

# Commercial Power Direct Vent Independent Vent Energy Saver Gas Water Heater



Photo is of  
PDV-100S-2003N

*The Power Direct Vent Independent Vent Models feature:*

- **ICON HD™**—Intelligent proven design combines temperature control, diagnostic codes, and system ignition functions into a single control board with a digital LCD display. Control panel cover tilts down for ease of wiring and service.
- **Honeywell Integrated Control**—Intelligent proven design combines temperature control, diagnostic codes, and system ignition function into a single control board with a digital LCD display. Control panel cover tilts down for ease of wiring and service.
- **Operation Mode**—Two different digitally displayed operation modes have the capability of adjusting the temperature setting up to 180°F (82°C), and adjusting the degree setting (°F to °C, or °C to °F).
- **Service Mode**—Eight different digitally displayed service modes can be easily cycled through by pressing the select button. There is the capability of adjusting the temperature setting up to 180°F (82°C), adjusting the degree setting (°F to °C, or °C to °F), locking the maximum temperature setting that can be adjusted in operation mode, displaying the average water temperature (if water heater has two sensors), displaying the upper temperature sensor, displaying the lower temperature sensor, displaying the flame current of the pilot flame, and displaying diagnostic codes.
- **Automatic Blower Motor**—Induced draft for direct venting.
- **Electronic Ignition**—High voltage, low current electricity is sent to the pilot electrode initiating a spark to ignite the pilot gas. This results in savings of pilot gas during stand-by periods because the pilot flame only operates when there's a call for heat.
- **Factory Installed Hydrojet® 2™ Sediment Reduction System**—Cold water inlet sediment reducing device helps prevent sediment build up in the tank.
- **Independent Vent System**—This allows combustible air to enter from the outside through one pipe and exhausts the products of combustion through another pipe (max. equivalent vent length for each pipe on reverse side).
- **Vitraglas® Lining**—Bradford White tanks are lined with a exclusively engineered enamel formula that provides superior protection from the highly corrosive effects of hot water. This formula (Vitraglas®) is fused to the steel surface by firing at a temperature of over 1600°F (871°C).
- **E.C.O.**—An automatic re-set Energy Cut Off (E.C.O) shuts off all gas in event of an overheat condition. This automatically re-sets when operation conditions are back to normal.
- **Non-CFC Foam Insulation**—Covers the sides and top of tank, reducing the amount of heat loss. This results in less energy consumption, improved operation efficiencies and jacket rigidity.
- **Water Connections**—Multiple water connection locations allow for greater installation flexibility. 1½" NPT top and front, 2" NPT rear factory installed true dielectric fittings extend water heater life and eases installation.
- **Protective Magnesium Anode Rods**—Provide added protection against corrosion for long trouble-free service.
- **Hand Hole Cleanout**—Allows inspection of tank interior and removal of sediment deposits.
- **Sanitizing Capability**—Temperature setting up to 180°F (82°C).
- **NSF Construction Available.**
- **ASME Construction Available on 250,000 BTU model (73.2 kW).**
- **Low NOx Construction Available.**
- **T&P Relief Valve**—Installed.
- **Brass Drain Valve**—Tamper proof.
- **Design Certified by CSA International (Formerly AGA and CGA).**

**3-Year Limited Tank Warranties / 1-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. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.



# Commercial Gas Water Heater

## Power Direct Vent Energy Saver Models

NATURAL GAS AND LIQUID PROPANE GAS

Meet or exceed ASHRAE 90.1b (current standard) C.E.C. Listed  
80% Recovery Efficiency

| Model Number       | Capacity  |           | Nat. BTU/Hr. Input | LP BTU/Hr. Input | Recovery at Degree °F Rise* |       |       | A Floor to Top of Heater in.   | B Jacket Dia. in.              | C Vent Size in. | D Floor to Gas Conn. in.       | E Front Cold Water Conn. in.   | F Front Hot Water Conn. in.    | G Floor to Top Water Conn. in. | H Floor to Vent Conn. in.      | K Depth in.                    | Approx. Shipping Weight lbs. |      |
|--------------------|-----------|-----------|--------------------|------------------|-----------------------------|-------|-------|--------------------------------|--------------------------------|-----------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|------------------------------|------|
|                    | U.S. Gal. | Imp. Gal. |                    |                  | 40°F                        | 100°F | 140°F |                                |                                |                 |                                |                                |                                |                                |                                |                                | Std.                         | ASME |
| PDV-80S-150-3N     | 80        | 66        | 150,000            | 150,000          | 364                         | 145   | 104   | 63 <sup>7</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>4</sub> | 3               | 17 <sup>3</sup> / <sub>8</sub> | 20 <sup>3</sup> / <sub>4</sub> | 51 <sup>3</sup> / <sub>8</sub> | 65 <sup>3</sup> / <sub>4</sub> | 68 <sup>7</sup> / <sub>8</sub> | 43 <sup>7</sup> / <sub>8</sub> | 645                          | -    |
| PDV-80S-200-3N     | 80        | 66        | 199,999            | 199,999          | 485                         | 194   | 139   | 63 <sup>7</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>4</sub> | 3               | 17 <sup>3</sup> / <sub>8</sub> | 20 <sup>3</sup> / <sub>4</sub> | 51 <sup>3</sup> / <sub>8</sub> | 65 <sup>3</sup> / <sub>4</sub> | 68 <sup>7</sup> / <sub>8</sub> | 43 <sup>7</sup> / <sub>8</sub> | 645                          | -    |
| PDV-80S-250-3N(A)  | 80        | 66        | 250,000            | 225,000          | 606                         | 242   | 173   | 63 <sup>7</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>4</sub> | 4               | 17 <sup>3</sup> / <sub>8</sub> | 20 <sup>3</sup> / <sub>4</sub> | 51 <sup>3</sup> / <sub>8</sub> | 65 <sup>3</sup> / <sub>4</sub> | 68 <sup>7</sup> / <sub>8</sub> | 43 <sup>7</sup> / <sub>8</sub> | 645                          | 720  |
| PDV-100S-150-3N    | 100       | 83        | 150,000            | 150,000          | 364                         | 145   | 104   | 72 <sup>7</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>4</sub> | 3               | 17 <sup>3</sup> / <sub>8</sub> | 20 <sup>3</sup> / <sub>4</sub> | 60 <sup>3</sup> / <sub>8</sub> | 74 <sup>3</sup> / <sub>4</sub> | 77 <sup>7</sup> / <sub>8</sub> | 43 <sup>7</sup> / <sub>8</sub> | 735                          | -    |
| PDV-100S-200-3N    | 100       | 83        | 199,999            | 199,999          | 485                         | 194   | 139   | 72 <sup>7</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>4</sub> | 3               | 17 <sup>3</sup> / <sub>8</sub> | 20 <sup>3</sup> / <sub>4</sub> | 60 <sup>3</sup> / <sub>8</sub> | 74 <sup>3</sup> / <sub>4</sub> | 77 <sup>7</sup> / <sub>8</sub> | 43 <sup>7</sup> / <sub>8</sub> | 735                          | -    |
| PDV-100S-250-3N(A) | 100       | 83        | 250,000            | 225,000          | 606                         | 242   | 173   | 72 <sup>7</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>4</sub> | 4               | 17 <sup>3</sup> / <sub>8</sub> | 20 <sup>3</sup> / <sub>4</sub> | 60 <sup>3</sup> / <sub>8</sub> | 74 <sup>3</sup> / <sub>4</sub> | 77 <sup>7</sup> / <sub>8</sub> | 43 <sup>7</sup> / <sub>8</sub> | 735                          | 815  |

| Model Number       | Capacity |  | Nat. kW Input | LP kW Input | Recovery at LPH °C Rise* |      |      | A Floor to Top of Heater mm. | B Jacket Dia. mm. | C Vent Size mm. | D Floor to Gas Conn. mm. | E Front Cold Water Conn. mm. | F Front Hot Water Conn. mm. | G Floor to Top Water Conn. mm. | H Floor to Vent Conn. mm. | K Depth mm. | Approx. Shipping Weight kg. |      |
|--------------------|----------|--|---------------|-------------|--------------------------|------|------|------------------------------|-------------------|-----------------|--------------------------|------------------------------|-----------------------------|--------------------------------|---------------------------|-------------|-----------------------------|------|
|                    | Liters   |  |               |             | 4.4°C                    | 56°C | 60°C |                              |                   |                 |                          |                              |                             |                                |                           |             | Std.                        | ASME |
| PDV-80S-150-3N     | 303      |  | 43.9          | 43.9        | 1378                     | 549  | 394  | 1603                         | 718               | 76              | 438                      | 525                          | 1303                        | 1654                           | 1732                      | 1117        | 293                         | -    |
| PDV-80S-200-3N     | 303      |  | 58.6          | 58.6        | 1836                     | 734  | 526  | 1603                         | 718               | 76              | 438                      | 525                          | 1303                        | 1654                           | 1732                      | 1117        | 293                         | -    |
| PDV-80S-250-3N(A)  | 303      |  | 73.3          | 65.9        | 2294                     | 916  | 655  | 1603                         | 718               | 102             | 438                      | 525                          | 1303                        | 1654                           | 1856                      | 1117        | 293                         | 327  |
| PDV-100S-150-3N    | 379      |  | 43.9          | 43.9        | 1378                     | 549  | 394  | 1832                         | 718               | 76              | 438                      | 525                          | 1532                        | 1883                           | 1961                      | 1117        | 333                         | -    |
| PDV-100S-200-3N    | 379      |  | 58.6          | 58.6        | 1836                     | 734  | 526  | 1832                         | 718               | 76              | 438                      | 525                          | 1532                        | 1883                           | 1961                      | 1117        | 333                         | -    |
| PDV-100S-250-3N(A) | 379      |  | 73.3          | 65.9        | 2294                     | 916  | 655  | 1832                         | 718               | 102             | 438                      | 525                          | 1532                        | 1883                           | 2084                      | 1117        | 333                         | 370  |

(A)=ASME Code Available.

For Propane (LP) Gas models change suffix "N" to "X".

\* Recoveries are based on Natural Gas input and 80% Thermal Efficiency.

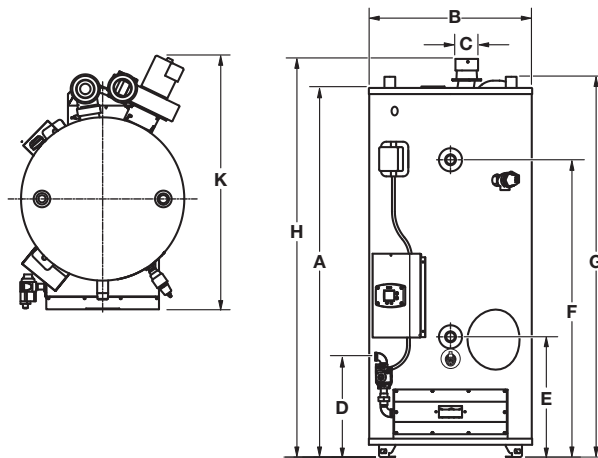
**For LowNOx compliance, place an "E" following the BTU Input identifier of the model number (input may be reduced).**

Example: PDV-80S-150E-3N.

For 5 year models change suffix from "3" to "5".

|                   | 3" Max. Intake | 3" Max. Exhaust | 4" Max. Intake | 4" Max. Exhaust |
|-------------------|----------------|-----------------|----------------|-----------------|
| PDV-80S-150, 200  | 45 ft.         | 45 ft.          | 60 ft.         | 60 ft.          |
| PDV-80S-250       | N/A            | N/A             | 60 ft.         | 60 ft.          |
| PDV-100S-150, 200 | 45 ft.         | 45 ft.          | 60 ft.         | 60 ft.          |
| PDV-100S-250      | N/A            | N/A             | 60 ft.         | 60 ft.          |

For additional venting information, consult I&O Manual.



### Sample Specification

The water heater shall be a Bradford White model with a rated storage capacity of not less than \_\_\_\_\_ gallons (\_\_\_\_\_ liters), a minimum gas input of \_\_\_\_\_ BTU/hr. (\_\_\_\_\_ kW), a minimum recovery of \_\_\_\_\_ GPH (\_\_\_\_\_ LPH). The tank shall be Vitraglas® lined and have a bolted hand hole cleanout. A digital LCD display shall be integrated into the front control box, and the control shall be an adjustable electronic thermostat to any temperature up to 185°F (85°C), and have an automatic re-set Energy Cut-off (E.C.O.), which shuts off all gas in an event of a overheat condition. The tank shall have \_\_\_\_\_ magnesium anode rods installed in separate tank head couplings. The heater shall have Non-CFC foam insulation, electronic ignition, and come equipped with an ASME rated T&P relief valve, a cold water inlet Hydrojet® Sediment Reduction System, and an induced draft blower motor for direct venting (115V AC required). It shall be design certified by CSA International for 180°F (82°C) application, either with or without a separate storage tank, and comply with state and local codes and ordinances.

### General

All gas water heaters are certified at 300 PSI test pressure (2068 kPa) and 150 PSI working pressure (1034 kPa). All models are design certified by CSA International (formerly AGA/CGA), ANSI standard Z-21.10.3, for up to 180°F (82°C) application as an Automatic Storage Heater, and an Automatic Circulating Tank Heater. As an Automatic Storage Heater, all models are complete, self-contained water heating systems. It needs no separate storage tank, pump, wiring or elaborate piping network. When equipped with a mixing valve, it will supply 180°F (82°C) sanitizing and lower temperature general purpose hot water simultaneously. These models can be used either as a single unit or in multiples connected in series or parallel (recommended).

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



Ambler, PA

For U.S. and Canada field service, contact your professional installer or local Bradford White sales representative.

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