

# Combi2®

## Residential Power Vent TTW®

### Gas Water Heater System

#### Features

- **Defender Safety System®\***—Designed to be the safest & most reliable flammable vapor ignition resistant system in the industry with a proven track record since 2003. Featuring an advanced ScreenLok® technology flame arrestor design, resettable thermal switch, sight window, and designed to be maintenance-free.
- **Bradford White ICON System®**—Intelligent gas control with no need for external electricity. Proprietary algorithms provide tighter temperature differential and consistent water temperature levels up to 180°F (82°C). LED light indicates operation status/service required.
- **Vitraglas® Lining with Microban®**—An exclusively engineered enamel formula that provides superior tank protection from the corrosive effects of water; and with Microban® antimicrobial product protection to help prevent the growth of bacteria, mold and mildew on the surface of the tank lining.
- **Hydrojet® Total Performance System**—Sediment reducing device that also increases first hour delivery of hot water while minimizing temperature build-up in tank.

#### Additional Details

- **AquaVENT MAX™ from Fasco™**: The industry's quietest blower motor with a lower profile and robust electrical connection. Includes 10-foot (3m) power cord (120 VAC).
- **Internal Double Wall Heat Exchanger**—1½" (38mm) O.D. glass coated (Vitraglas® with Microban®) steel coil.
  - **¾" (19mm) Supply and Return Connections.**
  - **Low Heat Exchanger Head Loss**—Up to 10 GPM (38L) flow, with less than 5ft. (1.5m) of head loss. Greatly reduces the required pump size for heat exchange.
- **Horizontal and Vertical Venting**—With 3" (76mm) or 4" (102mm) PVC, ABS or CPVC
- **High Altitude Ready**—Certified for installations up to 10,100 feet (3078m) out of the box. No conversion kit required.
- **Internal Double Wall Heat Exchanger**—Double wall 1½" (38mm) O.D. glass coated (Vitraglas® with Microban®) steel coil ensures separation of potable water and heating fluid.
  - **¾" (19mm) NPT Front Supply and Return Connections.**
  - **Low Heat Exchanger Head Loss**—Up to 8 GPM (30 LPM) flow, with less than 6 ft. (1.8m) of head loss. Greatly reduces the required pump size for heat exchange.
- **Insulation System**—Non-CFC foam covers the tank, reducing heat loss, energy consumption, and improves efficiency and jacket rigidity.
- **Pedestal Base**—Rugged and durable base allows easy transport and positioning while providing corrosion-resistant contact with floor.
- **Water Connections**—¾" (19mm) NPT factory installed true dielectric fittings.
- **Two Protective Anode Rods**—Provides added protection against corrosion for long-term, trouble-free service.
- **T&P Relief Valve**—Installed.
- **Low Restrictive Brass Drain Valve**—Durable tamper proof design.
- **Thermostatic Mixing Valve (ASSE Approved)**—Included.

\*C-DW2-TW50T10FBN only



C-DW2-TW50T10FBN

Bradford White  
**DEFENDER**  
Safety System

BRADFORD WHITE  
**ICON**  
System

**VITRAGLAS**  
SUPERIOR PROTECTION SINCE 1941  
+  
**MICROBAN**

**Hydrojet**



#### 10-Year Limited Tank Warranties / 6-Year Limited Warranty on Component Parts.

For more information on warranty, please visit [www.bradfordwhite.com](http://www.bradfordwhite.com)

For products installed in USA, Canada, and Puerto Rico. See complete copy of the warranty included with the heater for limitations.

Microban® antimicrobial product protection helps prevent the growth of bacteria, mold and mildew that may affect the product. The built-in antimicrobial properties do not protect users or others from disease-causing organisms. Microban® is a registered trademark of Microban Products Company.

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## Residential Power Vent TTW® Gas Water Heater System

### SPECIFICATIONS

These water heaters meet or exceed all or portions of (where applicable) the minimum efficiency requirements of ASHRAE Standard 90.1 (latest edition). C.E.C. Listed. 80% Recovery Efficiency.

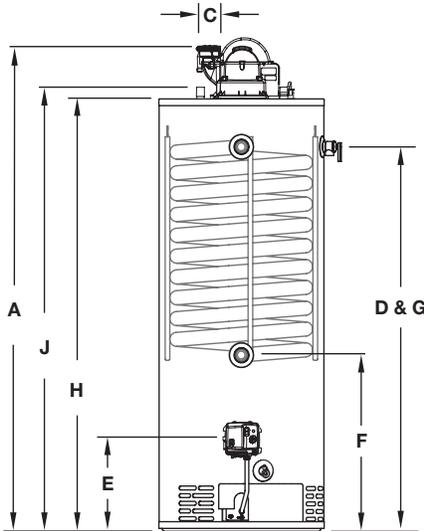
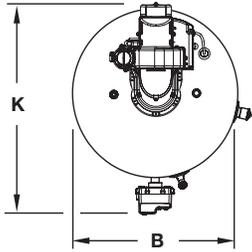
| Model Number     | Rated Nominal Volume |           | Recovery 90°F Rise* |                  |               |               | A<br>Floor to Top of Blower | B<br>Jacket Dia. | C<br>Vent Size                   | D<br>Floor to T&P Conn. | E<br>Floor to Gas Conn. | F<br>Floor to Exchanger Inlet | G<br>Floor to Exchanger Outlet | H<br>Floor to Heater Top in. | J<br>Floor to Water Conn. in. | K<br>Depth | Approx. Shipping Weight |     |     |
|------------------|----------------------|-----------|---------------------|------------------|---------------|---------------|-----------------------------|------------------|----------------------------------|-------------------------|-------------------------|-------------------------------|--------------------------------|------------------------------|-------------------------------|------------|-------------------------|-----|-----|
|                  | U.S. Gal.            | Imp. Gal. | Nat. BTU/Hr. Input  | LP BTU/Hr. Input | Nat. U.S. GPH | Imp. U.S. GPH |                             |                  |                                  |                         |                         |                               |                                |                              |                               |            |                         | in. | in. |
| C-DW2-TW50T10FBN | 45                   | 38        | 67,000              | 60,000           | 72            | 60            | 65                          | 54               | 63 <sup>13</sup> / <sub>16</sub> | 22                      | 3 or 4                  | 50%                           | 11%                            | 28                           | 50%                           | 56%        | 60%                     | 26% | 245 |
| C-DW2-TW75T10BN  | 72                   | 61        | 76,000              | 75,500           | 82            | 69            | 81                          | 67               | 66 <sup>1</sup> / <sub>8</sub>   | 26                      | 3 or 4                  | 53                            | 15                             | 30%                          | 53                            | 60%        | 64%                     | 31  | 315 |

| Model Number     | Rated Nominal Volume |               | Recovery 50°C Rise* |                  |                |      | A<br>Floor to Top of Blower | B<br>Jacket Dia. | C<br>Vent Size | D<br>Floor to T&P Conn. | E<br>Floor to Gas Conn. | F<br>Floor to Exchanger Inlet | G<br>Floor to Exchanger Outlet | H<br>Floor to Heater Top mm. | J<br>Floor to Water Conn. mm. | K<br>Depth | Approx. Shipping Weight |
|------------------|----------------------|---------------|---------------------|------------------|----------------|------|-----------------------------|------------------|----------------|-------------------------|-------------------------|-------------------------------|--------------------------------|------------------------------|-------------------------------|------------|-------------------------|
|                  | Liters               | Nat. kW Input | LP kW Input         | Nat. Liters/Hour | LP Liters/Hour | mm.  |                             |                  |                |                         |                         |                               |                                |                              |                               |            |                         |
| C-DW2-TW50T10FBN | 170                  | 19.6          | 17.5                | 272              | 246            | 1621 | 559                         | 76 or 102        | 1273           | 298                     | 711                     | 1273                          | 1432                           | 1543                         | 679                           | 111        |                         |
| C-DW2-TW75T10BN  | 272                  | 22.3          | 22.1                | 310              | 306            | 1684 | 660                         | 76 or 102        | 1346           | 389                     | 784                     | 1549                          | 1530                           | 1632                         | 787                           | 143        |                         |

Propane models feature a Titanium Stainless Steel propane burner. For Propane (LP) models change suffix "BN" to "SX".

\* Based on manufacturers rated recovery efficiency.

120 VAC Required for Power Venting / 120 VAC, 60Hz., 3.1 Amperes.



| Heat Exchanger Head Loss |                 | Heat Exchanger Head Loss |               |
|--------------------------|-----------------|--------------------------|---------------|
| GPM                      | Ft. of Hd. Loss | LPM                      | m of Hd. Loss |
| 2                        | 0.15            | 7.6                      | 0.0457        |
| 5                        | 0.94            | 18.9                     | 0.2865        |
| 8                        | 2.40            | 30.2                     | 0.7315        |
| 10                       | 3.75            | 37.9                     | 1.1430        |
| 12                       | 5.40            | 45.4                     | 1.6459        |

|                        | 3" (76mm) Vent Pipe                               | 4" (102mm) Vent Pipe                            |
|------------------------|---|---|
| C-DW2-TW50T10FBN       |   |   |
| C-DW2-TW75T10BN        |   |   |
| Max. Equivalent Length | †75 ft. †23.0m                                    | †180 ft. †55.0m                                 |
| Min. Equivalent Length | 7 ft. 2.1m  | 15 ft. 4.6m                                     |
| Number of 90° Elbows   | 1 70 ft. 21.3m<br>2 65 ft. 20.0m<br>3 60 ft. 18.3 | 175 ft. 53.3m<br>170 ft. 52.0m<br>165 ft. 50.3m |

Subtract 5 ft. (1.5m) for each additional 90° elbow.  
† For high altitude installations, consult the installation instructions.

#### Heat Exchanger Values\*

|                    | 140°F          | 60°C    | 120°F          | 49°C     | 100°F          | 38°C     |
|--------------------|----------------|---------|----------------|----------|----------------|----------|
| Supply Temperature | 140°F          | 60°C    | 120°F          | 49°C     | 100°F          | 38°C     |
| Return Temperature | 120°F          | 49°C    | 100°F          | 38°C     | 80°F           | 27°C     |
| Differential       | 20°F           | 11°C    | 20°F           | 11°C     | 20°F           | 11°C     |
| Flow Rate          | 2.3 GPM        | 8.7 LPM | 3.4 GPM        | 12.9 LPM | 4.4 GPM        | 16.7 LPM |
| Net Output         | 20,000 BTU/Hr. | 5.9kW   | 29,000 BTU/Hr. | 8.5kW    | 38,000 BTU/Hr. | 11.1kW   |

\* These values were obtained using 180°F stored tank temperature.

Net Output is the space heating capacity based on normal piping and pickup allowance of 15%.

Actual values may vary based on circulator flow rate, number of zones, water and space heating demands. Numbers subject to change.

### GENERAL:

#### Meets NAECA Requirements.

All gas water heaters are certified at 300 PSI test pressure (2068 kPa) and 150 PSI working pressure (1034 kPa). All potable water connections are 3/4" NPT (19mm) on 11" (279mm) centers. All heat exchanger connections are 1" NPT (25mm). All gas connections 1/2" (13mm). All models design certified by CSA International (formerly AGA/CGA), ANSI Z21.10.1 and peak performance rated.

#### Suitable for Water (Potable) Heating and Space Heating.

Toxic chemicals, such as those used for boiler treatment, shall NEVER be introduced into the potable side of this system. The potable side may NEVER be connected to any existing heating system or component(s) previously used with a non-potable water heating appliance. The heat exchanger side of the unit may be used in space heating applications.

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



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