

# BWB GAS-FIRED WATER BOILER

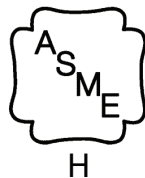
## PRODUCT DATA

### Features



Fig. 1 – Model BWB

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Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to [www.ahridirectory.org](http://www.ahridirectory.org).

A200078

The Model BWB Gas-Fired Hot Water Boiler provides fast heat quietly and economically to assure the finest in hydronic heating.

These boilers provide quality design in a small, compact unit easily installed in a basement, garage, or utility room. They can be installed on a combustible floor (excluding carpet) without a kit or field constructed base.

The BWB boilers are CSA certified for use with natural gas and are field convertible for use with propane gas when a factory-authorized conversion kit is used.

#### *Range of Capacities*

These boilers are available in sizes 60,000 to 235,000 BTUH.

#### *2021 DOE Compliant*

The BWB boiler meets all 2021 Department of Energy requirements for these products, including burner and heat exchanger design for 84% AFUE.

#### *Completely Packaged*

Each boiler is completely assembled, including all controls (except thermostat and expansion tank). All necessary wiring is factory installed, except for the circulator pump. The boiler is ready for gas, water, room thermostat, and electrical connections.

#### *Thermal-Pin, Cast-Iron Sections*

These sections speed heat transfer from the flue gases to the boiler water with faster thermostat response, providing greater comfort and economy. Maximum heat is produced at a lower level on the thermal-pin sections, leading to peak efficiency. Steel push nipples are used between each section to provide a water-tight seal.

#### *Integral Draft*

These boilers incorporate an integral draft system to simplify installation. A factory-supplied, field-installed draft hood is included.

#### *New Burner Design*

New burner design provides quiet operation, corrosion resistance and improved combustion efficiency. Propane convertible with accessory kit.

#### *Other Controls*

An automatic gas valve and intermittent pilot provide quiet dependable operation of the burners. Factory-supplied safety components assure protection against overheating and pressure build-up. A factory installed low-water cutoff is included for protection against low water operation. The circulator is pre-wired with 5-ft. (1.5 M) of BX conduit for easy installation for supply-side pumping.

#### *Insulated Casing*

The casing is fully insulated with fiberglass for maximum operating efficiency and economy.

#### *Automatic Vent Damper*

The BWB boiler is CSA design certified for use with the factory supplied automatic vent damper.

#### *Sections Tested*

All BWB heat exchanger assemblies are factory assembled and tested hydrostatically per the current ASME pressure vessel code, section IV, for cast iron sectional boilers. The maximum allowable working pressure is 50 psig. Assembled boilers are 100% end-of-line tested for functionality, electrical safety, and gas leak detection.

#### *Other Features*

- RH and LH piping and wiring connections for added flexibility
- Removable Burner Tray
- Factory Installed low-water cutoff

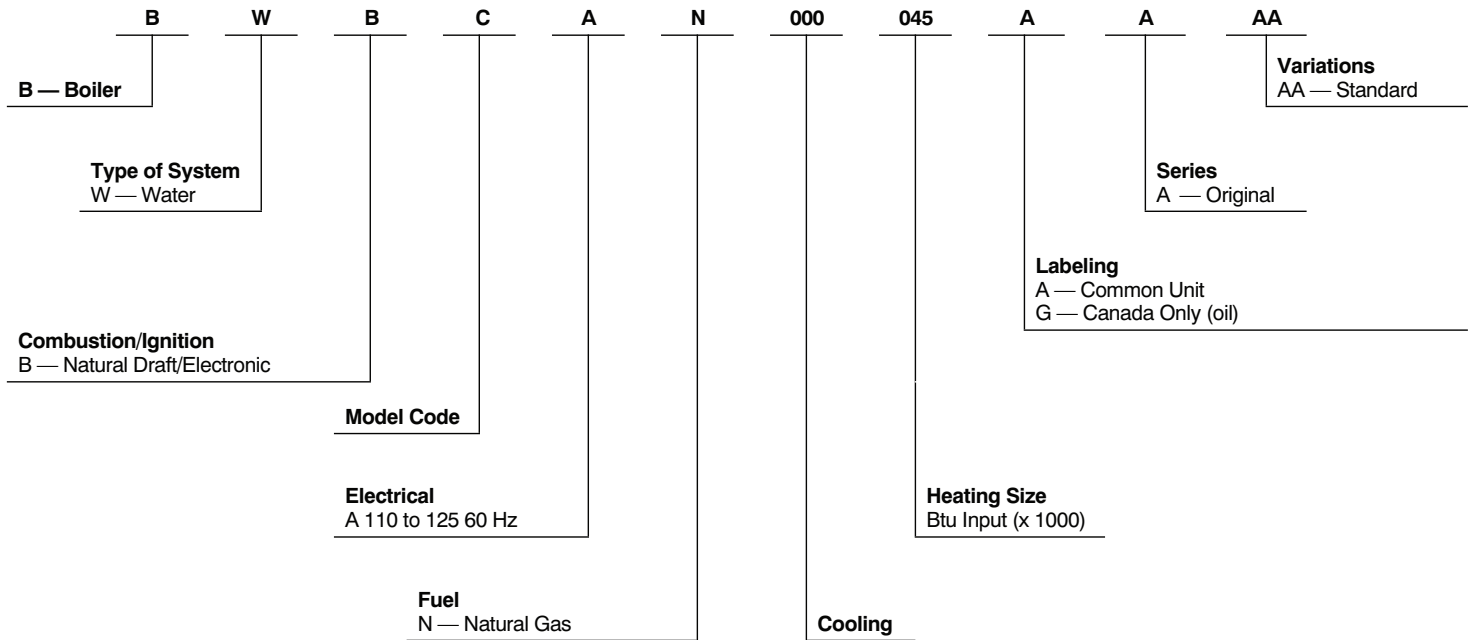


Fig. 2 – MODEL NUMBER NOMENCLATURE

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Table 1 – BOILER ACCESSORIES

DESCRIPTION	PART NUMBER
Filltrol Package (Up to 75,000 BTUH)	KBAFP0101DNK
Filltrol Package (Up to 200,000 BTUH)	KBAFP0201DNK
Filltrol Package (Over 200,000 BTUH)	KBAFP0301DNK
Zoning Valve 3/4-in.	KBAZV0101DNK
Gas Conversion Kit - Natural to Propane	KBANP4101DNK
Gas Conversion Kit - Propane to Natural	KBAPN3101DNK
Carbon Monoxide Alarm (10-pack)	COALM(CC,BB)NRB02-A10

Table 2 – CLEARANCES - in. (MM)

PART OF BOILER	CLEARANCE
Right Side	3 (76 mm)*
Left Side (Control Side)	9 (229 mm)
Top	18 (457 mm)
Back	8 (203 mm)
Front	18 (457 mm)*

\*Service clearance requirement 24 in. (610 mm); Front alcove clearance 18 in. (457 mm).

Table 3 – ELECTRICAL DATA

ALL MODELS	
Voltage—Hertz—Phase	120 — 60 — 1
Minimum Branch Circuit Wire Size (AWG)	14
Maximum Fuse Size (Amps)	15
Control Circuit Power Available	50va—@ 24v

Model	BWBC60	BWBC95	BWBC120	BWBC150	BWBC175	BWBC205	BWBC235
# Sections	3	4	5	6	7	8	9
<b>A</b> Width (Jacket)	13-3/8"	13-3/8"	16-1/4"	19"	21-7/8"	27-1/2"	27-1/2"
	340 mm	340 mm	411 mm	483 mm	555 mm	700 mm	700 mm
<b>B</b> Width W/ External Gas Valve	17-5/8"	19-1/4"	22"	24-7/8"	27-3/4"	32-3/4"	33-1/2"
	448 mm	489 mm	559 mm	632mm	705 mm	832 mm	851 mm
<b>C</b> Vent Location (Half Width)	6-3/4"	6-3/4"	8-1/8"	9-1/2"	10-15/16"	13-3/4"	13-3/4"
	171 mm	171 mm	206 mm	241 mm	278 mm	349 mm	349 mm
<b>D</b> Height	32-1/8"	32-1/8"	32-1/8"	32-1/8"	32-1/8"	32-1/8"	32-1/8"
	816 mm	816 mm	816 mm	816 mm	816 mm	816 mm	816 mm
<b>E</b> Damper Height	5 3/4"	5 3/4"	6"	6"	6-3/4"	6-3/4"	6-3/4"
	146 mm	146 mm	152 mm	152 mm	178 mm	178 mm	178 mm
<b>F</b> Depth w/o Draft Hood Installed	20"	20"	20"	20"	20"	20"	20"
	508 mm	508 mm	508 mm	508 mm	508 mm	508 mm	508 mm
<b>G</b> Depth W/ Draft Hood Installed	24-1/8"	24-1/8"	24-1/8"	24-1/8"	24-1/8"	24-1/8"	24-1/8"
	613 mm	613 mm	613 mm	613 mm	613 mm	613 mm	613 mm
<b>H</b> Flue Diameter	4"	5"	6"	6"	7"	7"	7"
	102 mm	127 mm	153 mm	153 mm	178 mm	178 mm	178 mm
Supply & Return Tappings	1-1/4" NPT	1-1/4" NPT	1-1/4" NPT	1-1/4" NPT	1-1/4" NPT	1-1/4" NPT	1-1/4" NPT
Natural Gas Inlet	1/2" NPT	1/2" NPT	1/2" NPT	1/2" NPT	1/2" NPT	3/4" NPT	3/4" NPT
Relief Valve NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT
Drain Valve NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT
Heating Water Content, Gal (Liter)	1.9 (7.2)	2.3 (8.8)	2.8 (10.5)	3.2 (12.2)	3.7 (13.9)	4.1 (15.6)	4.6 (17.3)
Air Cushion Tank, Gal (Liter) Estimate* (Actual Based on System Size)	15 (57)*	30 (114)*	30 (114)*	30 (114)*	30 (114)*	30 (114)*	30 (114)*
Weight less pkg lbs (KG)	170 (77)	210 (96)	250 (114)	280 (128)	320 (145)	350 (159)	390 (177)
Shipping Weight lbs (KG)	215 (98)	250 (114)	295 (134)	335 (152)	385 (175)	420 (191)	465 (211)

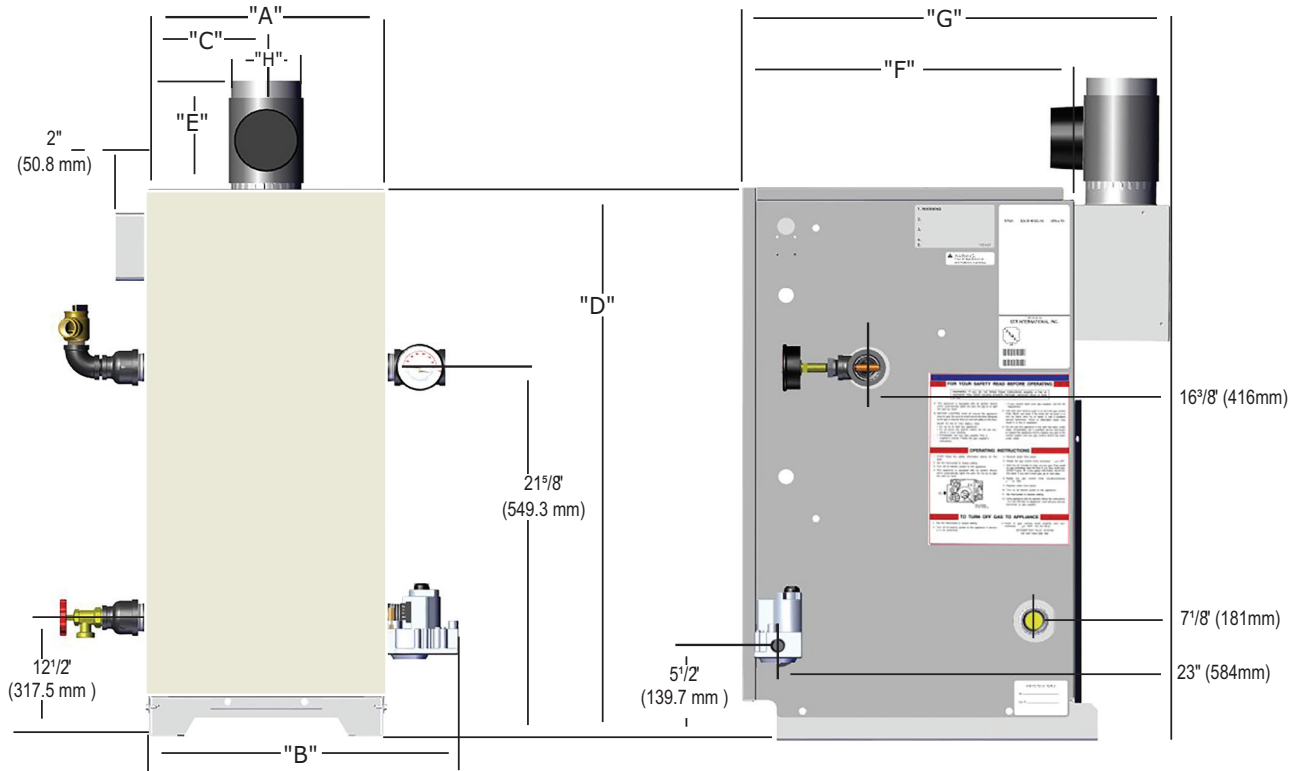


Fig. 3 – Dimensions

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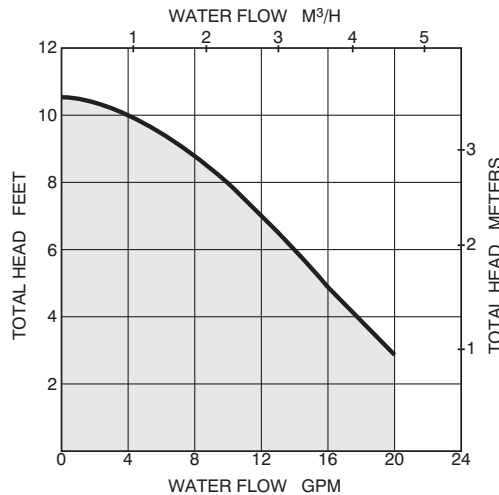
**Table 4 – RATINGS and CAPACITIES**

MODEL	GAS TYPE	NUMBER OF SECTIONS	NUMBER OF BURNERS	MAX INPUT (BTUH)	HEATING CAPACITY (BTUH)	NET AHRI RATING WATER (BTUH)	AFUE	CN HIGH ALTITUDE INPUT* (BTUH)	FLUE DIAMETER (INCHES)
BWBCAN000060	Natural	3	2	59,000	50,000	43,000	84.0	53,100	4
BWBCAN000095	Natural	4	3	92,500	78,000	68,000	84.0	83,200	5
BWBCAN000120	Natural	5	4	120,000	101,000	88,000	84.0	108,000	6
BWBCAN000150	Natural	6	5	149,000	125,000	109,000	84.0	134,000	6
BWBCAN000175	Natural	7	6	175,000	147,000	128,000	84.0	157,500	7
BWBCAN000205	Natural	8	7	205,000	172,000	150,000	84.0	184,500	7
BWBCAN000235	Natural	9	8	235,000	197,000	171,000	84.0	211,500	7

\*Figures for Canada 2000–4500. For U.S., derate 4% per every 1000 ft above 2000 ft.

**Table 5 – SPECIFICATIONS**

UNIT SIZE	060	095	120	150	175	205	235
<b>General Data</b>							
Sections -Fine Grain Cast Iron	3	4	5	6	7	8	9
Burners-Stainless Steel Alloy	2	3	4	5	6	7	8
Burners- Orifice Size Nat	#40	#38	#39	#39	#39	#39	#39
Burners- Orifice Size LP	#53	#52	#53	#53	#53	#53	#53
<b>Gas Controls - Intermittent Pilot</b>							
Gas Valve	Honeywell						
Inlet Size	1/2-in.	1/2-in.	1/2-in.	1/2-in.	1/2-in.	3/4-in.	3/4-in.
Pilot Assembly	CERV (France)						
Controls	Honeywell (Limit) / Hydrolevel (Low Water Cutoff)						
Limit Control Range	130° F to 220° F						
Pressure/Temperature Gauge	0 to 75 PSIG / 70° F to 320° F						
Pressure Relief Valve Setting	30 lbs.	30 lbs.	30 lbs.	30 lbs.	30 lbs.	30 lbs.	30 lbs.
Spark Generator	Integrated High Limit and Electronic Control						
Circulator Relay - Aquastat							
Vent Damper (inch)	4	5	5	6	6	7	7
<b>Circulator</b>							
Taco	007						
Full Load Amps	0.70						
Flange Size FPT	1-1/4-in.						



**Fig. 4 – Circulator Curve**

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