

BRADFORD WHITE

# Eco-DEFENDER

SAFETY SYSTEM<sup>®</sup> WITH SCREENLOK<sup>®</sup> TECHNOLOGY

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



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

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



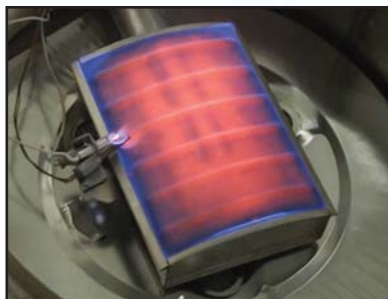
# GO GREEN!

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 stringent South Coast Air Quality Management District (SCAQMD) requirements for allowable NOx emissions\* 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 new Eco-Defender sets the standard for low emission water heaters. With a state-of-the-art radiant burner and an advanced control system, Eco-Defender models maintain extremely low emission levels, 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. Along with its patented ScreenLok® flame arrestor design, it has proven to be one of the most successful, reliable and maintenance-free FVIR technologies in the industry.

\*Meets SCAQMD Rule 1121 (15 PPM).

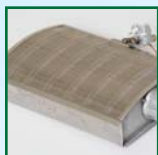


### Identical Dimensions

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

# with the **NEW Eco-Defender** ULTRA Low NOx Series Water Heaters

## ECO-DEFENDER FEATURED COMPONENTS



### Ultra Low NOx Burner

- Hyper-Stoichiometric† Primary-Air Radiant Burner to meet SCAQMD Rule 1121 (15 PPM)
- *Superalloy* Radiant Flame Holder - An integral design feature of the burner that assists in the overall reduction of NOx emissions. The mesh-like material is made of Inconel 601, chosen for its superior resistance to oxidation and corrosion
- Stainless Steel Diffuser - Internal to the burner, this diffuser evenly distributes the air/gas mixture across the flame holder. The diffuser is made of titanium-stabilized ferritic stainless steel, while the remaining components of the burner body are made of 409 stainless steel. These materials are used for additional durability and corrosion resistance



### 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 Combustion Chamber Door

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



### Sight Window

- Offers a view into the combustion chamber to observe the operation of the pilot and burner



### EXCLUSIVE Honeywell Control with Intelligent Diagnostics

- Learns and monitors the combustion chamber's temperature profile and automatically prevents water heater operation during upset conditions
- Millivolt powered with built-in Piezo igniter - no plugs, outlets or hardwiring
- Narrow swing temperature range for more precise and consistent water temperatures



### EXCLUSIVE Digital Thermal Sensor

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



### EXCLUSIVE LED Display

- Provides real-time status indication to assist in troubleshooting, diagnostics and start-up



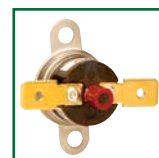
### Standard Off-The-Shelf Thermopile

- Proven reliable water heater technology that generates millivolt power to operate intelligent diagnostic control
- Standard right hand thread



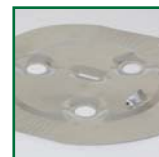
### Resettable Thermal Switch

- For additional safety, a reliable bimetallic switch prevents the water heater from operating during unsatisfactory conditions



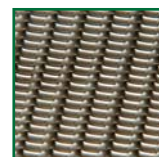
### EXCLUSIVE Secondary Air Distribution Device

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



### ScenLok® Technology Flame Arrestor

- Proven flame arrestor design resists the ignition of flammable vapors outside the water heater



### Other Standard Features

- 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 eases installation

†Hyper-stoichiometric: Increases the amount of primary air to mix with natural gas. A higher amount of primary air (air to gas ratio), prior to combustion, reduces formation of NOx emissions as a result of combustion.



SAFETY SYSTEM™ WITH SCREENLOK™ TECHNOLOGY

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

**Performance Data and Specifications**

Model Number	Input BTU/hr	FHD gallons	Capacity gallons	Diameter inches	Floor to Flue inches
U1-30S6FRN	30,000	55	30	18	48 <sup>3</sup> / <sub>8</sub>
U1-30T6FRN	32,000	54	30	16	59 <sup>1</sup> / <sub>8</sub>
U1-40T6FRN	40,000	75	40	18	59 <sup>3</sup> / <sub>8</sub>
U1-403S6FRN	40,000	72	40	20	50
U1-404T6FRN	50,000	86	40	18	60 <sup>3</sup> / <sub>4</sub>
U1-5036FRN	40,000	86	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-XR-403S6FRN	40,000	72	40	20	50
U4-30T6FRN	32,000	55	30	18	59 <sup>1</sup> / <sub>8</sub>
U4-40T6FRN	40,000	75	40	20	59 <sup>3</sup> / <sub>8</sub>
U4-403S6FRN	40,000	72	40	22	50
U4-5036FRN	40,000	86	50	22	59 <sup>5</sup> / <sub>8</sub>

## 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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