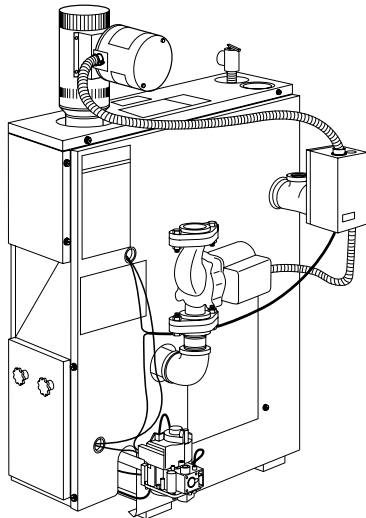


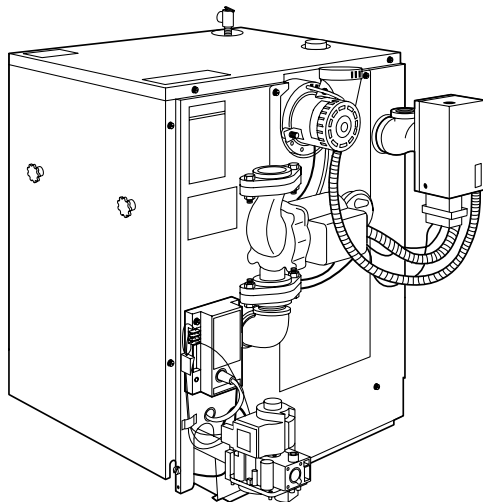


## Product Data

## Models BW1, BW2, and BW3 Gas-Fired Water Boilers Series B



**MODEL BW1, BW2  
Series B**



**MODEL BW3  
Series B**

### Models BW1, BW2, and BW3

Models BW1 and BW2 Gas-Fired Hot Water Boilers provide fast heat quietly and economically to assure the finest in hydronic heating. Model BW3 Gas-Fired Induced Combustion Water Boilers are the answer to energy efficient residential 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 an optional combustible floor base is used.

The BW1, BW2 and BW3 boilers are CSA design certified for use with natural gas and are field convertible for use with propane gas with a factory authorized accessory kit.

#### FEATURES

**Range of Capacities** — BW1 and BW2 boilers are available in sizes 37,500 through 280,000 BTUH. The BW3 boiler is available in sizes 42,500 through 225,000 BTUH.

**Completely Packaged** — Each boiler is completely assembled, including all controls (except room 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 as shipped.

**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.

**Venting** — These boilers are Category 1 for venting. The BW1 and BW2 boilers include an integral draft system to simplify installation. The BW3 is an induced-draft design boiler to achieve higher efficiencies. A field supplied accessory power venter is required for side wall venting options.

**Titanium Composite Burners** — Provide quiet operation, corrosion resistance and improved combustion efficiency. Propane convertible – with accessory kit.

**Controls** — An automatic gas valve and continuous pilot or intermittent pilot provide quiet, dependable operation of the burners. Factory-installed safety components assure protection against overheating and pressure buildup. A factory authorized accessory kit is available for protection against low water operation where required by local code. The circulator is shipped pre-wire with 6-ft. 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 model BW1 and BW2 boilers are CSA design certified for use with the factory supplied automatic vent damper. The BW3 boiler is an induced-draft design and does not require or use an automatic vent damper.

**Sections Tested** — Each section is hydrostatically tested to 50 psig. Individual sections are tested to 125 psig at factory. Assembled sections are tested to 75 psig at the factory. The maximum allowable pressure is 50 psig for hot water boilers.

**Warranty** — The cast-iron sections are covered by a non-prorated 20-year warranty on the entire assembly. All other parts are covered by a 5-year limited warranty.



ASME



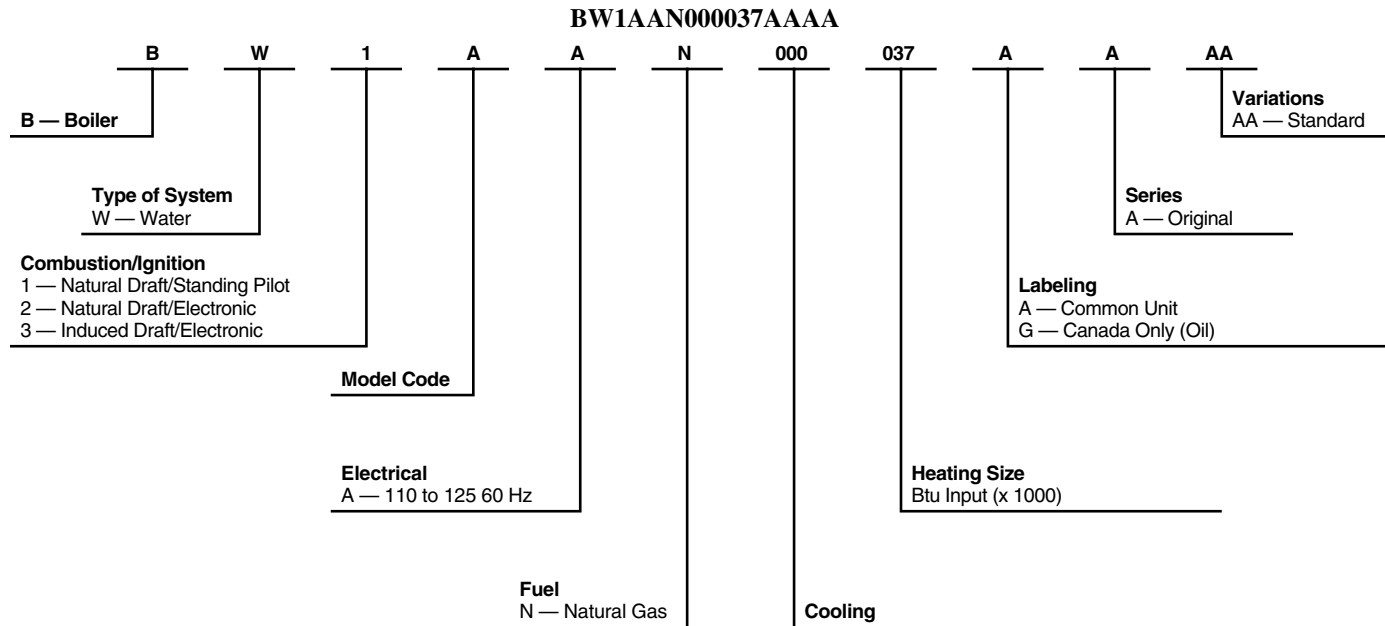
## Boiler accessories

BW1/BW2/BW3	
DESCRIPTION	PART NO.
Filltrol Package (Up to 75,000 Btuh Input)	KBAFP0101DNK
Filltrol Package (Up to 150,000 Btuh Input)	KBAFP0201DNK
Filltrol Package (Over 150,000 Btuh Input)	KBAFP0301DNK
High Limit Control	KBAHL0101DNK
Combustible Floor Base (2 thru 6 section BW1/BW2, 2 through 5 section BW3)	KBASB0301DNK
Combustible Floor Base (7 thru 9 section BW1/BW2, 6 and 7 section BW3)	KBASB0401DNK
Zoning Valve 3/4 in.	KBAZV0101DNK
Zoning Valve 1 in.	KBAZV0201DNK
Low Water Cut-off Kit	KBALW0101DNK
Gas Conversion Kit Natural to Propane (After 1799V)	KBANP1001DNK
Gas Conversion Kit Propane to Natural	KBAPN1001DNK

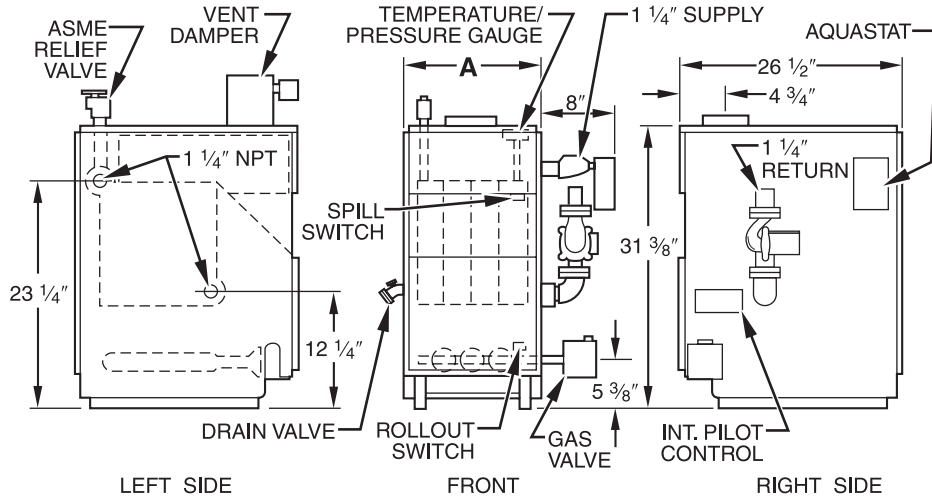
**NOTE:** There was never a Natural to Propane conversion kit for BW/BS boiler prior to 1799V.

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

## Model number nomenclature



# Dimensions — Models BW1 and BW2



A04205

## DIMENSIONS (In.)

UNIT SIZE	A	VENT CONNECTION
037	8	3
070	11-1/4	5
105	14-1/2	6
140	17-3/4	6
175	21	7
210	24-1/4	7
245	27-1/2	7
280	30-3/4	7

## CLEARANCES (In.)

RIGHT SIDE	6 (2-5 Section)* 24 (6-9 Section)*
LEFT SIDE	6 (2-5 Section) 24 (6-9 Section)
TOP	6
BACK	6
FRONT	6*

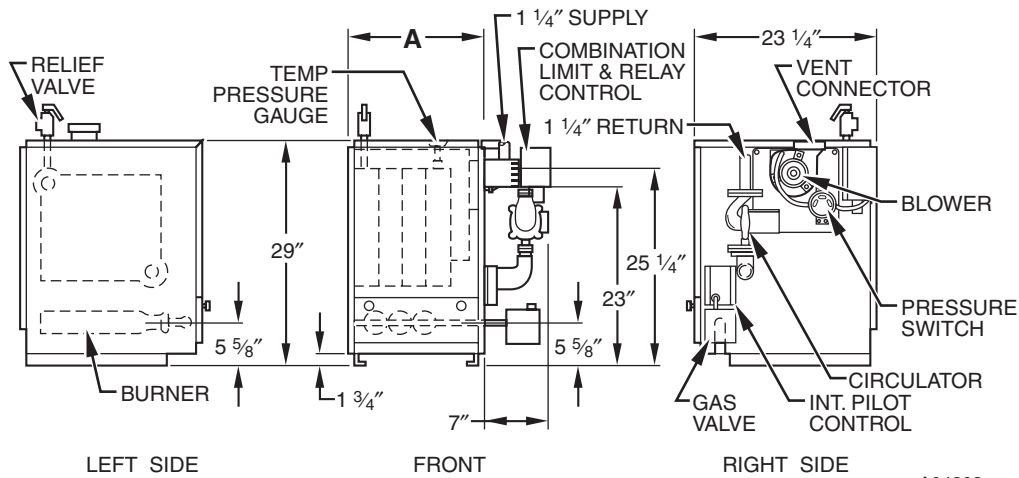
\* Service clearance requirement 24 in.

# Physical data

BW1/BW2 UNIT SIZE		037	070	105	140	175	210	245	280	
<b>GENERAL DATA</b>										
Sections—Fine Grain Cast Iron	No.	2	3	4	5	6	7	8	9	
Burners—Stainless/Titanium Alloy	No.	1	2	3	4	5	6	7	8	
Burners—Orifice Drill Size	Natural	36	36	36	36	36	36	36	36	
<b>GAS CONTROLS—STANDING PILOT (BW1)</b>										
Gas Valve		Honeywell								
Inlet Size	In.	1/2 FPT					3/4 FPT			
Pilot Assembly		Honeywell								
<b>GAS CONTROLS—INTERMITTENT PILOT (BW2)</b>										
Gas Valve		Honeywell								
Inlet Size	In.	1/2 FPT					3/4 FPT			
Pilot Assembly		Honeywell								
Spark Generator		Honeywell/UTEC								
<b>CONTROLS</b>										
Limit Control Range	°F	140 — 240								
Pressure/Temperature Gauge	Psig	10 — 70								
	°F	60 — 320								
Pressure Relief Valve Setting	Psig	30								
Circulator Relay—Aquastat		Honeywell (Factory Installed)								
Vent Damper*	In.	4	5	6				7		
<b>CIRCULATOR</b>										
Taco	Model	007								
Full Load Amps		0.70								
Flange Size FPT	In.	1-1/4								

\* Factory authorized and listed, field installed.

# Dimensions—Model BW3



A04203

## DIMENSIONS (In.)

UNIT SIZE	A	VENT CONNECTION
042	11	4*
075	14-1/4	4*
112	17-1/2	4*
150	20-3/4	4*
187	24	4
225	27-1/4	4

## CLEARANCES (In.)

RIGHT SIDE	6*
LEFT SIDE	6
TOP	6
BACK	6
FRONT	6*

\*Service clearance requirement 24 in.

\*With factory-supplied adapter installed.

# Physical data

BW3 UNIT SIZE		042	075	112	150	187	225
Sections — Fine Grain Cast-Iron	No.	2	3	4	5	6	7
<b>GAS CONTROLS — INTERMITTENT PILOT</b>							
Gas Valve		Honeywell					
Inlet Size	In.	1/2 FPT					
Pilot Assembly		Honeywell					
Spark Generator		Honeywell/UTEC					
Burners — Stainless/Titanium Alloy	No.	1	2	3	4	5	6
Burner Orifice — Drill Size	Natural	32	34	34	34	34	34
<b>CONTROLS</b>							
Limit Control Range	°F	180–240					
Pressure/Temperature Gauge	Psig	0–60					
	°F	60–260					
Pressure Relief Valve Setting	Psig	30					
Circulator Relay—Aquistat		Honeywell (Factory Installed)					
<b>CIRCULATOR</b>							
Taco	Model	007					
Full Load Amps		0.70					
Flange Size FPT	In.	1-1/4					

## Performance data\*

UNIT BW1, BW2	GAS TYPE	NUMBER OF SECTIONS	MAX INPUT (BTUH)	HEATING CAPACITY (BTUH)	NET RATING (BTUH)	AFUE%		APPROX SHIP. WT (Lb)
						BW1	BW2	
AAN037	Natural	2	37,500	30,000	26,000	80.0	81.1	217
AAN070	Natural	3	70,000	57,000	50,000	80.4	81.6	275
AAN105	Natural	4	105,000	85,000	74,000	80.4	81.5	334
AAN140	Natural	5	140,000	113,000	98,000	80.3	81.3	396
AAN175	Natural	6	175,000	142,000	124,000	80.2	81.1	458
AAN210	Natural	7	210,000	170,000	148,000	80.1	81.0	530
AAN245	Natural	8	245,000	198,000	172,000	80.0	80.8	586
AAN280	Natural	9	280,000	226,000	197,000	80.0	80.7	643

\* Ratings are for altitudes to 2000 ft. Unit ratings for altitudes over 2000 ft are 4% less for each 1000 ft above sea level.

## Performance data\*

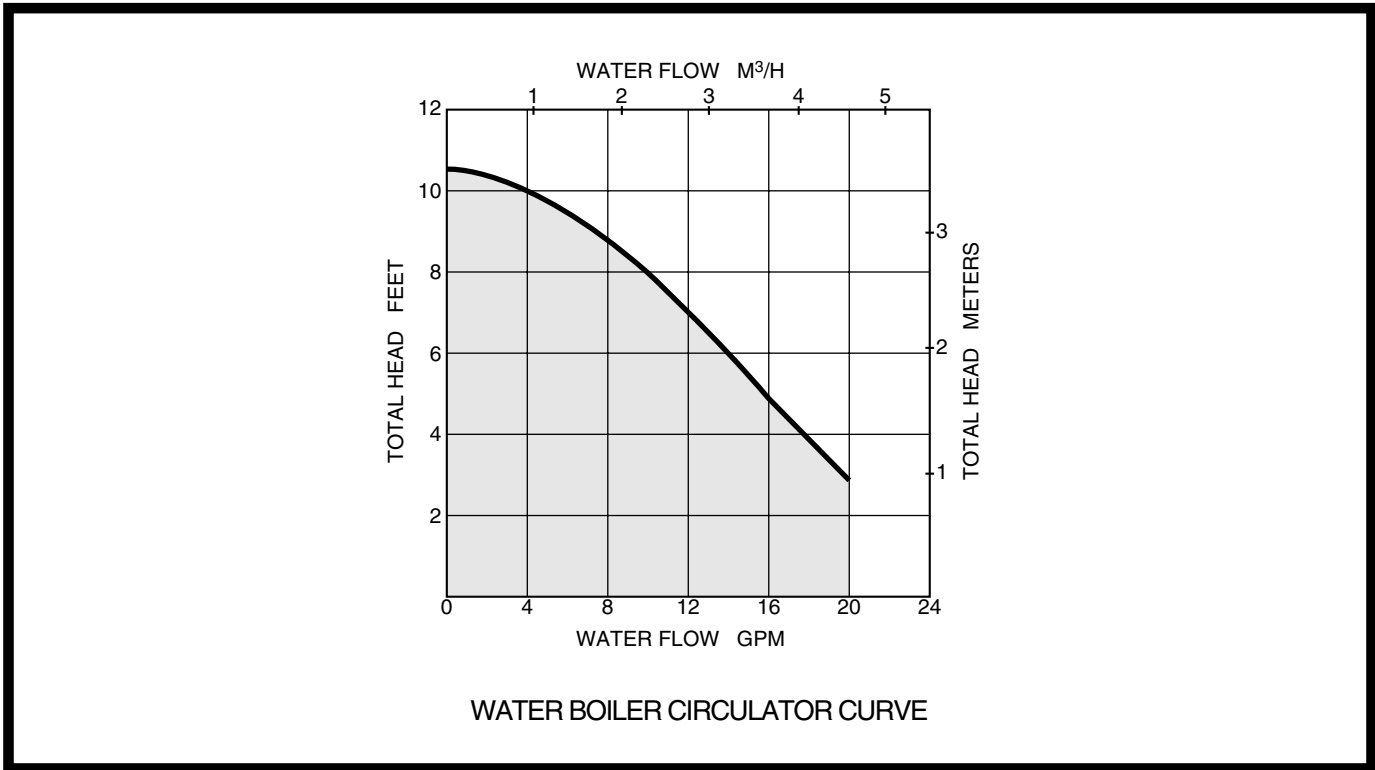
UNIT BW3	GAS TYPE	NO. SEC.	MAX INPUT (BTUH)	RATINGS HEATING CAPACITY‡	AFUE %	NET RATING†	BOILER WATER CAPACITY (GALLONS)	APPROX SHIP. WT (Lb)
				Btuh		Btuh		
BW3AAN042	Natural	2	42,500	36,000	84.4	31,000	1.75	211
BW3AAN075	Natural	3	75,000	63,000	83.4	55,000	3.00	263
BW3AAN112	Natural	4	112,500	94,000	83.0	82,000	4.25	320
BW3AAN150	Natural	5	150,000	125,000	82.7	109,000	5.50	369
BW3AAN187	Natural	6	187,500	155,000	82.3	135,000	6.75	418
BW3AAN225	Natural	7	225,000	186,000	82.0	162,000	8.00	471

\* Gas input ratings are for elevations up to 2000 ft. For elevations above 2000 ft, reduce input 4% for each 1000 ft above sea level.

† Selection factors providing for piping loss and starting load are those recommended by the Institute of Boiler and Radiator Manufacturers. Net water boiler ratings are based on an allowance of 1.15.

‡ In accordance with U.S. Government test procedures.

# Circulator curve



# Electrical data

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

‡Time-delay type is recommended





**Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.**