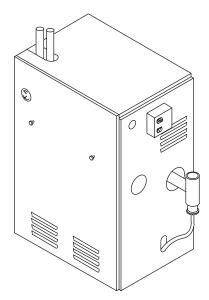


# Gas-Fired Condensing Water Boiler

## BW9 Series A



MODEL BW9 Series A



As an ENERGY STAR® Partner, Bryant Heating & Cooling Systems determined that this product meets the ENERGY STAR® guidelines for energy efficiency













The BW9 is a gas fired direct vent condensing hot water boiler with cast aluminum heat exchanger sections. A revolutionary cast aluminum heat exchanger means better heat transfer and thermal storage than similarly sized cast iron boiler, which results in higher efficiency. The heating system water absorbs large amounts of heat from the cast aluminum heat exchanger, cooling the flue gases and causing condensation. Sealed combustion, premix gas burner, and low flame temperature means drastically reduced CO and NOx emissions, which contribute to a cleaner and healthier environment.

The BW9, unlike normal residential atmospheric and induced draft boilers, takes its combustion air directly from the outdoors (sealed combustion) and does not compete with building occupants for fresh air. Sealed combustion (also known as "direct vent") is the safest and best way to obtain plenty of clean combustion air. The induced draft fan draws in the outside combustion air, then takes the cooler flue gases from the heat exchanger and provides a positive removal of the flue gases from the building through inexpensive and readily available PVC and CPVC pipes.

#### **FEATURES**

**RANGE OF CAPACITIES**—Seven sizes ranging from 50,000 through 200,000 Btuh input.

**COMPLETELY PACKAGED**—Each boiler is completely assembled, including all controls (except room thermostat and circulator pump). All necessary wiring is factory installed. The boiler is ready for gas piping, room thermostat, and electrical power connections as shipped. Circulator is shipped pre-wired with 6 ft bx conduit for easy installation for supply side pumping.

**VENTING**—This boiler is direct vented with PVC and CPVC pipe. See the Installation Instructions for common venting requirements.

**ALUMINUM SECTIONS**—These sections speed heat transfer to the boiler water. With faster thermal response, greater comfort and economy are achieved.

**PRE-MIX BURNER**—Provides quiet operation and improved combustion efficiency.

**CONTROLS**—Integrated Boiler Control provides safe, dependable operation of burners. Factory-installed safety components provide maximum safety against overheating, pressure buildup. A factory installed low water cut-off is standard on the BW9-125 through 200 and available as a field installed accessory on the BW9-50 through 100 sizes.

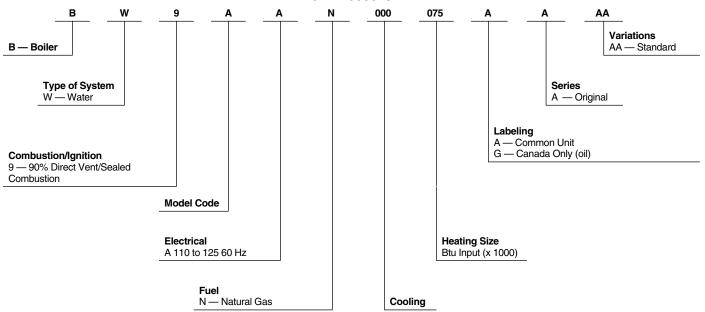
**SECTIONS TESTED**—Each section is hydrostatically tested to 50 psig. Individual sections are tested to 125 psig at factory. Assembled sections are tested to 75 psig at the factory. The maximum allowable pressure is 50 psig for hot water boilers.

**PROPANE CONVERTIBLE**—With factory approved conversion kit accessory.

**WARRANTY**—The aluminum sections are covered by a limited 15-year warranty on the entire assembly. All other parts are covered by a 5-year limited warranty.

## **MODEL NUMBER NOMENCLATURE**

#### BW9AAN000075AAAA



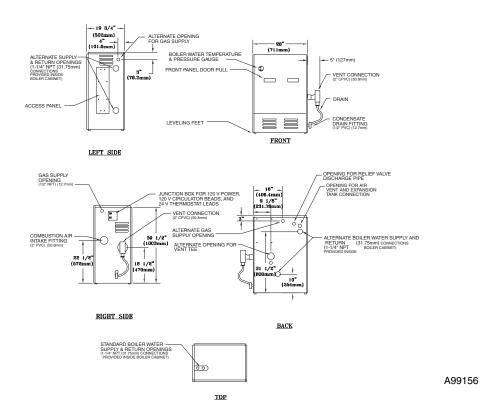
## **BOILER ACCESSORIES**

| BW9   |              |
|---|--------------|
| DESCRIPTION   | PART NO.     |
| Filltrol Package (Up to 75,000 BTUH)  | KBAFP0101DNK |
| Filltrol Package (Up to 150,000 BTUH)   | KBAFP0201DNK |
| Filltrol Package (Up to 300,000 BTUH)   | KBAFP0301DNK |
| High Limit Control L6006C1034   | KBAHL0101DNK |
| Zoning Valve 3/4-in.  | KBAZV0101DNK |
| Zoning Valve 1-in.  | KBAZV0201DNK |
| Gas Conversion Kit, Combination Natural to Propane and High Altitude Derate (BW9-050) | KBANP1101DNK |
| Gas Conversion Kit, Combination Natural to Propane and High Altitude Derate (BW9-075) | KBANP1201DNK |
| Gas Conversion Kit, Combination Natural to Propane and High Altitude Derate (BW9-100) | KBANP1301DNK |
| Gas Conversion Kit, Combination Natural to Propane and High Altitude Derate (BW9-125) | KBANP1401DNK |
| Gas Conversion Kit, Combination Natural to Propane and High Altitude Derate (BW9-150) | KBANP1501DNK |
| Gas Conversion Kit, Combination Natural to Propane and High Altitude Derate (BW9-175) | KBANP1601DNK |
| Gas Conversion Kit, Combination Natural to Propane and High Altitude Derate (BW9-200) | KBANP1701DNK |
| Gas Conversion Kit, Combination Propane to Natural and High Altitude Derate (BW9-050) | KBAPN1101DNK |
| Gas Conversion Kit, Combination Propane to Natural and High Altitude Derate (BW9-075) | KBAPN1201DNK |
| Gas Conversion Kit, Combination Propane to Natural and High Altitude Derate (BW9-100) | KBAPN1301DNK |
| Gas Conversion Kit, Combination Propane to Natural and High Altitude Derate (BW9-125) | KBAPN1401DNK |
| Gas Conversion Kit, Combination Propane to Natural and High Altitude Derate (BW9-150) | KBAPN1401DNK |
| Gas Conversion Kit, Combination Propane to Natural and High Altitude Derate (BW9-175) | KBAPN1401DNK |
| Gas Conversion Kit, Combination Propane to Natural and High Altitude Derate (BW9-200) | KBAPN1401DNK |
| Concentric Vent Kit 2 inch  | KGAVT0501CVT |
| Concentric Vent Kit 3 inch  | KGAVT0601CVT |
| Low Water Cut-Off Kit (for BW9-50/75/100 Factory-Installed on BW9 125 through 200)    | KBALW0101DNK |

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

## **DIMENSIONS**

## MODEL BW9-50/75/100



#### **CLEARANCES**

| UNIT                         | COMBUSTIBLE (in.) | ACCESSIBILITY/CLEANING (in.) | SERVICING (in.) |  |
|------------------------------|-------------------|------------------------------|-----------------|--|
| TOP                          | 1                 | 8                            | 8               |  |
| LEFT SIDE                    | 1                 | 24                           | 24              |  |
| RIGHT SIDE                   | 8                 | _                            |                 |  |
| BASE                         | 1                 | _                            |                 |  |
| FRONT                        | 0                 | 24                           | 24              |  |
| BACK                         | 1                 | _                            |                 |  |
| INTAKE/VENT PIPING           | 0                 | _                            |                 |  |
| NEAR BOILER HOT WATER PIPING | 1                 | _                            | _               |  |

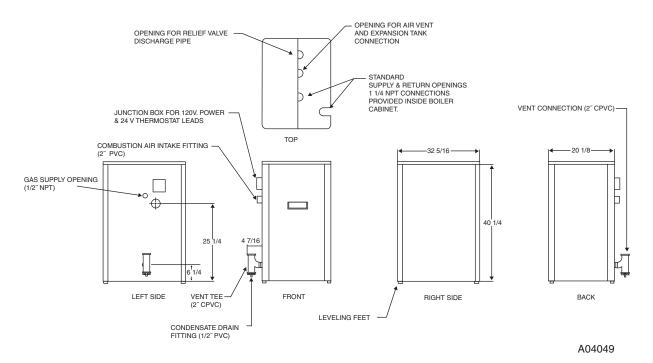
<sup>\*</sup> Service clearance requirement 24-in.

## **SPECIFICATIONS**

| UNIT SIZE  |       | 50                     | 75                   | 100 |  |
|--|-------|------------------------|----------------------|-----|--|
| Sections   |       | 1                      |                      |     |  |
| GAS CONTROLS   |       |                        |                      |     |  |
| Gas Valve  |       |                        | Honeywell            |     |  |
| Inlet Size   | ln.   |                        | 1/2                  |     |  |
| Ignition   |       |                        | Hot Surface Ignition |     |  |
| Burner—Stainless/Titanium Alloy                        |       | 1                      |                      |     |  |
| Burner Orifice (No orifice used in 125, 150, 175, 200) | No.   | NONE                   |                      |     |  |
| CONTROLS   |       |                        |                      |     |  |
| Limit Control Range                                    | °F    |                        | 100-200              |     |  |
| Pressure Relief Valve Setting                          | Psig  | 30                     |                      |     |  |
| Integrated Boiler Control                              |       | UTEC factory installed |                      |     |  |
| CIRCULATOR   |       |                        |                      |     |  |
| Taco   | Model | 007                    |                      |     |  |
| Full Load Amps   | ·     | 2.0 AMPS/330 WATTS     |                      |     |  |
| Flange Size FPT  | ln.   | 1-1/4                  |                      |     |  |

## **DIMENSIONS**

#### MODEL BW9-125/150/175/200



#### **CLEARANCES**

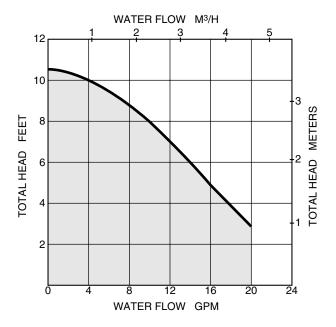
| UNIT                         | COMBUSTIBLE (in.) | ACCESSIBILITY/CLEANING (in.) | SERVICING (in.) |  |
|------------------------------|-------------------|------------------------------|-----------------|--|
| TOP                          | 1                 | 8                            | 8               |  |
| LEFT SIDE                    | 1                 | 24                           | 24              |  |
| RIGHT SIDE                   | 8                 | _                            | _               |  |
| BASE                         | 1                 | _                            | _               |  |
| FRONT                        | 0                 | 24                           | 24              |  |
| BACK                         | 1                 | _                            | _               |  |
| INTAKE/VENT PIPING           | 0                 | _                            | <del>_</del>    |  |
| NEAR BOILER HOT WATER PIPING | 1                 | _                            |                 |  |

<sup>\*</sup> Service clearance requirement 24-in.

#### **SPECIFICATIONS**

| UNIT SIZE  |       | 125                    | 150        | 175         | 200 |  |
|--|-------|------------------------|------------|-------------|-----|--|
| Sections   |       | 1                      |            |             |     |  |
| GAS CONTROLS   |       |                        |            |             |     |  |
| Gas Valve  |       |                        | Hone       | ywell       |     |  |
| Inlet Size   | ln.   |                        | 1/         | /2          |     |  |
| Ignition   |       |                        | Hot Surfac | ce Ignition |     |  |
| Burner—Stainless/Titanium Alloy                        |       | 1                      |            |             |     |  |
| Burner Orifice (No orifice used in 125, 150, 175, 200) | No.   | NONE                   |            |             |     |  |
| CONTROLS   |       |                        |            |             |     |  |
| Limit Control Range                                    | °F    | 100-200                |            |             |     |  |
| Pressure Relief Valve Setting                          | Psig  | 30                     |            |             |     |  |
| Integrated Boiler Control                              |       | UTEC factory installed |            |             |     |  |
| CIRCULATOR   |       |                        |            |             |     |  |
| Taco   | Model | 007                    |            |             |     |  |
| Full Load Amps   |       | 2.0 AMPS/330 WATTS     |            |             |     |  |
| Flange Size FPT  | ln.   | 1-1/4                  |            |             |     |  |

## **CIRCULATOR CURVE**



#### WATER BOILER CIRCULATOR CURVE

## **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   |  |  |  |

#### **RATINGS AND CAPACITIES\***

| UNIT      | GAS<br>TYPE | MAX INPUT<br>(BTUH) | HEATING<br>CAPACITY (BTUH) | AFUE % | NET RATING<br>Btuh | BOILER<br>WATER<br>CAPACITY<br>(GALLONS) | APPROX<br>SHIP.<br>WT (Lb) |
|-----------|-------------|---------------------|----------------------------|--------|--------------------|--|----------------------------|
| BW9AAN050 | Natural     | 50,000              | 45,000                     | 90     | 39,000             | 2.6                                      | 256                        |
| BW9AAN075 | Natural     | 75,000              | 68,000                     | 90     | 59,000             | 2.6                                      | 256                        |
| BW9AAN100 | Natural     | 100,000             | 90,000                     | 90     | 78,000             | 2.6                                      | 256                        |
| BW9AAN125 | Natural     | 125,000             | 113,000                    | 90     | 98,000             | 3.0                                      | 284                        |
| BW9AAN150 | Natural     | 150,000             | 134,000                    | 90     | 117,000            | 3.0                                      | 284                        |
| BW9AAN175 | Natural     | 175,000             | 158,000                    | 90     | 137,000            | 3.0                                      | 284                        |
| BW9AAN200 | Natural     | 200,000             | 180,000                    | 90     | 157,000            | 3.0                                      | 284                        |

<sup>\*</sup>Gas input ratings are for elevations up to 2000 ft. In the USA, for elevations above 2000 ft., reduce input per the charts supplied in the high altitude derate kits. In Canada, boilers may be used at high altitude by using a certified field conversion kit.



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS

Cancels: PDS BS1A.75.4

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