

BRADFORD WHITE



SAFETY SYSTEM® WITH SCREENLOK® TECHNOLOGY

ULTRA LOW NO<sub>x</sub> SERIES

Performance Data and Specifications

Model Number	Input BTU/hr	First Hour Delivery Gallons	Capacity Gallons	Diameter in.	Floor to Flue in.
U1-30S6FRN	30,000	55	30	18	48 <sup>3</sup> / <sub>8</sub>
U1-30T6FRN	32,000	57	30	16	59 <sup>1</sup> / <sub>8</sub>
U1-40T6FRN	40,000	77	40	18	59 <sup>3</sup> / <sub>8</sub>
U1-40S6FRN	40,000	72	40	20	50
U1-404T6FRN	50,000	86	40	18	60 <sup>3</sup> / <sub>4</sub>
U1-50S6FRN	40,000	90	50	20	59 <sup>5</sup> / <sub>8</sub>
U1-50L6FRN	40,000	86	48	22	49 <sup>3</sup> / <sub>4</sub>
U1-504S6FRN	50,000	92	50	20	58 <sup>1</sup> / <sub>2</sub>
U1-60T6FRN	40,000	96	60	22	60 <sup>3</sup> / <sub>4</sub>
U1-XR-40S6FRN	40,000	72	40	20	50
U2-XR-504T6FRN	55,000	91	48	22	59 <sup>1</sup> / <sub>4</sub>
U-50T-55FR-3N	55,000	91	48	22	59 <sup>1</sup> / <sub>4</sub>
U2-XR-65T6FRN	55,000	116	65	24	63
U-65T-55FR-3N	55,000	116	65	24	63
U4-30T6FRN	32,000	57	30	18	59 <sup>1</sup> / <sub>8</sub>
U4-40T6FRN	40,000	77	40	20	59 <sup>3</sup> / <sub>8</sub>
U4-40S6FRN	40,000	72	40	22	50
U4-50S6FRN	40,000	90	50	22	59 <sup>5</sup> / <sub>8</sub>
U4-60T6FRN	40,000	96	60	24	60 <sup>3</sup> / <sub>4</sub>
U-1-TW-40S6FRN	40,000	72	40	20	56 <sup>1</sup> / <sub>2</sub>
U-1-TW-50S6FRN	40,000	86	50	22	57 <sup>3</sup> / <sub>8</sub>
U-1-TW-60T6FRN	42,000	100	60	22	68
U-4-TW-40T6FRN*	40,000	72	40	20	66 <sup>15</sup> / <sub>16</sub>
U-4-TW-50T6FRN*	40,000	86	50	22	66 <sup>15</sup> / <sub>16</sub>
U-4-TW-60T6FRN*	40,000	98	60	24	67 <sup>3</sup> / <sub>4</sub>
U-2-TW-50T6FRN	60,000	101	48	22	65 <sup>7</sup> / <sub>8</sub>
U-2-TW-65T6FRN	60,000	116	65	24	69
U-TW4-50S-60FR-3N	60,000	101	48	22	65 <sup>7</sup> / <sub>8</sub>
U-TW4-65S-60FR-3N	60,000	116	65	24	69

\*Qualifies for the upcoming ENERGY STAR® criteria starting September 1st, 2010.

# Eco-DEFENDER

SAFETY SYSTEM® WITH SCREENLOK® TECHNOLOGY

ULTRA LOW NO<sub>x</sub> SERIES



Introducing new Ultra Low NO<sub>x</sub> Power Vent models

**75% LESS NO<sub>x</sub> EMISSIONS**

The **NEW** Standard for Low Emission Water Heaters



## Built to be the Best™

When it comes to water heating, trust Bradford White. We are dedicated to developing the best products and technology to meet every water heating situation. While we're very proud of our all-inclusive product line and exclusive features, we are most proud of our dedication to the plumbing and heating trade. That's why all Bradford White products are available only to plumbing and heating professionals exclusively through wholesale distribution.



[www.bradfordwhite.com](http://www.bradfordwhite.com)  
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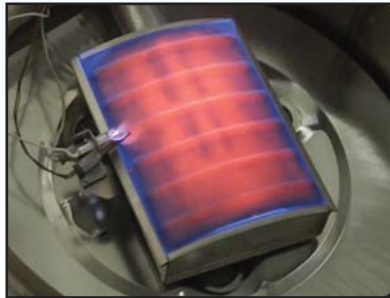
# GO GREEN!

Eco-Defender Safety System® Ultra Low NOx Series water heaters from Bradford White utilize the latest advances in technology and materials for an ecologically friendly line of water heaters. Each and every one meets the most stringent air quality requirements for allowable NOx emissions in the country\* while maintaining the incredibly high level of safety, performance and reliability that you've come to expect from a Bradford White water heater.

## Ultra Low NOx Performance plus the Proven Defender Safety System®

### Ultra Low NOx Performance

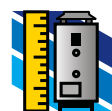
The Eco-Defender Series sets the standard for low emission water heaters. With a state-of-the-art radiant burner and an advanced control system, Eco-Defender models emit 75% less NOx emissions than standard models while maintaining optimal combustion efficiencies, and consistent operational temperatures. The result is an ecologically friendly and highly efficient line of water heaters from Bradford White.



### Defender Safety System® with ScreenLok® Technology

The Defender Safety System® is an exclusive Flammable Vapor Ignition Resistant (FVIR) technology introduced by Bradford White to meet the American National Standards Institute's (ANSI) standard for residential gas water heaters. Its patented Screenlok® Technology Flame Arrestor design resists the ignition of flammable vapors that can occur outside the water heater. Since its inception, the Defender Safety System® has proven to be one of the most successful, reliable and maintenance-free FVIR technologies in the industry.

\*Meets South Coast Air Quality Management District (SCAQMD), Bay Area Air Quality Management District (BAAQMD), Yolo-Solano Air Quality Management District (YSAQMD), San Joaquin Valley Air Pollution Control District (SJVAPCD) and Ventura County Air Pollution Control District (VCAPCD) Rule 1121 (15 PPM), currently the most stringent air quality requirement for allowable NOx emissions in the country. YSAQMD SJVAPCD

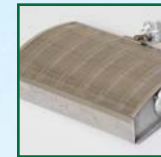


### Identical Dimensions

- Same diameter, height and connections as standard units for ease of replacement

## with the Eco-Defender Atmospheric Vent and Power Vent ULTRA Low NOx Series Water Heaters

### HOW IT WORKS



#### Ultra Low NOx Burner

A proven method to lower NOx emissions, which can contribute to smog, acid rain and the depletion of the ozone layer, is to reduce flame temperatures and secondary air. In order to accomplish this, our Ultra Low NOx design features three key components.

First, a long venturi tube allows greater primary air to be introduced into the burner prior to combustion. This excess primary air acts to cool the flame.

Next, the large surface area of the radiant flame holder allows the flame to burn at much cooler temperatures (600°F cooler).

Lastly, an Inconel screen absorbs and dissipates the heat from the flame, much like a heat sink, causing it to burn at decreased flame temperatures.

#### EXCLUSIVE Honeywell Control with Intelligent Diagnostics

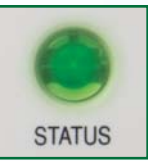
Unique to all Bradford White Ultra Low NOx models is a proven Honeywell gas control valve. This intelligent gas control learns and monitors the combustion chamber's temperature profile and automatically prevents water heater operation during upset conditions. Also, this design incorporates a thermowell that provides isolation between the temperature sensor and the surrounding water. No need to drain the tank when removing the gas valve.



Atmospheric Vent Models (Millivolt Powered)



Power Vent Models (Electronic Ignition)



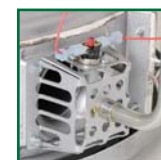
STATUS



Atmospheric Vent Model shown

Because of the intelligence of the control, it provides real time status diagnostics to aid in startup and troubleshooting, as well as increased First Hour Delivery Ratings.

### ECO-DEFENDER FEATURED COMPONENTS



#### EXCLUSIVE Rigid Manifold Mount

- Holds combustion system firmly in place while guarding vital internal burner components
- Specifically engineered to ensure optimal primary air distribution and proper air to gas mixture

#### EXCLUSIVE Secondary Air Distribution Device

- Specially designed to regulate the distribution of secondary air and to maintain Ultra Low NOx emissions



#### EXCLUSIVE Combustion Chamber Door

- A large split door design allows for servicing of combustion chamber components without removing the entire burner assembly

#### EXCLUSIVE Digital Thermal Sensor

- Resistance Temperature Device (RTD) transmits performance data to the intelligent diagnostic control



#### Optional Accessory Packages

- Power Vent models are compatible with the Performance Package, Programmable Setback Control Kit, Protection Package and Inlet Shut-Off Valve Kit (available on atmospheric vent models 4th quarter 2010).



#### Other Standard Features

- Sight Glass Window
- ScreenLok® Technology Flame Arrestor
- Resettable Thermal Switch

- The Hydrojet Total Performance System® for reducing sediment build-up, increasing first hour delivery and minimizing thermal stratification

- Protective magnesium anode rod
- Vitraglas® lining for longer tank life
- Quiet Heat Traps that reduce heat loss in piping

- Six year limited tank and parts warranty
- Dielectric waterway fittings extend water heater life and ease installation