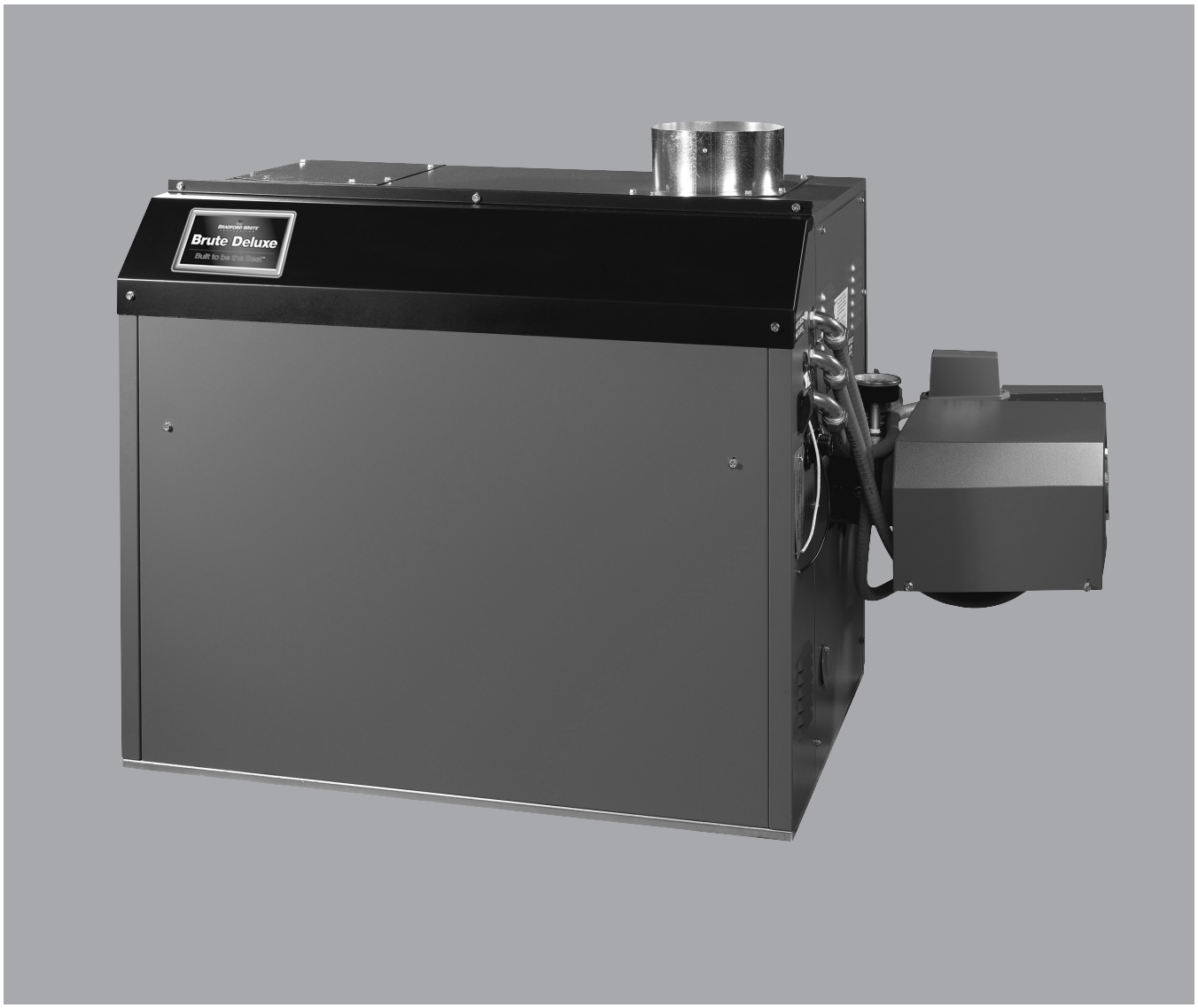
BRADFORD WHITE®
WATER HEATERS

Brute Deluxe Volume Water Heater

Indoor or Outdoor 200,000 - 400,000 BTU/Hr.

85.0% Thermal Efficiency

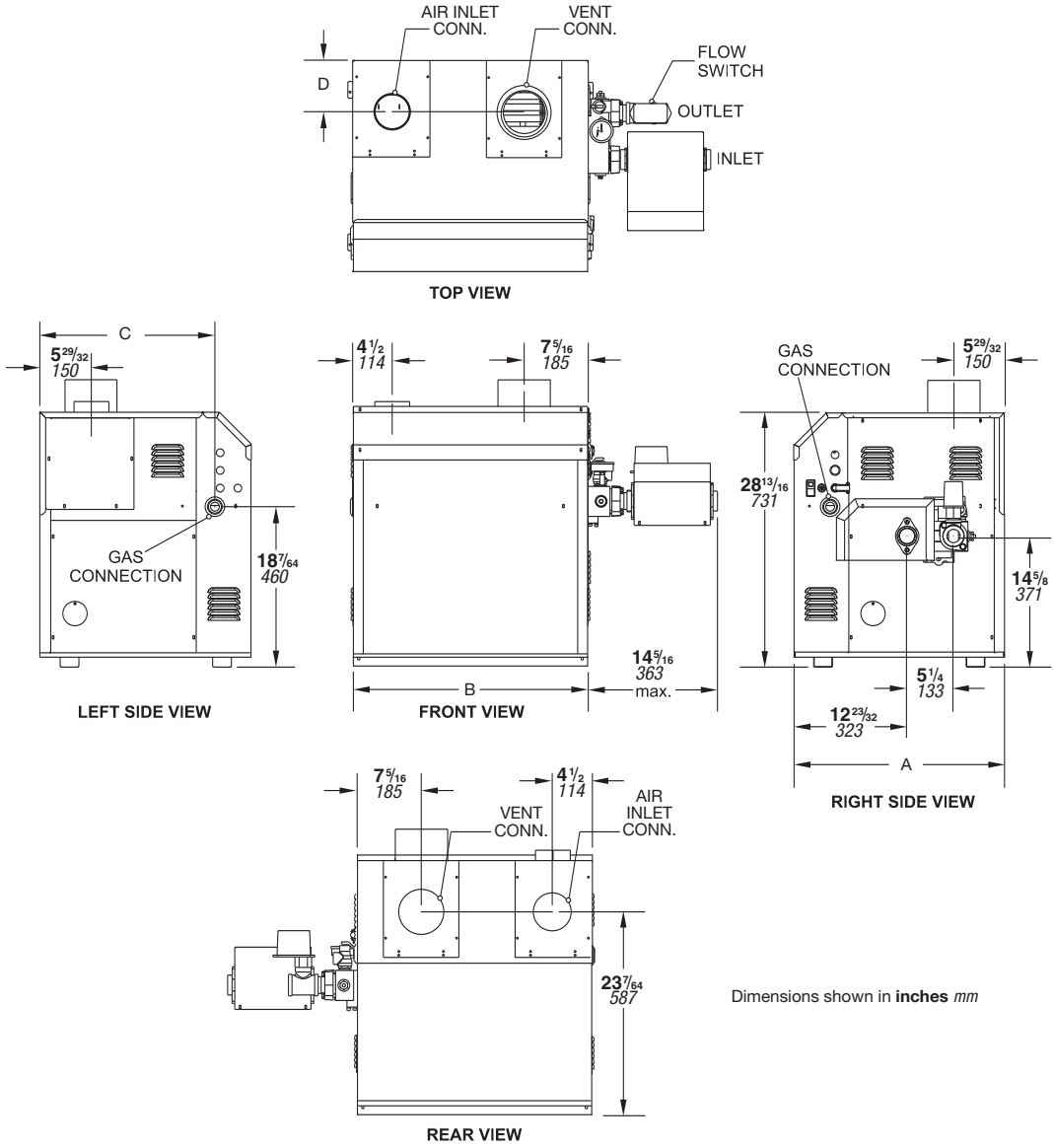


10-Year Limited Heat Exchanger Warranty / 1-Year Limited Warranty on Component Parts.

For more information on warranty, please visit www.bradfordwhite.com

For products installed in USA, Canada and Puerto Rico. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.

Brute Deluxe Volume Water Heater Specifications



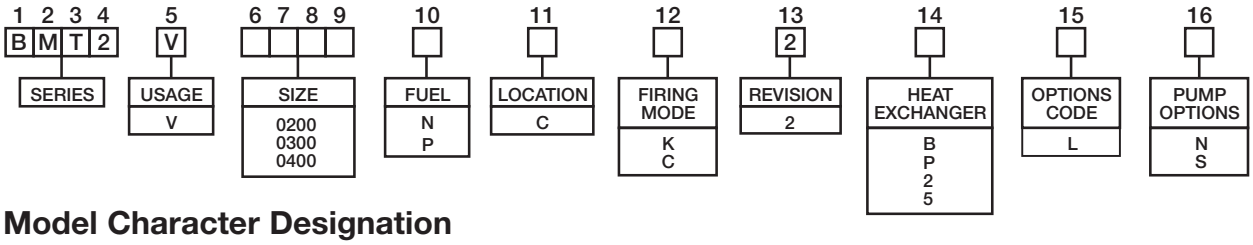
Dimensions shown in **inches** *mm*

Dimensions

Model Number	A Depth in.	B Width in.	C in.	D in.	Air Inlet Conn. in.	Vent Conn. in.	Connections NPT Size Water in.	Gas in.
BMT2V0200	23 13/16	20 1/2	19 29/32	5 29/32	4	5	1 1/2 NPT	3/4 NPT
BMT2V0300	23 13/16	26 1/2	19 29/32	5 29/32	4	6	1 1/2 NPT	3/4 NPT
BMT2V0400	23 13/16	33 1/2	19 29/32	5 29/32	6	7	1 1/2 NPT	3/4 NPT

Model Number	A Depth mm.	B Width mm.	C mm.	D mm.	Air Inlet Conn. mm.	Vent Conn. mm.	Connections NPT Size Water mm.	Gas mm.
BMT2V0200	605	521	505	150	102	127	38 NPT	19 NPT
BMT2V0300	605	673	505	150	102	152	38 NPT	19 NPT
BMT2V0400	605	851	505	150	152	178	38 NPT	19 NPT

Brute Deluxe Volume Water Heater Specifications



Model Character Designation

(1-4) Model Series Designation
BMT2 = Brute Deluxe

(5) Usage
V= Volume Water Heater

(6-9) Size
0200 = 199,900 BTU/Hr. input
0300 = 300,000 BTU/Hr. input
0400 = 399,900 BTU/Hr. input

(10) Fuel
N = Natural Gas
P = Propane

(11) Location
C = Indoor or Outdoor

(12) Firing Mode
K = 2-Stage
C = On-Off

(13) Revision
2 = Revision Two with Tekmar Board

(14) Heat Exchanger
B = Glass Lined Cast Iron with Copper Tubes Bronze Trim (Standard)
P = Glass Lined Cast Iron with Cupronickel Tubes Bronze Trim
2 = Glass Lined Cast Iron with Copper Tubes Bronze Trim with HLW Stamp
5 = Glass Lined Cast Iron with Cupronickel Tubes Bronze Trim with HLW Stamp

(15) Options
L = Standard

(16) Options
N = Pump Mounted (Normal Water Conditions)
S = Pump Mounted (Soft Water Conditions)

Sizing Data

Model Number	Input [1]		Output [1]		Shipping Weight	
	BTU/Hr.	kW	BTU/Hr.	kW	lbs.	kg.
BMT2V0200	199,900	58.6	169,915	49.8	290	*132*
BMT2V0300	300,000	87.9	255,000	74.7	320	*145*
BMT2V0400	399,900	117.2	339,915	99.6	350	*159*

NOTES:
1. Input and output must be derated 4% per 1000 feet above sea level when installed above 2000 feet altitude.

Clearances

Appliance Surface	Required Clearance from Combustible Material in.	mm.	Suggested Service Access Clearance in.	mm.
Left Side	1	*25*	24	*607*
Right Side	1	*25*	24	*607*
Top	1	*25*	12	*305*
Back	1	*25*	12	*305*
Front	1	*25*	36	*914*
Vent	Per venting system supplier's instructions			

Electrical Data

Models	Boiler Volts	Phase	Amps	Pump Circuit Size Volts	Phase	Amps	Blower Circuit
200 - 400	120	Single	15	Included in Boiler Connection			Included in Boiler Circuit

Recovery Data

Model Number	GPH Recovery at Degree Rise								
	40°F	50°F	60°F	70°F	80°F	90°F	100°F	120°F	140°F
BMT2V0200	510	408	340	291	255	227	204	170	146
BMT2V0300	765	612	510	437	383	340	306	255	219
BMT2V0400	1020	816	680	583	510	453	408	340	291

Model Number	LPH Recovery at Degree Rise								
	22°C	28°C	33°C	39°C	44°C	50°C	56°C	67°C	78°C
BMT2V0200	1,928	1,542	1,285	1,100	964	858	771	643	552
BMT2V0300	2,892	2,313	1,928	1,652	1,448	1,285	1,157	964	828
BMT2V0400	3,856	3,084	2,570	2,204	1,928	1,712	1,542	1,285	1,100

Water Flow Data

Model Number	Hard Water		Normal Water		Soft Water	
	Flow GPM	Temp. Rise °F	Flow GPM	Temp. Rise °F	Flow GPM	Temp. Rise °F
BMT2V0200	45	8	35	10	23	15
BMT2V0300	45	11	35	15	23	22
BMT2V0400	45	15	35	19	23	30

Model Number	Hard Water		Normal Water		Soft Water	
	Flow LPM	Temp. Rise °C	Flow LPM	Temp. Rise °C	Flow LPM	Temp. Rise °C
BMT2V0200	170	4	133	6	87	8
BMT2V0300	170	6	133	8	87	12
BMT2V0400	170	8	133	11	87	17

Note: Soft water: 1 to 7.5 grains per gallon. Normal water: 7.6 to 17 grains per gallon. Hard water: More than 17 grains per gallon.

Pump Data

Model Number	Normal Water	
	HP	Amps
BMT2V0200	1/6	2.0
BMT2V0300	1/6	2.0
BMT2V0400	1/6	2.0

Brute Deluxe Volume Water Heater Specifications

Standard Features

- ASME 160 psi working pressure heat exchanger
- ASME “H” stamp
- Flanged water connections
- Glass-lined headers
- External header gaskets
- 125 psi (861 kPa) ASME rated pressure relief valve
- Low lead construction
- Temperature pressure gauge
- Multiple operating gas valve/ pressure regulators
- Manual “A” gas valve
- Intake air filter
- Removable burner tray(s)
- Stainless steel burners
- Built-in fan for Category I or III vent systems
- Air pressure switch
- Blocked vent switch
- Burner site glass
- Blower pre-purge and post-purge
- 24V control system
- 115/24V transformer
- Flow switch
- Manual reset high limit
- Fusible link (size 200)
- On-off, or 2-stage firing
- Field convertible Vent and Intake Air connections (top or rear)
- Certified for indoor or outdoor use
- Hot surface ignition
- On/off toggle switch
- Pump time delay
- CSD-1 compliant
- Less than10ppm NOx

Factory Mounted Options

- Glass lined cast iron headers, cupronickel tubes, bronze trim
- Glass lined cast iron headers, copper tubes, bronze trim – HLW Stamp
- Glass lined cast iron headers, cupronickel tubes, bronze trim – HLW Stamp
- Soft water pump
- Reversed heat exchanger
- Low water cutoff

Field Installed Accessories

- Alarm package (with bell)
- Side-wall vent terminal for indoor unit with horizontal venting
- Side-wall combustion air terminal for indoor unit with horizontal ducted air
- Air terminal for outdoor unit
- Vent terminal for outdoor unit

Sample Specification

The heater shall be a Bradford White Model BMT2V _____ , rated at the input and output shown on the schedule. The unit(s) shall be design certified to comply with the current edition of the Harmonized ANSI Z21.10.3 / CSA 4.3 Standard for Gas Water Heaters, and shall be design certified for both indoor and outdoor use. The unit(s) shall be designed and constructed in accordance with the ASME Boiler & Pressure Vessel Code, Section IV requirements for 160 psi (1103 kPa) working pressure, and shall bear the ASME “H” Stamp. The unit(s) shall be constructed to comply with the efficiency requirements of the latest edition of ASHRAE Standard 90.1.

The water tube heat exchanger shall be a straight tube design with ten 5/8" (16mm) inner diameter integral finned copper tubes, with a heat exchanger rating of 160 psi (1103 kPa) working pressure. The heat exchanger shall be a low water volume design. All gaskets shall be non-metallic, outside the jacket, and separated from the combustion chamber to eliminate deterioration from heat. Headers shall have covers permitting visual inspection and cleaning of all internal surfaces. The heat exchanger shall have a ten year warranty.

The heater shall come complete with an in-line pump, mounted and wired, and sized to provide the correct heater flow rate for the heater and thirty feet of 1½" pipe, with a normal number of fittings. Each unit shall have a pump time delay. The pump time delay shall be adjustable from 0.1 to 10 minutes for continued pump circulation after the call for heat has been satisfied, to remove residual heat from the unit’s combustion chamber.

The units shall use a proved heat surface ignition with a 15 second pre-purge cycle to clean out the combustion chamber. Upon the call for heat, if a flame is not detected, the ignition module shall attempt 2 more time before locking out, and required manual reset. If there is a loss of flame signal during a call for heat, the ignition control shall attempt three re-ignition cycles before locking out. The ignition control shall have terminals for checking flame signal without having to remove the access ignitor. The control circuit shall be 24V. Unit shall be 120V, single-phase.

Burners shall be multi-port design, and shall be constructed of high temperature stainless steel. The burners shall be designed to mix air and gas, and burn cleanly with NOx emissions not exceeding 10ppm. Burners shall be in easily-removable burner tray assemblies with no more than 4 burners per tray.

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

BRADFORD WHITE® WATER HEATERS

Ambler, PA

For U.S. and Canada field service, contact your professional installer or local Bradford White sales representative.

Sales **800-523-2931** • Fax **215-641-1670** / Technical Support **800-334-3393** • Fax **269-795-1089** • Warranty **800-531-2111** • Fax **269-795-1089**

International: Telephone **215-641-9400** • Telefax **215-641-9750 / www.bradfordwhite.com**

BRADFORD WHITE-CANADA® INC. Sales / Technical Support **866-690-0961** / **905-238-0100** • Fax **905-238-0105** / **www.bradfordwhite.com**

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