BRADFORD WHITE®
WATER HEATERS

Residential Ultra Low NOx Direct Vent Energy Saver Gas Water Heater



Photo is of
UDS1-50S6FRN

FEATURING:

BRADFORD WHITE ICON System™

Hydrojet® TOTAL PERFORMANCE SYSTEM

ECO DEFENDER® SAFETY SYSTEM® WITH SCREENLOK™ TECHNOLOGY
ULTRA LOW NOx SERIES

The Direct Vent FVIR Eco-Defender Safety System® Models Feature:

- **Bradford White ICON System™—**Intelligent gas control with proven millivolt powered technology and built-in piezo igniter. A standard, off the shelf thermopile converts heat energy from the pilot flame into electrical energy to operate the gas valve and microprocessor. No need for external electricity.
  - **Enhanced Performance—**Proprietary algorithms provide enhanced First Hour Delivery ratings and tighter temperature differentials.
  - **Advanced Temperature Control System—**Microprocessor constantly monitors and controls burner operation to maintain consistent and accurate water temperature levels.
  - **Intelligent Diagnostics—**An exclusive green LED light prompts the installer during start-up and provides ten different diagnostic codes to assist in troubleshooting.
  - **Pilot On Indication—**Flashing green LED provides positive indication that pilot is on.
  - **Separate Immersed Thermowell—**High strength advanced polymer composite thermowell provides isolation between electric temperature sensor and surrounding water. No need to drain the tank when removing gas valve.
- **Ultra Low NOx Burner with Primary and Secondary Air Distribution Devices—**Ensures proper air to gas ratio for reduction of NOx generated by the combustion process.
- **Closed Combustion—**All air for combustion is taken directly from the outside. The co-axial vent pipe (pipe inside a pipe) draws combustion air in through the outer pipe (5"), and exhausts the products of combustion through the inner pipe (3"). The vent pipe at the top of the unit can be rotated for venting flexibility.
- **Reinforced Seals—**Seals surround the closed combustion chamber and the FVIR inner door, preventing the ignition of flammable vapors outside of the water heater.
- **Maintenance Free—**The vent piping and the closed combustion chamber with reinforced seals do not require regular cleaning under normal operating conditions.
- **Sight Window—**Offers a view into the combustion chamber to observe the operation of the pilot and burner.
- **Factory Installed Hydrojet® Total Performance System—**Cold water inlet sediment reducing device. Helps prevent sediment build up in tank. Increases first hour delivery of hot water while minimizing temperature build up in tank.
- **Vitraglas® Lining—**Bradford White tanks are lined with an exclusively engineered enamel formula that provides superior tank 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).
- **Cast Aluminum Air Intake Boot—**A cast molded air intake boot provides exceptional installation durability.
- **Telescoping Solid Vent Kits—**Multiple kits (see reverse side) allow up to 8ft. vertical and 8ft. horizontal vent lengths (horizontal termination only).
- **Flexible Vent Kit—**The maximum vent length (horizontal and vertical) can be flexed to 100" (horizontal termination only).
- **1" 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.
- **Pedestal Base**.
- **Water Connections—**3/4" NPT factory installed true dielectric fittings.
- **Factory Installed Heat Traps**.
- **Protective Magnesium Anode Rod**.
- **T&P Relief Valve—**Included.
- **Low Restriction Brass Drain Valve—**Durable tamper proof design.
- **Design Certified by CSA International (formerly AGA and CGA).**
- **Complies with the latest ultra-low NOx requirement (10 ng/J NOx limit)**.

AHRI

LLC – Low Lead Content

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

For more information on warranty, please visit 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.

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,954,492; 5,761,379; 5,943,984; 5,081,696; 5,988,117; 6,142,216; 5,199,385; 5,574,822; 5,372,185; 5,485,879; 5,277,171; (B1)5,341,770; 5,660,165; 5,596,952; 5,682,666; 4,904,428; 5,023,031; 5,000,893; 4,669,448; 4,829,983; 4,808,356; 5,115,767; 5,092,519; 5,052,346; 4,416,222; 4,628,184; 4,861,968; 4,672,919; Re. 34,534; 7,270,087 B2. OTHER U.S. AND FOREIGN PATENT APPLICATIONS PENDING. CURRENT CANADIAN PATENTS: 1,272,914; 1,280,043; 1,289,832; 2,045,862; 2,112,515; 2,108,186; 2,107,012; 2,092,105; 2,409,271.
Defender Safety System®, Vitraglas® and Hydrojet® are registered trademarks of Bradford White® Corporation.

Residential Direct Vent Water Heater

Direct Vent Energy Saver Models

NATURAL GAS

Meet or exceed ASHRAE 90.1b (current standard) C.E.C. Listed
79% Recovery Efficiency

Model Number	Capacity U.S. Gal.	Capacity Imp. Gal.	Nat. BTU/Hr. Input	Recovery at 90°F Rise* Nat. U.S. GPH	Recovery at 90°F Rise* Nat. Imp. GPH	A Floor to Center Line of Vent in.	B Jacket Dia. in.	C Vent Size in.	D Floor to T&P Conn. in.	E Floor to Gas Conn. in.	F Floor to Top of Heater in.	H Floor to Water Conn. in.	K Depth in.	Approx. Shipping Weight lbs.
UDS1-40S6FRN	40	33	38,000	41	34	63 1/4 min.	20	3-5	43 1/2	15	49 3/4	50 3/4	31 1/8	169
UDS1-50S6FRN	50	42	38,000	41	34	72 1/4 min.	20	3-5	52 1/4	15	58 3/4	59 3/4	31	186

Model Number	Capacity Liters	Nat. kW Input	Recovery at 50°C Rise* Nat. Liters/ Hour	A Floor to Center Line of Vent mm.	B Jacket Dia. mm.	C Vent Size mm.	D Floor to T&P Conn. mm.	E Floor to Gas Conn. mm.	F Floor to Top of Heater mm.	H Floor to Water Conn. mm.	K Depth mm.	Approx. Shipping Weight kg.
UDS1-40S6FRN	151	11.1	155	1607	508	76-127	1105	381	1264	1289	795	76
UDS1-50S6FRN	189	11.1	155	1835	508	76-127	1327	381	1492	1518	787	85

Available in Natural Gas only.

For 10 year models, change suffix from "6" to "10".

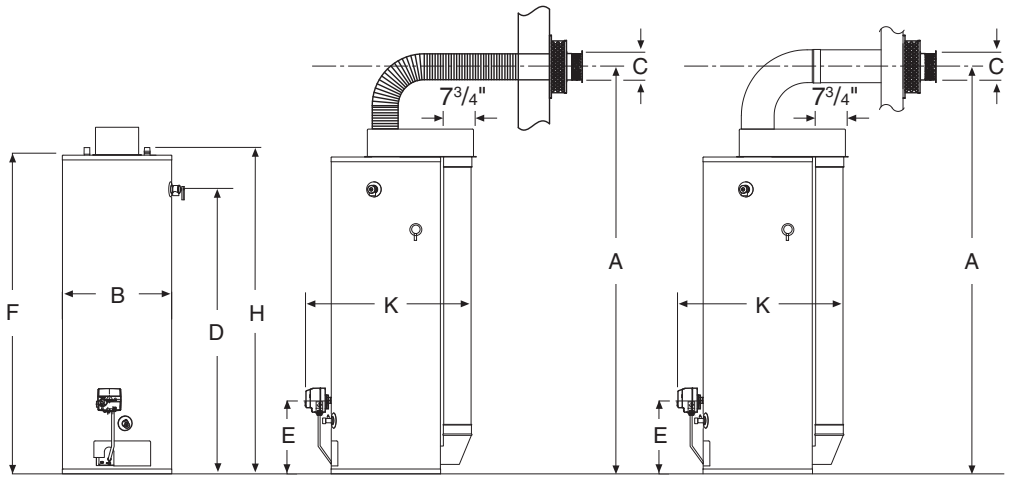
*Based on manufacturers rated recovery efficiency.

Telescoping Solid Vent Kit (239-47810-00) or Flexible Vent Kit (239-47812-00) can be ordered and shipped with water heater, or ordered and shipped separately

For vent kit components and venting instructions, refer to Installation and Operating Manual.

Optional Telescoping Solid Vent Kits:

Kit "A"	Telescopes from 4¾" to 5 11/16"	Part No. 239-41260-00
Kit "B"	Telescopes from 6½" to 9 3/16"	Part No. 239-41331-00
Kit "C"	Telescopes from 13¾" to 23 11/16"	Part No. 239-41029-00
Kit "D"	Telescopes from 49 13/16" to 95 13/16"	Part No. 239-41424-00



Flexible Vent Kit (Side View) Telescoping Solid Vent Kit (Side View)

Meets NAECA Requirements

General

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 8" (203mm) centers. All gas connections 1/2" (13mm).

All models design certified by CSA International (formerly AGA/CGA), ANSI Z-21.10.1 and peak performance rated.

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

Suitable for Water (Potable) Heating and Space Heating.

Toxic chemicals, such as those used for boiler treatment, shall NEVER be introduced into this system. This unit may NEVER be connected to any existing heating system or component(s) previously used with a non-potable water heating appliance.

BRADFORD WHITE®
WATER HEATERS

Ambler, PA

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

Sales **800-523-2931** • Fax **215-641-1670** / Technical Support **800-334-3393** • Fax **269-795-1089** • Warranty **800-531-2111** • Fax **269-795-1089**

International: Telephone **215-641-9400** • Telefax **215-641-9750 / www.bradfordwhite.com**

BRADFORD WHITE-CANADA® INC. Sales / Technical Support **866-690-0961** / **905-238-0100** • Fax **905-238-0105** / **www.bradfordwhite.com**

Built to be the Best™

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