

# Richmond® *ENCORE*® & *Essential Plus*® Super High Efficiency Gas Water Heaters

MAXIMUM EFFICIENCY.  
POWERFUL PERFORMANCE.  
SMART CONTROL.



**RICHMOND®  
ENCORE®  
SHEG WITH  
LEAKSENSE™**

**RICHMOND®  
ENCORE®  
SHEG HEAVY  
DUTY WITH  
LEAKSENSE™**

**RICHMOND®  
ESSENTIAL  
PLUS® SHEG**



These products meet a stringent set of our internally defined sustainability standards.<sup>1</sup>

**Richmond®**  
The Water Heater Experts™

<sup>1</sup>Sustainability Standouts applies to premium models only.

# Richmond *ENCORE*® Super High Efficiency Gas with LeakSense™ Premium Models

Richmond® *ENCORE*® Super High Efficiency Gas with LeakSense and *ENCORE*® Super High Efficiency Gas Heavy Duty with LeakSense were designed to give homeowners continuous hot water, MaxMode™ and smart features— all from a water heater that installs as easily as a standard product.



FEATURE	SHEG WITH LEAKSENSE	SHEG HEAVY DUTY	COMPETITOR 1	COMPETITOR 2
LeakGuard™ Auto Shut-Off Valve <sup>1</sup> Ready	✓	✓	✗	✗
LeakSense™ Integrated Leak Detection System	✓	✓	✗	✗
Integrated Monitoring With Wi-Fi Mobile App	✓	✓	✗	✗
Full-Color LCD Monitoring Display	✓	✓	✗	✗
Air Handler Certified	✓	✓	✗	✗
Built-in Condensate Neutralizer	✓	✓	✗	✗
Flexible Venting	✓	✓	✓	✓

## MAXIMUM EFFICIENCY

ENERGY STAR® certified and up to 0.90 UEF reduces energy usage and carbon footprint by up to 36%<sup>1</sup>

## POWERFUL PERFORMANCE

Fast recovery heats water up to 2X faster than a standard gas tank<sup>2</sup>, enough for up to nine simultaneous showers<sup>4</sup>

## SMART CONTROL

Built-in EcoNet® Wi-Fi Technology allows homeowners to control and optimize their water heater experience from a mobile device<sup>5</sup>

## SMART PROTECTION

LeakSense™ Leak Detection System detects any water leak—large or small, internal or external<sup>6</sup>

# Richmond *Essential Plus*® Super High Efficiency Gas Plus Model

Richmond® *Essential Plus*® Super High Efficiency Gas was designed with a powerful, yet efficient burner that helps it outperform, so there's no need to choose between sustainability goals and enjoying hot water.



FEATURE	SHEG PLUS	COMPETITOR 1	COMPETITOR 2
High Altitude (Up to 10,000 feet)	✓	X	X
Error Code Diagnostics	✓	✓	X
ULN Models as low as 10 ng/j	✓	X	X
Installation Verification	✓	X	X
Air Handler Certified	✓	X	X
Built-in Condensate Neutalizer	✓	X	X
Flexible Venting	✓	✓	✓
100% Serviceable From the Front	✓	X	X

## MAXIMUM EFFICIENCY

ENERGY STAR® certified and up to 0.90 UEF for carbon footprint reduction with up to a 36%<sup>1</sup> reduction in energy use

## POWERFUL PERFORMANCE

Provides up to 25% more hot water than a standard gas tank<sup>7</sup> so you'll never worry about running out of hot water while you shower, do the dishes and wash the laundry

**Richmond**<sup>®</sup>  
The Water Heater Experts™

# Maximum Efficiency

As the most efficient water heater in its class, Super High Efficiency Gas is ENERGY STAR® certified and helps deliver up to \$1,100+ in energy cost savings over 12 years.<sup>8</sup> And it may save even more with available tax credits or local utility rebates.

## Earth-Friendly Design

Super High Efficiency Gas was designed with a powerful, yet efficient burner that helps it outperform, so there's no need to choose between sustainability goals and enjoying hot water. It helps homeowners reduce their carbon footprint and energy use by up to 36%<sup>1</sup> and reduce their NOx emissions up to 75%.<sup>9</sup>

## Save Water with Recirculation

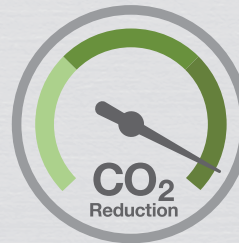
Pair with a recirculation pump (sold separately) to save over 12,000 gallons of water from being wasted down the drain each year.<sup>10</sup> (premium models)

## Space Heating Ready

Side water connections built-in for use with a space heating, hydronic air handler—no need for a second tank or a furnace.



*This product meets a stringent set of our internally defined sustainability standards*



**This Product Demonstrates a BRAND BEST Level of CO<sub>2</sub> Reduction\***

*\*As compared to our baseline product*



# Smart Control

## PREMIUM MODELS

### Wi-Fi Monitoring

With integrated Wi-Fi and the EcoNet® App, homeowners can enjoy complete control—like adjusting water temperature and setting Vacation / Away or MaxMode™— and know when their water heater needs service. It's all possible with the Richmond® Super High Efficiency Gas Water Heater.

### Hot Water Availability Indicator

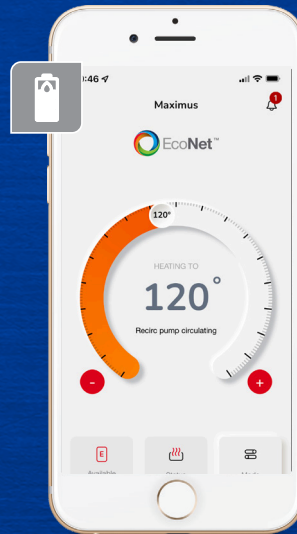
Know how much hot water is available before jumping into the shower.

### Scheduling

Program the water heater to match household needs throughout the day.

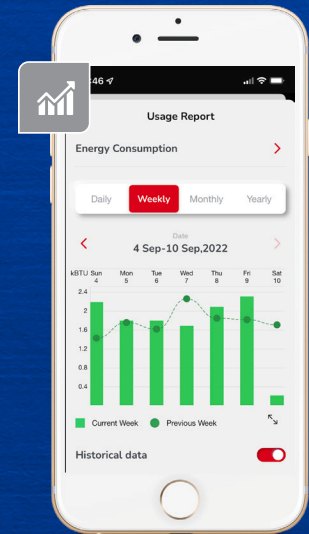
### Mobile Alerts

Receive immediate notifications leaks and service needs through the EcoNet App<sup>5</sup>.



### Total Control

Check hot water availability, adjust the temperature or turn on a recirculation pump accessory.



### Energy Usage Tracking

View weekly, monthly and yearly energy usage reports to better manage consumption<sup>5</sup>.

**NOTE:** EcoNet App subject to change without notice.

# Smart Protection

## PREMIUM MODELS

### Leak Detection

Super High Efficiency Gas was designed with homeowner comfort and safety in mind. It features LeakSense™ leak detection system that detects any leak—large or small, internal or external—in less than 15 seconds<sup>6</sup> and alerts the homeowner through the EcoNet App and on-unit display.

### Add Leak Prevention

When you add a LeakGuard™ Auto Water Shut-off Valve Kit (Part SP21172), Super High Efficiency Gas can stop leaks before they become a problem. LeakGuard protects your homeowners' belongings by limiting leaks to no more than 20 ounces<sup>11</sup>.

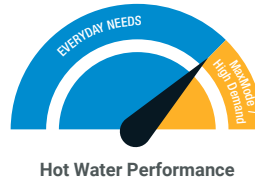


# Powerful Performance

With an efficient yet powerful burner, a 50-gallon Super High Efficiency Gas produces up to 2.5X the hot water of a standard tank. So homeowners will never worry about running out of hot water while they do the dishes, wash the laundry or even run continuous back-to-back showers.

## MaxMode™

Gives the water heater the boost it needs to keep up when demand is high, producing up to 15% more hot water.<sup>12</sup> So even with houseguests, homeowners are covered.



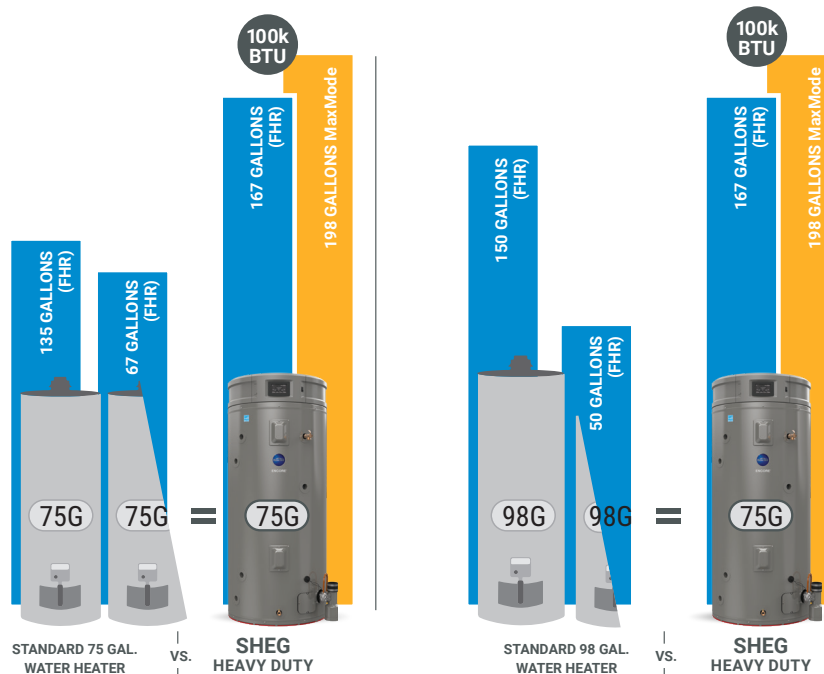
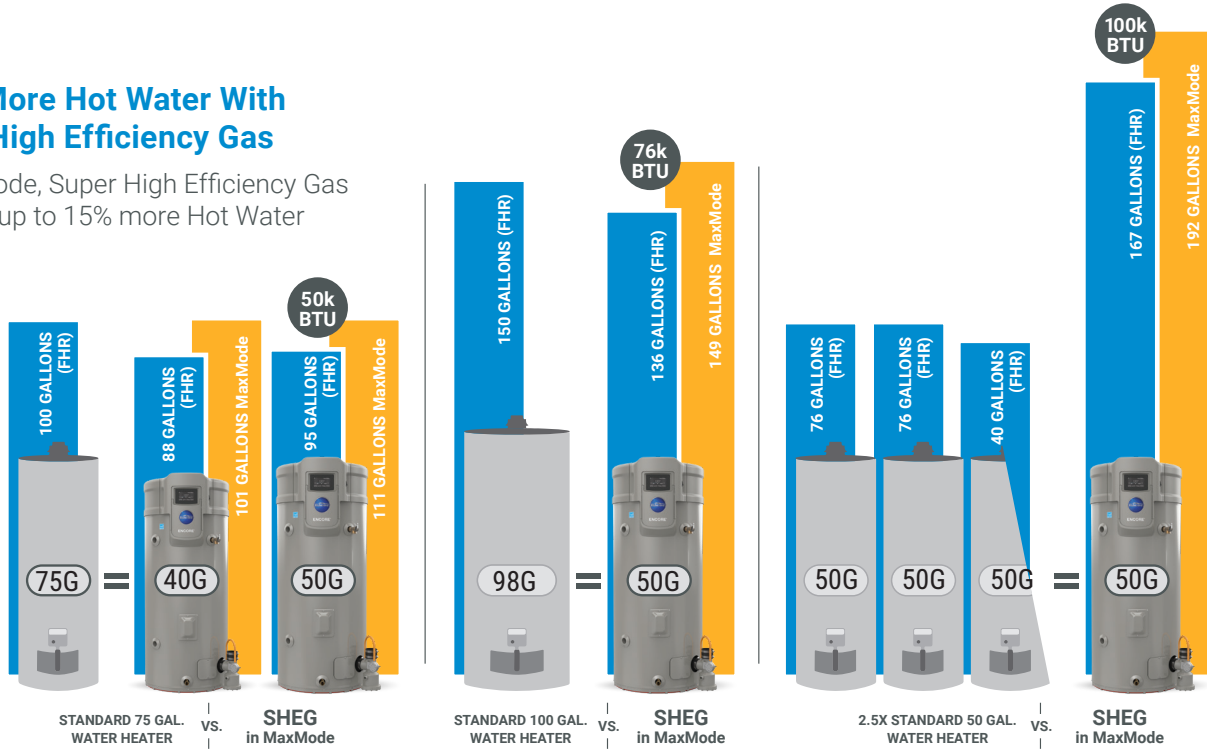
### Delivery:

Gallons of hot water produced per hour, starting with a full tank.

- STANDARD FHR
- MAXMODE DELIVERY

## Enjoy More Hot Water With Super High Efficiency Gas

In MaxMode, Super High Efficiency Gas provides up to 15% more Hot Water



## Fast Recovery

Replenishes hot water up to 2X faster than a standard gas tank to provide continuous hot water, up to 3.8 Gallons Per Minute<sup>13</sup>, so you can take as many showers back-to-back as you need. With the tank capacity added to the fast recovery, Super High Efficiency Gas is capable of providing hot water for up to nine simultaneous showers.\*

## CONTINUOUS HOT WATER FROM SUPER HIGH EFFICIENCY GAS

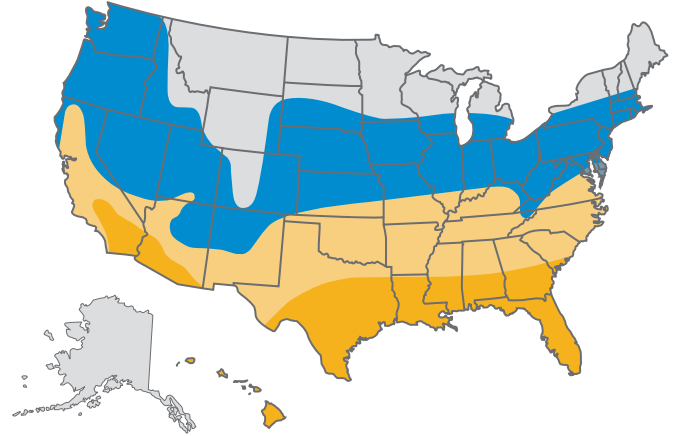
	Inlet Temperature 45°	Inlet Temperature 58°	Inlet Temperature 70°
Models:	Approximate Usage	Approximate Usage	Approximate Usage
40G-50K	1 Shower	1 Shower	1 Shower
50G-50K	1 Shower	1 Shower	1 Shower
50K-76K	1 Shower	2 Showers	2 Showers
50G-100K	3 Showers	2 Showers, 1 Faucet	2 Showers, 1 Faucet
75G-100K	3 Showers	2 Showers, 1 Faucet	2 Showers, 1 Faucet

Total simultaneous hot water flow for a continuous duration.

TOTAL # OF SHOWERS   120°F SET-POINT   2 GPM SHOWER			
Models:	Inlet Temperature 45°	Inlet Temperature 58°	Inlet Temperature 70°
40G-50K	3 Showers	3 Showers	3 Showers, 1 Faucet
50G-50K	3 Showers, 1 Faucet	3 Showers, 1 Faucet	3 Showers, 1 Faucet
50K-76K	3 Showers, 1 Faucet	3 Showers	3 Showers, 1 Faucet
50G-100K	3 Showers	3 Showers, 1 Faucet	3 Showers, 1 Faucet
75G-100K	3 Showers, 1 Faucet	3 Showers, 1 Faucet	3 Showers, 1 Faucet

TOTAL # OF SHOWERS   140°F SET-POINT   2 GPM SHOWER			
Models:	Inlet Temperature 45°	Inlet Temperature 58°	Inlet Temperature 70°
40G-50K	3 Showers, 1 Faucet	3 Showers	3 Showers, 1 Faucet
50G-50K	3 Showers	3 Showers, 1 Faucet	3 Showers, 1 Faucet
50K-76K	3 Showers, 1 Faucet	3 Showers	3 Showers, 1 Faucet
50G-100K	3 Showers	3 Showers, 1 Faucet	3 Showers, 1 Faucet
75G-100K	3 Showers, 1 Faucet	3 Showers, 1 Faucet	3 Showers, 1 Faucet

Total simultaneous hot water flow for an 8 minute duration.



Flow rates are dependent on the inlet water temp. Gray zone flow rates will typically be less than other zones.

- 45°F Inlet Temperature
- 58°F Inlet Temperature
- 70°F Inlet Temperature

### USAGE KEY



**Shower**  
Flow rate of 2.0 GPM



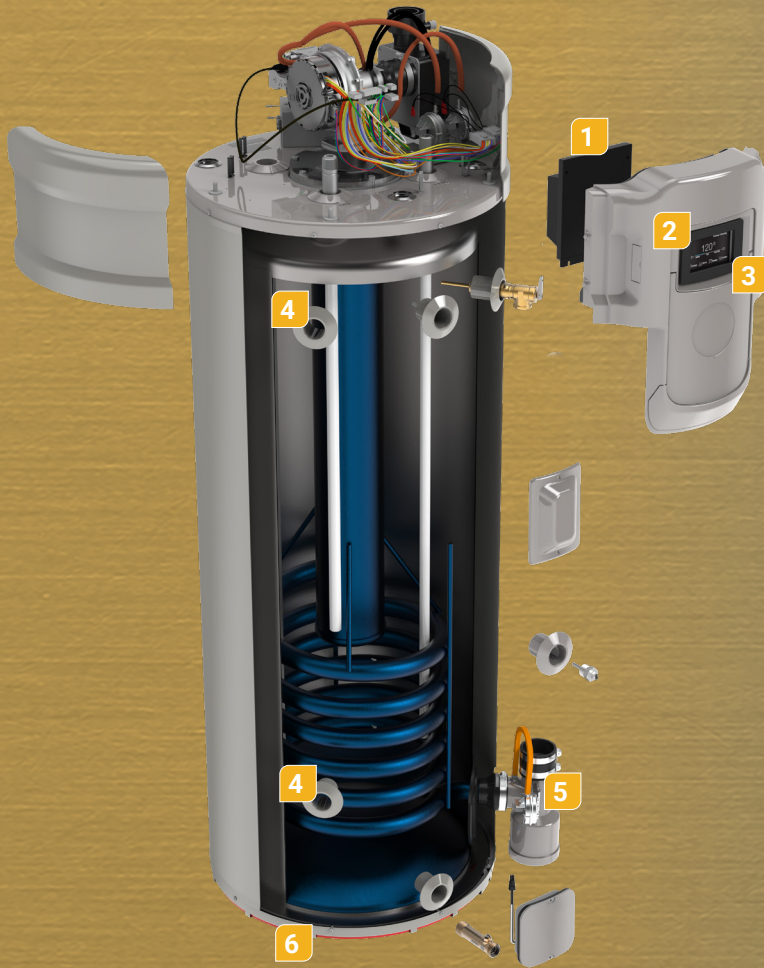
**Faucet**  
Flow rate of 1.0 GPM

**Inlet Temperature:**  
The temperature of cold water before it enters your water heater.

**Approximate Usage:**  
Shower temperature of 105°F. Flow rates vary depending on temperature of incoming cold water and water heater set temperature.

SUPER HIGH EFFICIENCY GAS WITH LEAKSENSE™

SUPER HIGH EFFICIENCY GAS HEAVY DU



## Built to be better for the Homeowner—and You

### Super High Efficiency Gas Product Features

Not only did we make it easy to install and service, but we also made it powerful, smart and dependable. So when you're looking for a gas water heater for your homeowners, why look for the best when you can install the greatest?

### Richmond® *ENCORE*® Super High Efficiency Gas with LeakSense™ Premium Model

- 40 and 50-Gallon Capacities
- 50K - 100K BTU/h
- Super High Efficiency – Up to .90 UEF
- 1** • Advanced Controls and Start-up Verification
- 2** • Touchscreen LCD Display with System Health Alerts
- 3** • Integrated EcoNet® Smart Wi-Fi Monitoring Technology
- 4** • Side Water Connections for Space Heating
- 5** • Built-in Condensate Neutralizer
- 6** • LeakSense™ Built-in 360° Leak Detection System
- MaxMode™ for up to 15% More Hot Water on Demand
- 12-Year Warranty



TY WITH LEAKSENSE™

SUPER HIGH EFFICIENCY GAS



## Richmond® *ENCORE*® Super High Efficiency Gas Heavy Duty Premium Model

- 75-Gallon Capacity
- 100K BTU/h
- Super High Efficiency – Up to .88 UEF
- 1** • Advanced Controls and Start-up Verification
- 2** • Touchscreen LCD Display with System Health Alerts
- 3** • Integrated EcoNet® Smart Wi-Fi Monitoring Technology
- 4** • Side Water Connections for Space Heating
- 5** • Built-in Condensate Neutralizer
- 6** • LeakSense™ Built-in 360° Leak Detection System
- MaxMode™ for up to 15% More Hot Water on Demand
- 12-Year Warranty

## Richmond® *Essential Plus*® Super High Efficiency Gas Plus Model

- 40 and 50-Gallon Capacities
- 50K BTU/h
- Super High Efficiency – Up to .90 UEF
- 1** • Start-up Verification
- 2** • LCD Display with Integrated Diagnostics
- 3** • Side Water Connections for Space Heating
- 4** • Built-in Condensate Neutralizer
- 9-Year Warranty

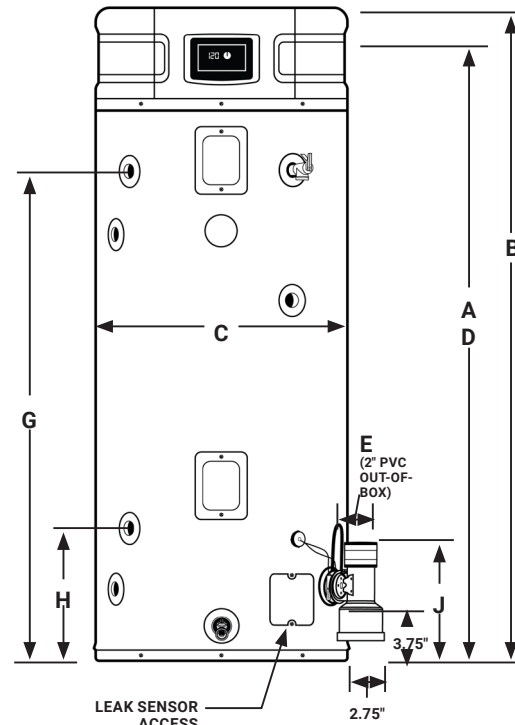
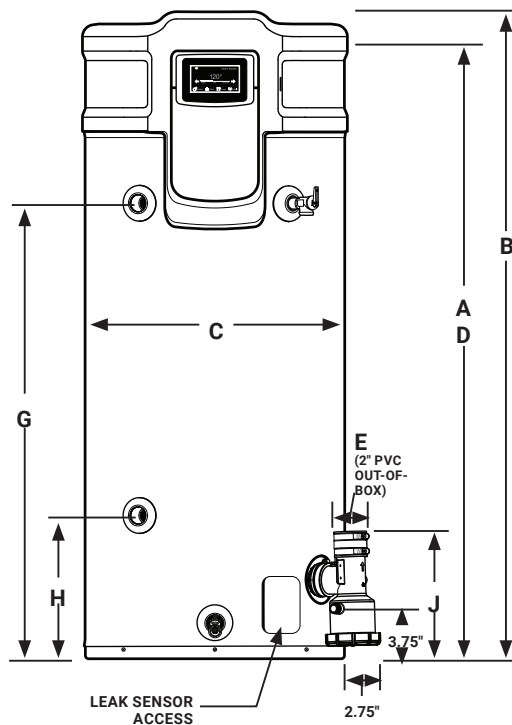
**Richmond**®  
The Water Heater Experts™

# Richmond *ENCORE*<sup>®</sup> Super High Efficiency Gas with LeakSense<sup>™</sup> / Richmond *ENCORE*<sup>®</sup> Super High Efficiency Gas Heavy Duty with LeakSense<sup>™</sup>

## Specifications

DESCRIPTION				FEATURES								ROUGHING IN DIMENSIONS (SHOWN IN INCHES)										ENERGY INFO.	
TYPE	NOMINAL GALLON CAP.	RATED GALLON CAP.	MODEL NUMBER	GAS INPUT IN THOUS. BTU/H		RECOVERY IN G.P.H. 90° F RISE		FIRST HR. RATING (GALLONS)		MAXMODE™ DELIVERY (GALLONS)		HEIGHT TO INTAKE A	OVERALL UNIT HEIGHT B	DIAM. C	HT. TO GAS CONN. D	VENT SIZE E	WATER CONN. CENTER F	HT. TO SIDE TAP HOT G	HT. TO SIDE TAP COLD H	HT. TO EXHAUST J	WATER CONN. SIZE	SHIP WT. (LBS)	UNIFORM ENERGY FACTOR (UEF)
				NAT.	LP	NAT.	LP	NAT.	LP	NAT.	LP												
Tall	40	40	12GUH40-50FN	50	-	64	-	88	-	101	-	54-1/4	54-1/2	21-3/4	50-1/4	2", 3", 4", 2" or 3" Flex	8	38	12	10	3/4	221	0.90
Tall	40	40	12GUH40-50FP	-	50	-	64	-	88	-	101	54-1/4	54-1/2	21-3/4	50-1/4	2", 3", 4", 2" or 3" Flex	8	38	12	10	3/4	221	0.90
Tall	50	50	12GUH50-50FN	50	-	64	-	95	-	109	-	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	247	0.88
Tall	50	50	12GUH50-50FP	-	50	-	64	-	95	-	109	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	247	0.88
Tall	50	50	12GUH50-75FN	76	-	97	-	136	-	156	-	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	256	0.89
Tall	50	50	12GUH50-75FP	-	76	-	97	-	136	-	156	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	256	0.89
Tall	50	50	12GUH50-100FN	100	-	128	-	167	-	192	-	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	256	0.89
Tall	50	50	12GUH50-100FP	-	100	-	128	-	167	-	192	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	256	0.89
Tall	75	75	12GUH75-100FN	100	-	129	-	167	-	198	-	62-5/8	64-1/2	26-1/4	60-1/8	2", 3", 4", 2" or 3" Flex	12	47	12	9	3/4	332	0.88
Tall	75	75	12GUH75-100FP	-	100	-	129	-	167	-	198	62-5/8	64-1/2	26-1/4	60-1/8	2", 3", 4", 2" or 3" Flex	12	47	12	9	3/4	332	0.88

Uniform Energy Factor and rated gallon capacity based on Department of Energy (DOE) requirements. All units have integrated Wi-Fi control board.

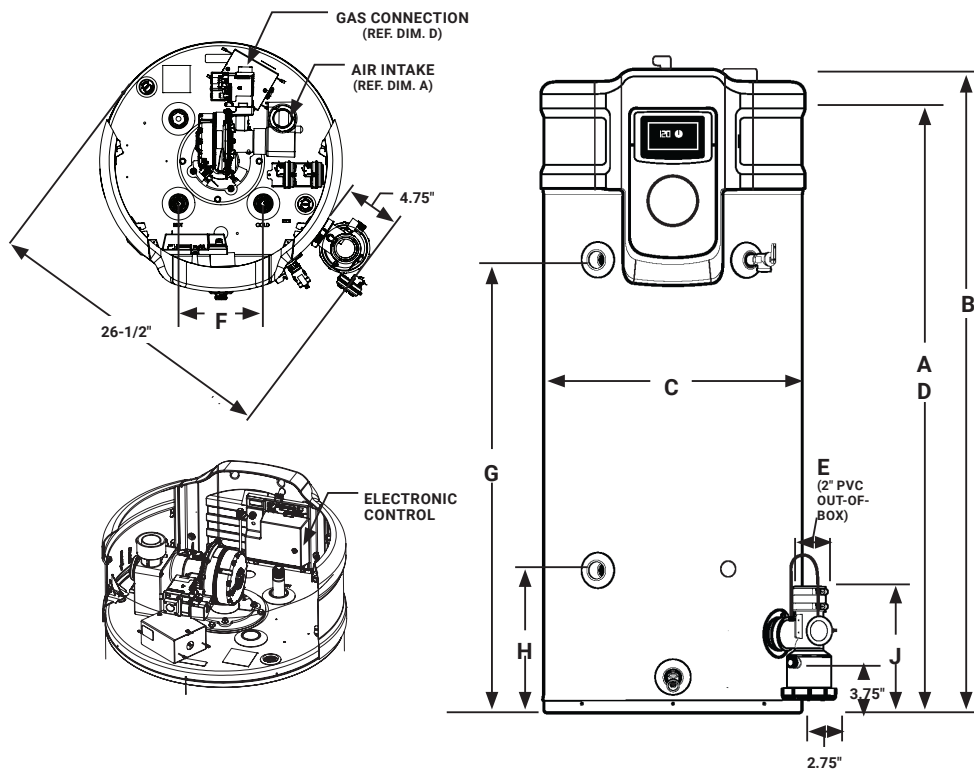


# Richmond Essential Plus® Super High Efficiency Gas

## Specifications

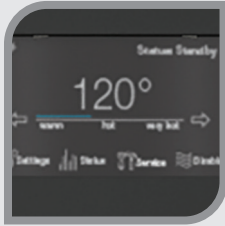
DESCRIPTION				FEATURES						ROUGHING IN DIMENSIONS (SHOWN IN INCHES)											ENERGY INFO.
TYPE	NOMINAL GALLON CAP.	RATED GALLON CAP.	MODEL NUMBER	GAS INPUT IN THOUS. BTU/H		RECOVERY IN G.P.H. 90° F RISE		FIRST HR. RATING (GALLONS)		HEIGHT TO INTAKE A	OVERALL UNIT HEIGHT B	DIAM. C	HT. TO GAS CONN. D	VENT SIZE E	WATER CONN. CENTER F	HT. TO SIDE TAP HOT G	HT. TO SIDE TAP COLD H	HT. TO EXHAUST J	WATER CONN. SIZE	SHIP WT. (LBS)	UNIFORM ENERGY FACTOR (UEF)
				NAT.	LP	NAT.	LP	NAT.	LP												
Short	40	40	9GUH40-50FN	50	-	64	-	88	-	54-1/4	54-1/2	21-3/4	50-1/4	2", 3", 4", 2" or 3" Flex	8	38	12	10	3/4	221	0.90
Short	40	40	9GUH40-50FP (H)	-	50	-	64	-	88	54-1/4	54-1/2	21-3/4	50-1/4	2", 3", 4", 2" or 3" Flex	8	38	12	10	3/4	221	0.90
Tall	50	50	9GUH50-50FN	50	-	64	-	95	-	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	247	0.88
Tall	50	50	9GUH50-50FP (H)	-	50	-	64	-	95	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	247	0.88

Uniform Energy Factor and rated gallon capacity based on Department of Energy (DOE) requirements.  
 (H) denotes model is available in high-altitude version. High-altitude versions are required for LP installations at 2000-7800 ft. To order a high-altitude model, add H and the end of the base model number.



# Why Super High Efficiency Gas?

Richmond® Super High Efficiency Gas is what you've been waiting for. Now you can give more homeowners the continuous hot water they want without the costs typically required, from a tank that installs no different than the many you've installed before. Because Super High Efficiency Gas was designed by plumbers and perfected by Richmond engineering, it's a win-win solution that makes you come out looking like a hero.



## Advanced Diagnostics

View detailed diagnostics, alerts and alarm codes while at the water heater to expedite service.



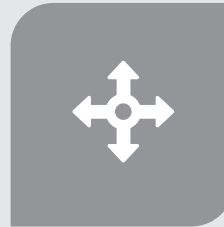
## Start Up Verification

Be 100% sure your customer is up and running before you leave the job to prevent callbacks.



## Leak Sensor Channel

Leak sensor replacement is easy by opening the thermostat panel and snaking the new leak sensor down the channel—360° protection, all from the front of the tank.



## Perfect for Replacement

Easy replacement with the same dimensions as a standard gas water heater.



## 0" Clearance on Sides

Fits in a closet and is fully serviceable from the front.



## Contact Info in the App

If anything ever goes wrong, your contact info in the EcoNet® App gives homeowners an easy way to reach and share codes with you for repeat business and simpler service calls.



## CONTACT US

**Customer Service, Warranty and Parts:** 800.621.5622

**Technical Service:** 800.HEATER3 (800.432.8373)

**EcoNet® Support:** 800.255.2388

**Plumber Support Group:** 866.339.2388

## LEARN MORE

[Richmondwaterheaters.com/SHEG](http://Richmondwaterheaters.com/SHEG)

<sup>1</sup>Comparison of a 40 and 50-gallon SHEG to a standard atmospheric gas tank of like capacity with minimum efficiency. <sup>2</sup>Recovery comparison of SHEG to atmospheric and PV/conventional vent gas tanks. <sup>3</sup>Comparison of the MaxMode® delivery of a 50-gallon Richmond® SHEG to first hour rating of a standard 50-gallon gas water heater. <sup>4</sup>Based on 2 GPM shower flow of hot water at 70°F inlet water temperature and 140° F tank water set point temperature. <sup>5</sup>Wi-Fi broadband connection and EcoNet® App required; connection between water heater and app are dependent on external factors beyond Richmond's control. <sup>6</sup>Water leaks from the heater only, as tested across scenarios including a minimum of 5.5mL/hr volume leak rate, using most common installation scenarios. Time starts when leak begins and ends when sensor alarm is triggered. <sup>7</sup>Based on comparison of the First Hour Rating of a 50-gallon Richmond® SHEG to a standard 50-gallon gas water heater. <sup>8</sup>Based on AOC (annual operating cost) comparison of 40 and 50-gallon Richmond SHEG Gas Water Heaters to standard gas water heaters of like capacity with minimum efficiency. <sup>9</sup>Comparison of SHEG to a standard atmospheric gas water heater, not to exceed 75,000 BTUs. <sup>10</sup>Applies to models with a recirculation pump installed only. Recirculation pump sold separately. Claim based on recirculation pump that runs 24/7 with no controls or smart features, for a period of one year. <sup>11</sup>Applies to models with auto shut-off valve installed only. Testing under a vacuum lock using 50-gallon tank, no expansion tank, average tank pressure of 40 psi, assuming no additional faucets are opened. <sup>12</sup>Comparison of SHEG delivery in normal mode to SHEG first hour rating in MaxMode®. <sup>13</sup>GPM varies by model and inlet water and tank water set point temperature.

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**Richmond®**  
The Water Heater Experts™