.5
Left	1	2.5	6	15
Right	1	2.5	6	15
Top (Alcove)	9	23	24	61
Top (Closet)	22	56	22	56
Bottom	12	30	24	61

	Boiler with Floor Stand			
	Clearance to Any Surface		Suggested Service Clearance	
	inches	cm	inches	cm
Front	1	3	18	46
Back	1	2.5	1	2.5
Left	1	2.5	6	15
Right	1	2.5	6	15
Top (Alcove)	9	23	24	61
Top (Closet)	22	56	24	61

## Electrical Data

Size	Main Supply	Maximum Power Consumption
301	120V 60Hz / 15A	160W
399	120V 60Hz / 15A	160W

## Vent System

	3" Combustion Air & Vent Pipe			4" Combustion Air & Vent Pipe		
	Minimum Combustion Air Pipe Length	Minimum Vent Pipe Length	Maximum Combustion Air & Vent Pipe Length	Minimum Combustion Air Pipe Length	Minimum Vent Pipe Length	Maximum Combustion Air & Vent Pipe Length
Pipe Length	0 feet (0 m)	3 feet (1 m)	65 feet (19.5 m)	0 feet (0 m)	3 feet (1 m)	150 feet (45 m)
Deductions per 90° Elbow	5 feet (1.5 m)			5 feet (1.5 m)		
Deductions per 45° Elbow	2.5 feet (0.75 m)			2.5 feet (0.75 m)		
Max. Number of Total Elbows	6			8		

### Combustion Air Pipe

Material	United States	Canada
ABS	ANSI/ASTM D1527	Air pipe material must be CPVC, sch 40, ANSI/ASTM or polypropylene, based upon the intended application of the boiler.
PVC, sch 40	ANSI/ASTM D1785 or D2665	
CPVC, sch 40	ANSI/ASTM F441	
Polypropylene	UL1738, ULC S636	
Single wall galv. steel	26 gauge	

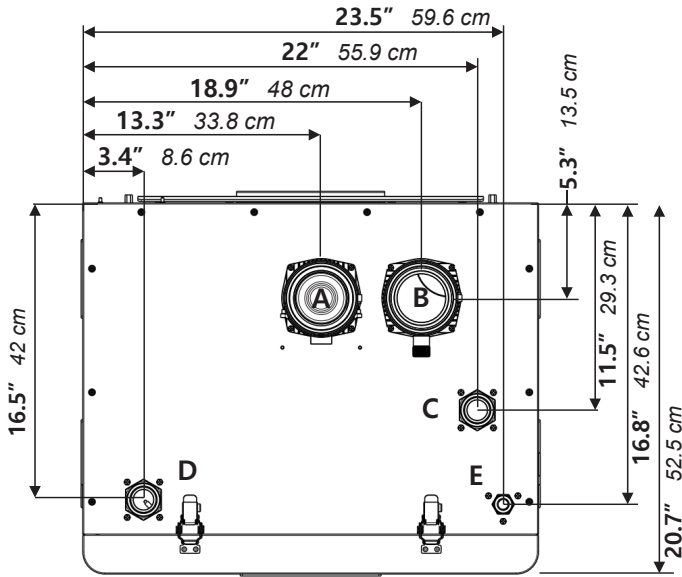
### Exhaust Vent Pipe

Material	United States	Canada
Stainless Steel	UL 1738	Venting must be ULC-S636 certified for use as venting material. The venting material must be chosen based upon the intended application of boiler.
PVC, sch 40	ANSI/ASTM D1785	
CPVC, sch 40	ANSI/ASTM F441	
Polypropylene (PP)**	UL1738 or ULC-S636	

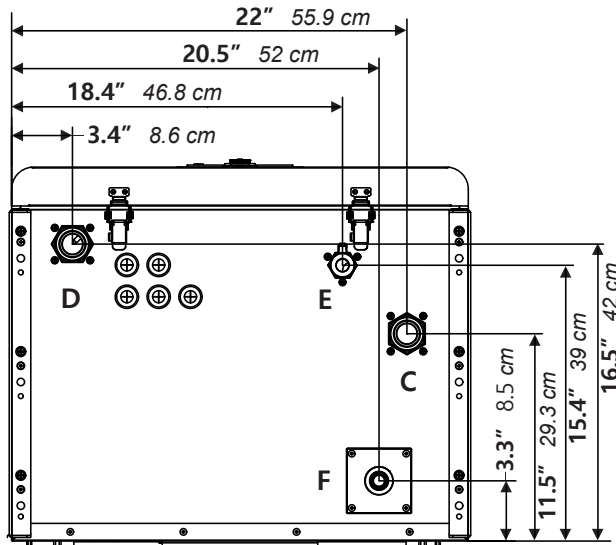
\*\* 3" Polypropylene Flex allowed with restrictions:

- Up to 65 linear feet.
- Vertical vent through the roof ONLY.
- Indirect venting ONLY.

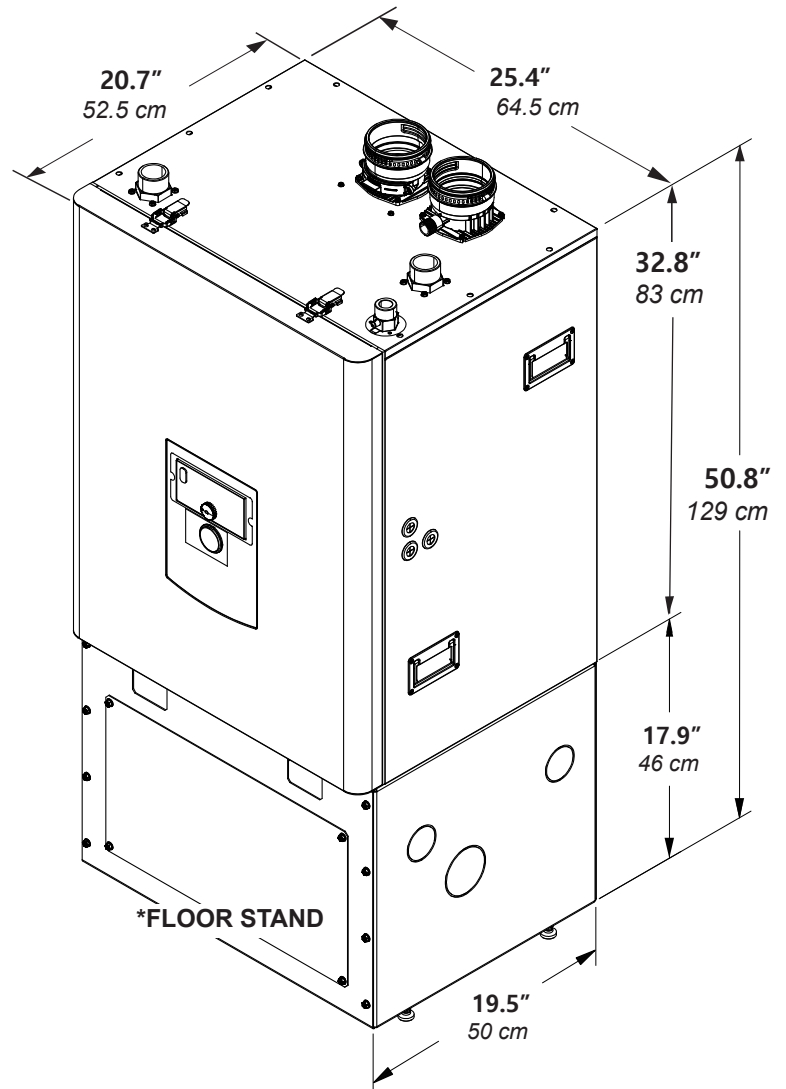
## Dimensional Data



**TOP VIEW**



**BOTTOM VIEW**



\*FLOOR STAND

\*Floor stand is available separately or ordered with the boiler.

Callout	Description	Diameter
A	Air Intake Collar	3-inch
B	Vent Pipe Collar	3-inch
C	Boiler Supply	1½" NPT
D	Boiler Return	1½" NPT
E	Gas Inlet	1" NPT
F	Condensate Line	½"