Commercial eF Series® Ultra High Efficiency Gas Water Heater

The eF Series® Models feature:

- **ENERGY STAR® Models Available**—EF60T125 & EF100T (150,199,250,399) Models.
- **Thermal Efficiency up to 97%**—Ultra High Efficiency results in less fuel consumption and greater hot water recovery.
- **ICON HD**—Intelligent proven design combines temperature control, diagnostic codes, and system ignition functions into a single control board with a digital LCD display.
- **Factory Installed Hydrojet® Sediment Reduction System**—Cold water inlet sediment reducing device helps prevent sediment build up in the tank.
- **Vitraglas® Lining**—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).
- **Direct Spark Ignition**—For improved operational dependability and durability.
- **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 screens 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 temperature sensor reading, displaying the flame current, and displaying diagnostic codes.
- **Premix Power Burner**—A self compensating negative regulation system automatically increases or decreases fuel flow when a change in combustion air is detected. This provides the range for optimum combustion and efficiency (automatic high altitude compatibility).
- **Venting Versatility**—The eF Series® can vent vertically or horizontally with either 2”, 3”, 4” or 6” (51mm, 76mm, 107mm or 152mm) PVC, CPVC, Polypropylene, Stainless Steel, or ABS (not approved for Canada) vent pipe, and is approved for direct vent closed combustion applications, or those applications that require inside air for combustion. The eF Series® is also approved for unbalanced venting, which means the air intake pipe doesn’t have to be vented the same distance as the exhaust.
- **Three Pass Fire Tube Heat Exchanger System**—The three pass Heat Exchanger system keeps the hot combustion gases moving at a high velocity. The combination of high turbulence and velocity causes an enormous rate of heat transfer into the water.
- **Ultra Quiet Operation.**
- **A Single Exhaust Pressure Switch.**
- **1” (25mm) NPT Side Connections for Space Heating.**
- **Sanitizing Capability**—Temperature setting up to 180°F (82°C).
- **Complies with the latest ultra-low NOx requirement (14 ng/J NOx limit).**
- **ASME Code Available on All Models.**
- **NSF Construction Available.**
- **T&P Relief Valve—Installed.**
- **Low Restrictive Brass Drain Valve—Durable tamper proof design.**

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.
**Commercial Gas High Efficiency Water Heater**

**eF Series® Additional Equipment Features:**

Submerged Combustion Chamber—Submerging the combustion chamber in the center of the water storage tank minimizes radiant heat loss and improves efficiency.

Zero Inch Clearance—The eF Series® jacket is cool to the touch and is approved for zero inch clearance to combustibles for unsurpassed installation flexibility.

Protective Magnesium Anode Rods—Each eF Series® model has multiple anodes to provide increased protection against corrosion for long trouble-free service (EF100T399 has two powered anode rods).

**Water Connections**—Factory-installed true dielectric fittings extend water heater life and simplify water line connections.

Hand Hole Cleanout—Allows inspection of tank interior and facilitates the removal of sediment deposits.


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.

Air intake cannot exceed exhaust by more than 30 ft. (9.1m) in any venting situation. Subtract 5 ft. (1.5m) for each additional 90° elbow.

**eF Series® Optional Equipment Features:**

**NSF Compliance Kit**

p/n A265-44542-04

Optional Condensate Neutralizer Kit

p/n A2123601 (125,000 - 250,000 BTU/Hr.)

p/n A2123602 (300,000 - 399,000 BTU/Hr.)

**Low Inlet Gas Pressure Option**—Pre-assembled to allow operation with natural gas inlet pressure down to 3.5" w.c. (Not available on EF-100T-300/399E-3N(A) models or any size propane models.)

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### Low Profile Termination Kit Model Numbers

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<th>IPEX System (1738 or 636)</th>
<th>IPEX Part Number</th>
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**Commercial Gas High Efficiency Water Heater**

**eF Series® Models**

**NATURAL GAS AND LIQUID PROPANE GAS**

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For propane gas models, change suffix “N” to “X” and remove “E” from the model number. **Example: EF-100T-150E-3N(A)**

(A) ASME: All models are available with ASME construction. To order ASME construction add the (A) to the end of the model number.

**Example: EF-60T-125E-3N(A)**

For 5 year warranty models, change suffix “3” to “5”. **Example: EF-100T-399E-5N**

★ = ENERGY STAR® models available.

**Recovery Data**

- **GPH Recovery at Degree Rise**
- **LPH Recovery at Degree Rise**

**Note:** The weight is the same for both ASME and Non-ASME models. All models comply with the latest ultra-low NOx requirements of 14 ng/J or less. 14.0° w.c. maximum static, 4.5° w.c. minimum running (recommend 7.0° w.c. minimum running).

**Diagram:**

- **3 PVC Inlet**
- **1/4" NPT Gas Inlet**
- **1/4" NPT Outlet**
- **1" NPT Space Heating Outlet**
- **1" NPT Space Heating Return**
- **3 PVC Exhaust**

**Note:** Diagrams are for both 60 and 100 gallon models.
Sample Specification

The water heater shall be a Bradford White model EF-_____ with a rated storage capacity of not less than _____ gallons/liters, a minimum gas input of _________ BTU/hr., a minimum recovery of _____ GPH/LPH at 100°F (56°C) temperature rise, and a Thermal Efficiency Rating of ____%. It shall be design certified by CSA International (formerly AGA and CGA) for 180°F (82°C) application, either with or without a separate storage tank. The tank shall be lined with Vitraglas® vitreous enamel and shall have a bolted hand hole cleanout. The tank shall have four extruded magnesium anode rods installed in separate head couplings. This water heater shall be equipped with stainless steel cold water inlet, Hydrojet® Sediment Reduction System. The heater shall be insulated with Non-CFC foam. This water heater shall be equipped with an electronic ignition system, an ASME rated T&P relief valve and a premix closed combustion system for direct venting using either 2", 3", 4" or 6" (51mm, 76mm, 107mm or 152mm) PVC, CPVC, Polypropylene, Stainless Steel, or ABS vent pipe. The water heater shall be factory assembled and tested. The water heater shall be approved for zero inch clearance to combustibles. A digital LCD display shall be integrated into the front and be an adjustable electronic thermostat to any temperature up to 180°F. A recycling Energy Cut Off (E.C.O.) shuts off all gas in the event of an overheat condition. The entire installation shall be made in compliance 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. As an Automatic Storage Heater, all models are complete, self-contained water heating systems. It needs no separate storage tank, pump, wiring (115V AC required), 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.