

**TTW1**

## Residential Ultra Low NOx Power Vent Energy Saver Gas Water Heater



Photo is of  
**U-1-TW-40S6FRN**

### Identical Dimensions

Same diameter, height and connections as standard units for ease of installation.

### FEATURING:



### The TTW<sup>®</sup>1 FVIR Eco-Defender Safety System<sup>®</sup> Models Feature:

- **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.
- **Defender Combustion Chamber**—Incorporates the Advanced ScreenLok<sup>®</sup> Technology Flame Arrestor and large split-door design to prevent ignition of flammable vapors outside the water heater.
- **Flammable Vapor Sensor and Resettable Thermal Switch**—Coordinates with control to prevent burner operation if flammable vapors are detected. The sensor will also prevent operation if there is ongoing flammable vapor burn inside the combustion chamber.
- **Maintenance Free**—No regular cleaning of air inlet openings or flame arrestor is required under normal conditions.
- **Sight Window**—Offers a view into the combustion chamber to observe the operation of the pilot and burner.
- **Honeywell Self Diagnostic Electronic Gas Control**—Intelligent gas control with spark to pilot ignition system eliminates the constant burning pilot. This results in savings of pilot gas during stand by periods (120 V.A.C.).
  - **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 accurate and consistent water temperature levels.
  - **Intelligent Diagnostics**—An exclusive green LED light prompts the installer during start-up and provides fifteen different diagnostic codes to assist in troubleshooting.
  - **Pilot On Indication**—Flashing green LED provides positive indication that pilot is on.
- **Compatible With Optional Accessory Packages**—Performance Package, Protection Package and Inlet Shut-off Valve.
- **Powerful Blower Motor**—Our significantly quiet design has greater resistance to outside winds and the power to vent in many difficult venting situations.
- **Horizontal and Vertical Venting**—With 2" or 3" PVC, ABS or CPVC (Maximum equivalent vent length on reverse side).
- **Factory installed Hydrojet<sup>®</sup> Total Performance System**—Cold water inlet sediment reducing device helps prevent sediment build up in tank. This increases first hour delivery, while minimizing temperature build up at top of tank.
- **Vitraglas<sup>®</sup> 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<sup>®</sup>) is fused to the steel surface by firing at a temperature of over 1600° F.
- **1" Non-CFC Foam Insulation**—Covers the sides and top, reducing the amount of heat loss. This results in less energy consumption, improved operation efficiencies and jacket rigidity.
- **Water Connections**—3/4"NPT factory installed true dielectric fittings.
- **Factory installed Heat Traps**—Design incorporates a flexible disk that reduces heat loss in piping and eliminates the potential for noise generation.
- **Protective Magnesium Anode Rod.**
- **Pedestal Base.**
- **T&P Relief Valve**—Included.
- **Low Restriction Brass Drain Valve**—Durable tamper proof design.
- **Meets SCAQMD Rule 1121 (10ng/J).**

### 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](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.

# Residential Power Vent Gas Water Heater

## TTW®1 Ultra Low NOx Energy Saver Models

NATURAL GAS

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

Model Number	Capacity		Nat. BTU/Hr. Input	Recovery 90°F Rise*		A Floor to Vent Conn.	B Jacket Dia.	C Vent Size	D Floor to T&P Conn.	E Floor to Gas Conn. in.	F Floor to Top of Heater in.	G Floor to Water Conn. in.	H Depth	Approx. Shipping Weight
	U.S. Gal.	Imp. Gal.		Nat. U.S. GPH	Nat. Imp. GPH	in.	in.	in.	in.	in.	in.	in.	in.	lbs.
U-1-TW-40S6FRN	40	33	40,000	43	36	56½	20	2	40½	11½	46½	48	24½	139
U-1-TW-50S6FRN	50	42	40,000	43	36	57½	22	2	40½	11½	47½	49½	26½	160
U-1-TW-60T6FRN	60	51	42,000	45	38	68	22	2	50½	11½	57½	58½	27½	192

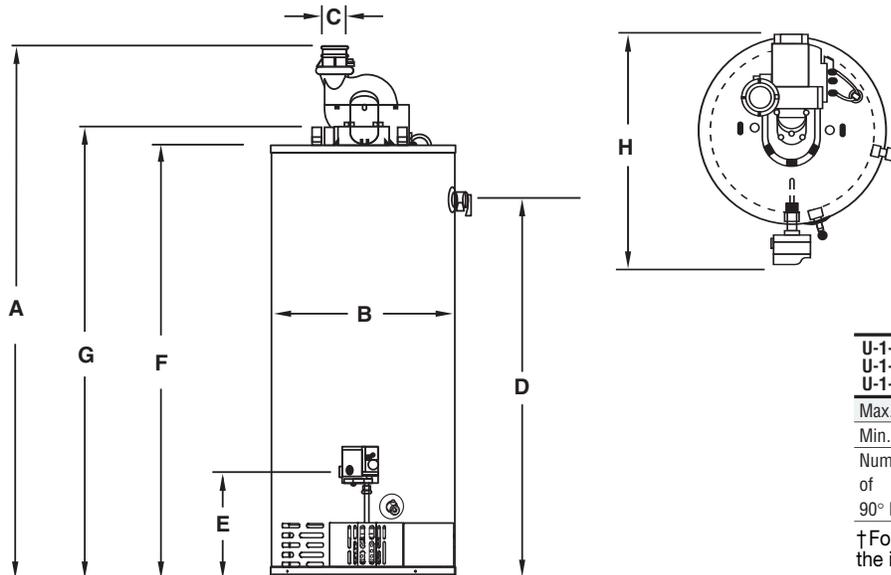
Model Number	Capacity		Nat. kW Input	Recovery 50°C Rise*		A Floor to Vent Conn.	B Jacket Dia.	C Vent Size	D Floor to T&P Conn.	E Floor to Gas Conn. mm.	F Floor to Top of Heater mm.	G Floor to Water Conn. mm.	H Depth	Approx. Shipping Weight
	Liters			Nat. Liters/Hour	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	kg.
U-1-TW-40S6FRN	151		11.7	163	1435	508	51	1030	298	1175	1220	632	75	
U-1-TW-50S6FRN	190		11.7	163	1457	560	51	1038	298	1197	1251	679	84	
U-1-TW-60T6FRN	227		12.3	170	1727	560	51	1292	298	1467	1486	692	88	

Available in Natural Gas only.

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

\*Based on manufacturer's rated recovery efficiency.

110 V.A.C. Required for Power Venting / 110 V.A.C., 60HZ, 3.1 Amperes.



	2" Vent Pipe	3" Vent Pipe
U-1-TW-40		
U-1-TW-50		
U-1-TW-60		
Max. Equivalent Length	†50 ft.	†120 ft.
Min. Equivalent Length	7 ft.	15 ft.
Number of 90° Elbows	1 45 ft. 2 40 ft. 3 35 ft.	115 ft. 110 ft. 105 ft.

† For high altitude installations, consult the installation instructions.

All models meet SCAQMD rule 1121 requirement of 10ng/J, or less, NOx emissions.

### General

All gas water heaters are certified at 300 PSI (2068 kPa) test pressure and 150 PSI (1034 kPa) working pressure.

All water connections are 3/4" NPT (19mm) on 8" (203mm) centers, all gas connections are 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.



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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