

# BW3 GAS-FIRED WATER BOILER SERIES C

## PRODUCT DATA

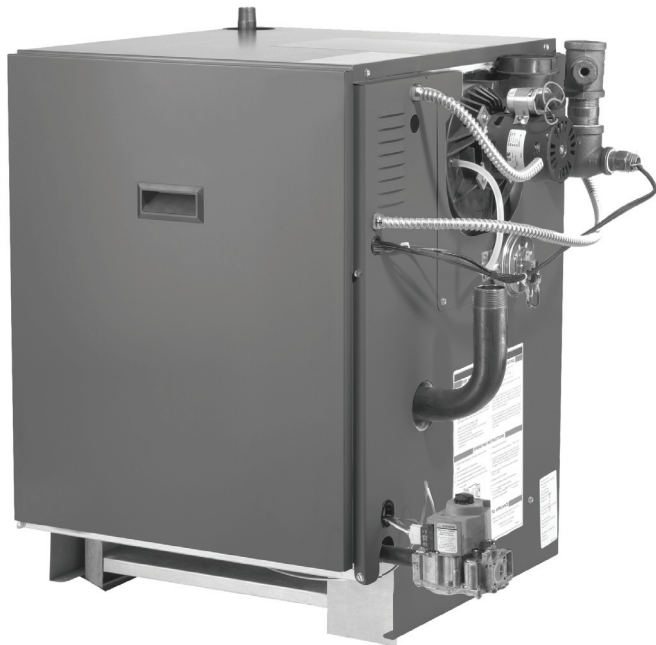
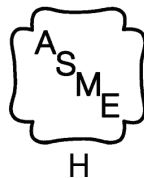


Fig. 1 – Model BW3

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The Model BW3 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 when a combustible floor base is constructed.

The BW3 boiler is CSA certified for use with natural gas and is field convertible for use with propane gas when a factory-authorized conversion kit is used.

### Features

#### *Range of Capacities*

These boilers are available in sizes 42,500 to 187,500 BTUH.

#### *2021 DOE Compliant*

The BW3 boiler meets all 2021 Department of Energy requirements for these products.

#### *Completely Packaged*

Each boiler comes fully assembled, including all controls (except thermostat and expansion tank). Factory pre-wired for quick connection of supplied circulator pump. Easily identified field connections for gas, electric, water, and room thermostat.

#### *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 induced draft system to simplify installation. No external draft diverter is needed. Category I horizontal venting with compatible power venter.

#### *Titanium Composite Burners*

Provide 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 authorized accessory kit is available for protection against low water operation where required by local code. The circulator is pre-wired with 6-ft. (1.8 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.

#### *No Automatic Vent Damper Required*

The BW3 boiler is an induced draft design and does not require or use an automatic vent damper for chimney venting.

#### *Sections Tested*

Each section is hydrostatically tested per ASME Section H requirements. The maximum allowable working pressure is 50 psig for a hot water boiler.

#### *Propane Convertible*

With factory approved conversion kit accessory.

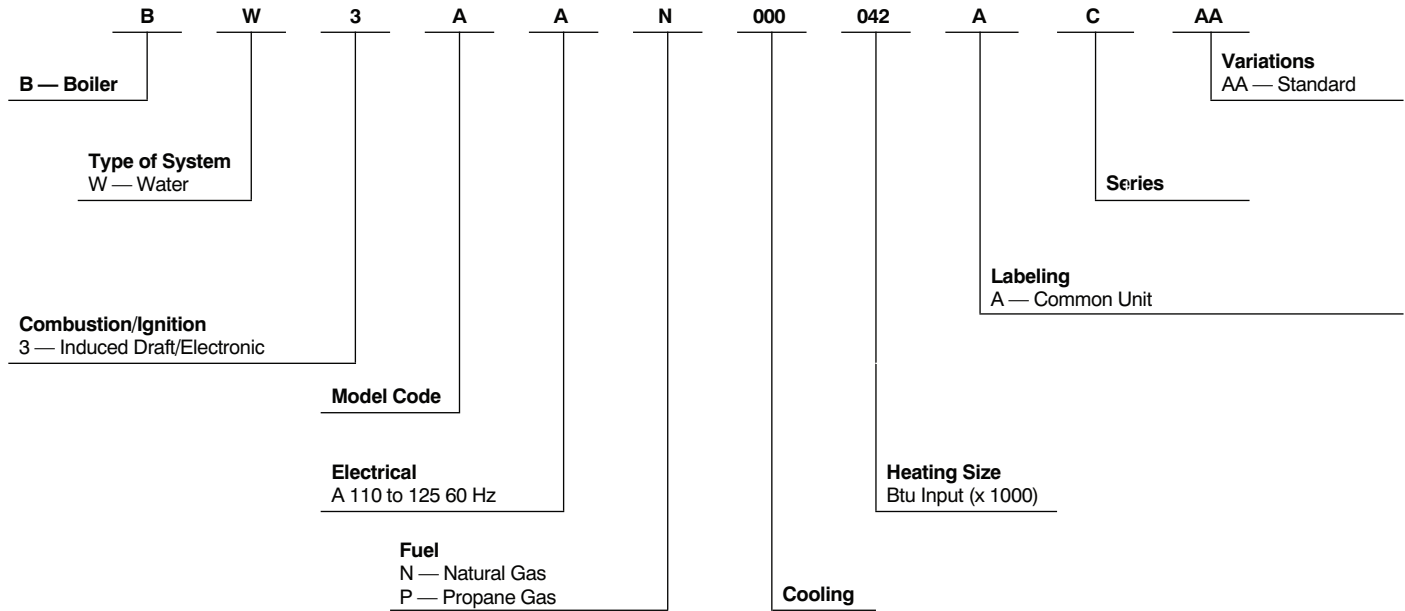


Fig. 2 – Model Number Nomenclature

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Table 1 – 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
High Limit Control*	KBAHL0101DNK
Carbon Monoxide Alarm (10-pack)	COALM(CC,BB)NRB02-A10
Low Water Cut-off Kit	KBALW0201DNK
Gas Conversion Kit Natural to Propane	KBANP1001DNK
Gas Conversion Kit Propane to Natural	KBAPN1001DNK

\*Accessory High Limit Control is a strap-on aquastat used as an auxiliary limit or reverse acting circulator control.

Table 2 – ELECTRICAL DATA

ALL MODELS	
Voltage—Hertz—Phase	115 — 60 — 1
Minimum Branch Circuit Wire Size (AWG)	14
Maximum Fuse Size (Amps)	15
Control Circuit Power Available	40va—@ 24v

Model	BW3AAN000042	BW2AAN000050	BW3AAN000112	BW3AAN000150	BW3AAN000187
# Sections	2	3	4	5	6
A Width	11"	14-1/4"	17-1/2"	20-3/4"	24"
	279 mm	362 mm	445 mm	527 mm	610 mm
B Height	29"	29"	29"	29"	29"
	737 mm	737 mm	737 mm	737 mm	737 mm
C Depth	23-1/4"	23-1/4"	23-1/4"	23-1/4"	23-1/4"
	591 mm	591 mm	591 mm	591 mm	591 mm
D Vent Location	2-5/16"	2-5/16"	2-5/16"	2-5/16"	2-5/16"
	59 mm	59 mm	59 mm	59 mm	59 mm
E Flue Diameter (Sidewall)	3"	3"	3"	3"	4"
	76 mm	76 mm	76 mm	76 mm	102 mm
F Flue Diameter (Chimney)	4"	4"	4"	4"	4"
	102 mm	102 mm	102 mm	102 mm	102 mm
Supply & Return Tappings	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
Relief Valve 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
Heating Water Content, Gal (Liters)	1.75 (6.6)	3 (11.4)	4.25 (16.1)	5.5 (20.9)	6.75(25.6)
Boiler Weight, less pkg - Lbs (KG)	225 (102.1)	265 (120.2)	322 (146.1)	370 (167.8)	431 (195.5)

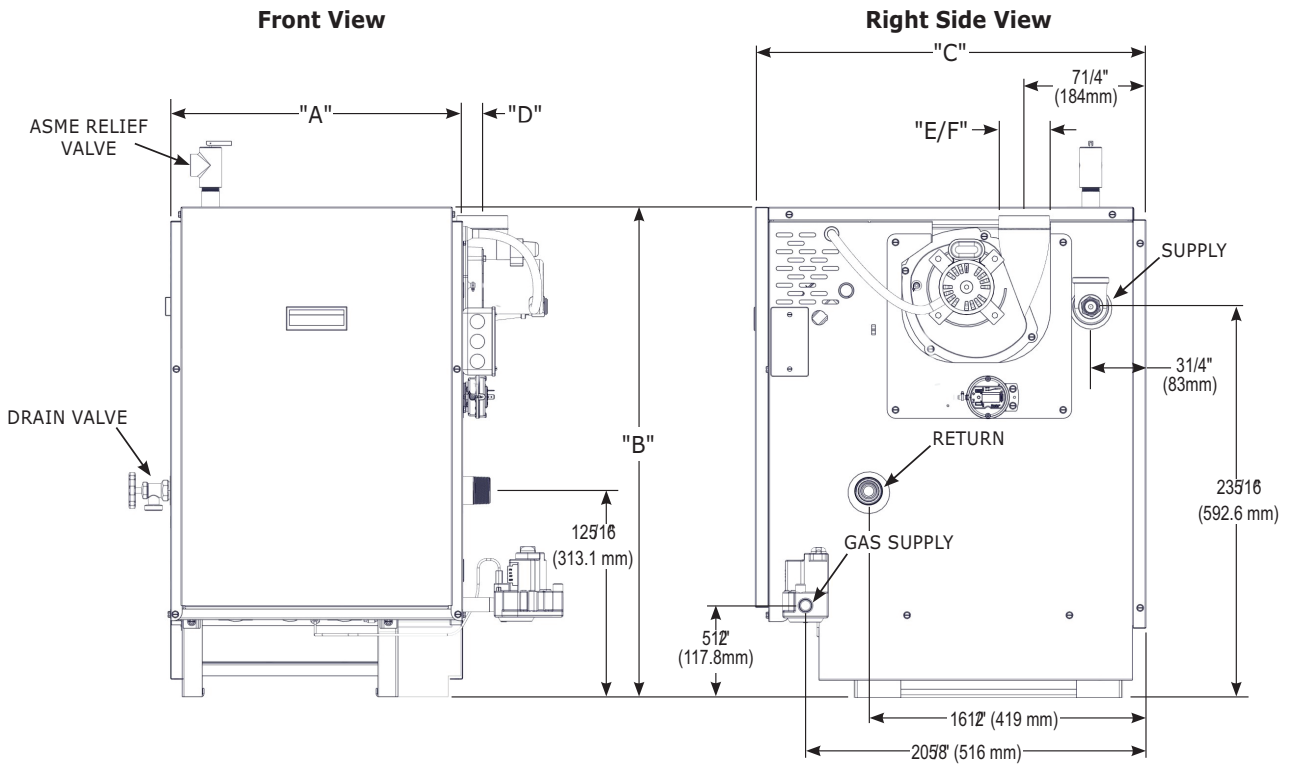


Fig. 3 – Dimensions

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Table 3 – Clearances

PART OF BOILER	COMBUSTIBLE - IN. (mm)
Right Side (Control Side)	8 (203 mm)*
Left Side	6 (152 mm)
Top	6 (152 mm)
Back	6 (152 mm)
Front	18 (457 mm)*
Flue/Vent Connector	6 (152 mm)

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

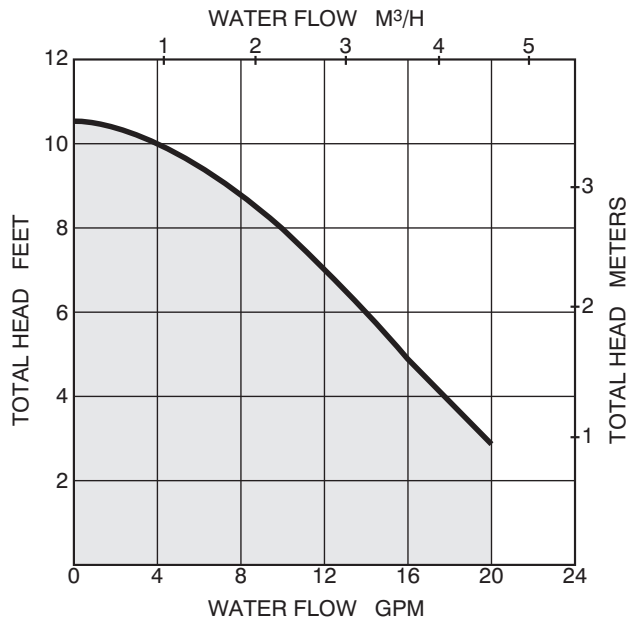
**Table 4 – Ratings and capacities\***

MODEL	GAS TYPE	MAX INPUT (BTUH)	HEATING CAPACITY (BTUH)	AFUE %	NET RATINGS (BTUH)	BOILER WATER CAPACITY (GALLONS)	APPROXIMATE SHIP WEIGHT (LBS.)
BW3AAN042	Natural	42,500	36,000	84.4	31,000	1.7	215
BW3AAN075	Natural	75,000	63,000	84.0	55,000	3.0	265
BW3AAN112	Natural	112,500	95,000	84.0	83,000	4.2	322
BW3AAN150	Natural	150,000	127,000	84.0	110,000	5.5	370
BW3AAN187	Natural	187,500	158,000	84.0	137,000	6.7	431

\* Gas input ratings are for elevations up to 2000 ft. in the USA. For elevations above 2000 ft., reduce input 4% for each 1000 ft. above sea level. In Canada, boilers may be used at high altitude using a certified field conversion kit, resulting in a 10% derate.

**Table 5 – Specifications**

UNIT SIZE	042	075	112	150	187
General Data					
Sections—Fine Grain Cast Iron	2	3	4	5	6
Burners—Titanium Composite	1	2	3	4	5
Burners Orifice—Drill Size (Natural)	32	34	34	34	34
Gas Controls					
Gas Valve	Honeywell Intermittent Pilot				
Inlet Size	1/2-in.				
Pilot Assembly	Honeywell				
Controls					
Limit Control Range	140° F to 220° F				
Pressure/Temperature Gauge	0 to 75 Psig / 70° F to 320° F				
Pressure Relief Valve Setting	30 Psig				
Spark Generator	Honeywell				
Circulator Relay—Aquatstat	Honeywell (Factory Installed)				
Circulator					
Taco	007				
Full Load Amps	0.76				
Flange Size FPT	1 1/4-in.				



**Fig. 4 – Circulator Curve**

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