

# Richmond®

The Water Heater Experts

## Product Guide

Effective April 2015



**Gas and Electric Tank, Tankless Gas and Electric, and Solar Water Heating Solutions for America's homes!**

[richmondwaterheaters.com](http://richmondwaterheaters.com)

# Richmond®

The Water Heater Experts

### National Customer Service

Division Office..... 334-260-1500  
Customer Service ..... 800-621-5622  
Warranty, Parts ..... 800-219-6107  
Fax ..... 800-535-9538  
Email ..... CustomerService@rheem.com  
Technical Service.....800-HEATER3  
(800-432-8373)  
Website ..... richmondwaterheaters.com

*In keeping with its policy of continuous progress and product improvement, Richmond reserves the right to make changes without notice.*

Richmond Water Heaters • 101 Bell Road • Montgomery, AL 36117 • 1-800-621-5622

© Rheem Manufacturing Company • Printed in U.S.A. • 04/15 WP • FORM NO. T-147F Rev. 33

[richmondwaterheaters.com](http://richmondwaterheaters.com)

# Richmond Water Heaters

## Miscellaneous

- FVIR System ..... 4
- EverKleen System..... 5
- Lifeguard Electric Element..... 6

## ENERGY STAR®

### Gas Tank-Type

#### Encore Models

- Encore High Efficiency  
Condensing Power Direct Vent..... 8-9
- Encore XR90 Induced Draft..... 10-11
- Encore Powered Damper ..... 12-13
- Encore Atmospheric..... 14-15

#### Essential Plus Models

- Essential Plus  
Powered Damper..... 16-17
- Essential Plus Atmospheric ..... 18-19
- Essential Plus Heavy Duty ..... 20-21
- Essential Plus Heavy Duty  
Power Direct Vent ..... 22-23
- Essential Plus Heavy Duty  
Power Vent ..... 24-25

## Essential Models

- Essential Powered Damper ..... 26-27
- Essential Atmospheric ..... 28-29
- Essential Power Vent ..... 30-31
- Essential Power Direct Vent..... 32-37
- Essential Direct Vent..... 38-39
- Essential Atmospheric for  
Mfg. Housing ..... 40-41
- Essential Direct Vent for  
Mfg. Housing ..... 42-43
- Essential Direct Vent Co-Axial  
for Mfg. Housing..... 44-45

## Ultra Low NOx Models

- Powered Damper  
Ultra Low NOx ..... 46-47
- Atmospheric Ultra Low NOx..... 48-49
- Heavy Duty Ultra Low NOx..... 50-51
- Power Vent Ultra Low NOx..... 52-53

## Tankless Gas

### Encore Models

- Encore High Efficiency  
Condensing Tankless..... 54-55

## Essential Plus Models

- Essential Plus Mid-Efficiency  
Tankless ..... 56-57

## Electric Tank-Type

### Encore Models

- Encore Hybrid Heat Pump..... 58-59
- Encore ..... 60-61

### Essential Plus Model

- Essential Plus ..... 62-63

### Essential Models

- Essential ..... 64-65
- Essential Point-of-Use..... 66-67
- Essential for Mfg. Housing ..... 68-69
- Essential Table Top ..... 70-71

## Tankless Electric

### Essential Model

- Essential Tankless..... 72-73

## Solar

- SolPak Active System with  
Electric Backup..... 74-75
- Solaraide HE Tanks..... 76-77

## Marathon Models

- Marathon ..... 78-79
- Marathon Heavy Duty..... 80-81

## Thermal Expansion Tanks

# Exceptional Performance and Value from The Water Heater Experts

Richmond Water Heaters are manufactured by Rheem®, the company that invented water heaters. We put the best materials and workmanship into our Richmond brand to produce water heaters that offer exceptional values.

Now, we provide you better value than ever, with our all-new Richmond water heater product line. Our comprehensive line has been designed to meet all consumer needs, and re-engineered to keep pace with consumer demands for more efficient, fast-recovery water heaters.

Our electric, natural gas, and liquid propane (LP) models are available in several warranties options — ranging from 6-year to 12-year, and even lifetime for our Marathon™ models. And to meet your specialty applications, we offer the Power Direct Vent, Direct Vent, Power Vent, Mobile Home, Tankless and Point-Of-Use models, as well as our new Heat Pump and Solar models.

And when you look at the value, quality, and features of Richmond Water Heaters, no other brand comes close. Here are just a few of the features that make Richmond Water Heaters the best product for you and your family.

# The Major Features of Richmond Flammable Vapor Ignition Resistant (FVIR) Product Designs



## Flammable Vapor Ignition Resistance

We offer the best-in-class FVIR System that's engineered to exceed ANSI standards.



## Exclusive, Air Shut-Off System

It shuts off gas and air supplies – providing double protection.



## Flame Arrestor Plate

A specially-designed flame arrestor prevents ignition of vapors outside the combustion chamber.



## Superior Air Filtration

It prevents the flame arrestor from becoming clogged by lint, dust and oil.



## Maintenance-Free! No Filters to Clean!

Our products have no filters to service, replace or clean.



## Standard Replacement Parts

We use standard gas valves and thermocouples – easy to replace.



## It's Easy to Light

No matches are required with the Richmond FVIR System.

## Plus...

- FVIR System models are high altitude compliant – some models certified for applications up to 6,000 and 10,200 feet above sea level.
- Zero clearance to combustibles, rear and side.
- Energy efficient! Get more hot water at a lower operating cost!
- Available on most Richmond gas water heater models.

## EverKleen™ System

**EverKleen™ self-cleaning water heating system fights harmful sediment build-up with a high velocity spiraling water stream**



Sediment build-up in a water heater creates layers of non-conducting material between the water and the energy that heats the water. This causes a reduction of heat transfer which increases tank bottom temperatures and decreases water temperatures. When this occurs, the results are decreased water heater efficiency and decreased tank life.



The EverKleen™ system helps to dislodge this sediment by channeling water through a specially developed inlet tube. This tube creates a high-velocity spiraling water stream which strikes the bottom of the water heater tank with sediment busting force.



The spiraling effect also creates better mixing throughout the water heater tank which reduces the effects of stacking. Stacking occurs when frequent small draws of water create different temperatures throughout the tank resulting in increased peak temperatures at the top of the tank. The EverKleen™ system greatly reduces peak temperatures, thus increases first hour deliverability.

## Advantages

- Water Heating System
- Fights sediment build-up
- Helps preserve operating efficiency
- Helps improve tank life
- Provides increased deliverability



## Lifeguard™ Electric Element

Low watt density design delivers full watt-rated heating power to a larger surface area, eliminating high heat concentrations and prolonging element life.\*

\*See Residential Warranty Certificate for complete information.

High density *nichrome* wire electric heating filament; best grade A, 80/20 nichrome wire made...for top performance and long-life operation.

High-grade magnesium oxide packing moves the heat quickly to the element's surface, protecting the *nichrome* wire filament and boosting efficiency.

INCOLOY® 840 stainless steel sheath, resists water chemical corrosion and burn-out even in air or sediment for long element life, long life performance.

Steel screw-in head provides solid construction and ease of maintenance.

## ENERGY STAR® Qualified Water Heaters



### What is ENERGY STAR®?

ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy

helping us all save money and protect the environment through energy efficient products and practices.

Energy efficient choices can save families about a third on their energy bill with similar savings of greenhouse gas emissions, without sacrificing features, style or comfort. ENERGY STAR® helps you make the energy efficient choice.

### Tankless Models

#### Gas

##### Direct Vents

- ★ RMTGH-84DVLN
- ★ RMTGH-84DVLN
- ★ RMTGH-95DVLN
- ★ RMTGH-95DVLN

##### Outdoor

- ★ RMTGH-84XLN
- ★ RMTGH-84XLP
- ★ RMTGH-95XLN
- ★ RMTGH-95XLP

### Tank Models

#### Gas

##### Induced Draft

- ★ 12G30-60
- ★ 12G40S-36PE2
- ★ 6G30-60

##### Short Powered Damper

- ★ 12G40S-40E2
- ★ 12G40S-36PE2
- ★ 12G50S-40E2
- ★ 12G50S-36PE2
- ★ 9G40S-40E2
- ★ 9G40S-36PE2
- ★ 9G50S-40E2
- ★ 9G50S-36PE2
- ★ 6G40S-40E2
- ★ 6G40S-40PE2
- ★ 6G50S-40E2
- ★ 6G50S-36PE2

##### Tall Powered Damper

- ★ 12G40-40E2
- ★ 12G40-36PE2
- ★ 12G50-40E2
- ★ 12G50-36PE2

- ★ 9G40-40E2
- ★ 9G40-36PE2
- ★ 9G50-40E2
- ★ 9G50-36PE2
- ★ 6G40-40E2
- ★ 6G40-36PE2
- ★ 6G50-40E2
- ★ 6G50-36PE2

##### Powered Damper Ultra Low NOx

- ★ 12G40-36NE2
- ★ 12G50-36NE2
- ★ 9G40-36NE2
- ★ 9G50-36NE2
- ★ 6G40-36NE2
- ★ 6G50-36NE2

##### Short Power Vent

- ★ 6GR40SPVE2-36
- ★ 6GR40SPVE2-32P
- ★ 6GR50SPVE2-36
- ★ 6GR50SPVE2-32P

##### Tall Power Vent

- ★ 6GR40PVE2-40
- ★ 6GR40PVE2-36P
- ★ 6GR50PVE2-42
- ★ 6GR50PVE2-42P

##### Power Vent Ultra Low NOx

- ★ 6G40PV-36FN
- ★ 6G40PV-38FN

##### Power Direct Vent

- ★ 6RHE40S
- ★ 6RHE50
- ★ 6G40PDV-40
- ★ 6G40PDV-38
- ★ 6G450PDV-40
- ★ 6G50PDV-4

##### Electric

- ★ Hybrid Heat Pump
- ★ HB50RM

# Encore® High Efficiency Condensing Power Direct Vent

## Efficiency

- .82 EF
- ENERGY STAR® rated

## Performance

- FHR: Up to 93 gallons for natural and LP gas
- Recovery: 43.6 to 48.5 GPH at a 90° F rise, depending on model

## Self-Diagnostic System

- Integrated system control for easy installation and service
- Diagnostic system control can be replaced without draining the water heater

## Low Emissions

- Eco-friendly burner, low NOx design

## Features

- Power direct vents are an ideal choice when either indoor air quality or negative air pressure are concerns
- Two-pipe system: one pipe pulls in outside air for combustion and the other exhausts combustion gases
- 120 VAC, 60Hz, induced draft blower
- New whisper quiet blower

## Innovative Technology

- Proven center flue design with submerged coil type condensing heat exchanger
- Heat exchanger is porcelain coated inside and out for increased product life

## Flammable Vapor Detection System

- FVIR compliant protective
- Control system that disables the heater in the presence of flammable vapor accumulation

## Flexible Venting Options

- Long venting lengths up to 60 feet
- Use 2 or 3 inch diameter PVC, ABS, or CPVC vent pipe options. (In Canada ULC S636 PVC and CPVC must be used.)
- Vertical or horizontal termination
- Concentric vent kit available

## Longer Life

- Dual anode rods protect the tank from corrosion

## High Altitude Compliant

- Models are certified for applications up to 9,000 feet above sea level

## Plus...

- Enhanced-flow brass drain valve
- Temperature and pressure relief valve included
- Low lead compliant
- Durable silicon nitride igniter (HSI)
- Inlet tube with diffuser enhances heat transfer
- Front access to condensate trap and vent pipe
- Condensate neutralizer option
- Standard replacement parts

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| TYPE  | DESCRIPTION |              | FEATURES                  |    |                             |      |                        |    | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                           |            |         |                    |                     |                         |                    |                 | ENERGY INFO.    |               |                              |
|-------|-------------|--------------|---------------------------|----|-----------------------------|------|------------------------|----|--|---------------------------|------------|---------|--------------------|---------------------|-------------------------|--------------------|-----------------|-----------------|---------------|------------------------------|
|       | GAL. CAP.   | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. |    | HT. TO TOP OF VENT A                     | HT. TO TOP OF AIR INLET B | TANK HT. C | DIAM. D | HT. TO GAS CONN. E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | FRONT TO BACK I | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|       |             |              | NAT.                      | LP | NAT.                        | LP   | NAT.                   | LP |  |                           |            |         |                    |                     |                         |                    |                 |                 |               |                              |
| Short | 38          | ★ 6RHE40S    | 40                        | 36 | 48.5                        | 43.6 | 74                     | 74 | 60-3/8                                   | 60-1/8                    | 51-1/16    | 22-1/8  | 14-1/8             | 8                   | 44-1/4                  | 3/4                | 26-11/16        | 220             | 0.82          | \$199                        |
| Tall  | 48          | ★ 6RHE50     | 40                        | 36 | 48.5                        | 43.6 | 93                     | 93 | 68-3/4                                   | 68-5/8                    | 59-11/16   | 22-1/8  | 14-1/8             | 8                   | 52-7/8                  | 3/4                | 26-11/16        | 250             | 0.82          | \$199                        |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

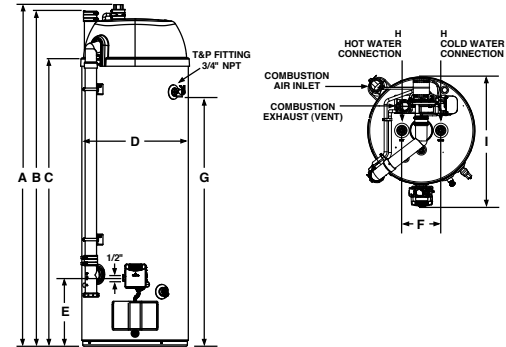
★ ENERGY STAR® compliant model.

## Air-Inlet and Venting Information for 6RHE40S and 6RHE50

| MODEL NUMBER  | VENT & COMBUSTION AIR-INLET PIPE DIAMETER (INCHES) | MINIMUM ALLOWED EQUIVALENT VENT & COMBUSTION AIR-INLET LENGTHS - EACH PIPE RUN (FT.) | MAXIMUM ALLOWED EQUIVALENT VENT & COMBUSTION AIR-INLET LENGTHS - EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |
|---|--|--|--|---|
| <b>From Sea Level Through 5,999 ft. Above Sea Level</b>                 |  |  |  |   |
| 6RHE40S   | 2  | 7  | 30   | 90° Elbows Concentric*                              |
| 6RHE40S   | 3  | 7  | 60   | 90° Elbows Concentric*                              |
| 6RHE50  | 2  | 7  | 30   | 90° Elbows Concentric*                              |
| 6RHE50  | 3  | 7  | 60   | 90° Elbows Concentric*                              |
| <b>From 6,000 ft. Above Sea Level Through 8,999 ft. Above Sea Level</b> |  |  |  |   |
| 6RHE40S   | 2  | Not Allowed  | Not Allowed  | -   |
| 6RHE40S   | 3  | 7  | 45   | 90° Elbows Concentric*                              |
| 6RHE50  | 2  | Not Allowed  | Not Allowed  | -   |
| 6RHE50  | 3  | 7  | 45   | 90° Elbows Concentric*                              |

One 90° elbow is equivalent to 5 feet of straight pipe. One 45° elbow is equivalent to 2.5 feet of straight pipe. The vent and combustion air inlet terminations are not included in the equivalency calculations.

\* Use only Richmond 3 inch concentric termination kit SP20245.



# Encore® XR90 Induced Draft

## Efficiency

- .70 EF
- ENERGY STAR® rated
- Well insulated for reduced stand-by heat loss

## Performance

- 29-Gallon capacity with 90 gallon FHR performance
- Recovery: 61 GPH at 90° F rise, exceeds standard 50-gallon by up to 59%

## Compact Size

- Small foot print, 17-3/4 inch diameter
- Fast one-man installation, compact and light weight

## Self-Diagnostic System

- Integrated self-diagnostic system control for easy installation and service

## Low Emissions

- Eco-friendly burner, low NOx design
- Meets 40 ng/J NOx requirements

## Technology

- 110 VAC draft inducer (includes 8-foot cord with 3-prong plug)
- Standard atmospheric Category I, double-wall, B-vent, 3" or 4" (4" adaptor included)
- Fan assisted draft inducer creates the proper draft to expel the combustion gases

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device for double protection
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## High Altitude Compliant

- Certified for applications up to 7,700 feet above sea level

## Plus...

- Dual certified for both potable water and space heating
- Enhanced-flow brass drain valve
- Temperature and pressure relief valve included
- Low lead compliant
- EverKleen™ patented system fights sediment build-up
- Standard replacement parts

## Warranty

- 12-Year and 6-year limited tank and parts warranties available\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.

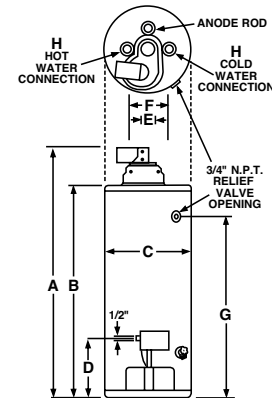
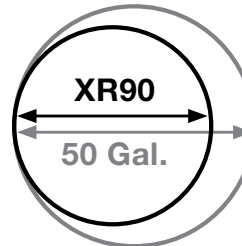


| DESCRIPTION |              | FEATURES                       |                                  |                             | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                     |                   |               |                 | ENERGY INFO.  |                              |                |
|-------------|--------------|--------------------------------|----------------------------------|-----------------------------|--|------------|---------|--------------------|-------------|---------------------|-------------------|---------------|-----------------|---------------|------------------------------|----------------|
| GAL. CAP.   | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H NAT. | RECOVERY IN G.P.H. 90° RISE NAT. | FIRST HOUR DEL. G.P.H. NAT. | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | WATER CONN. CNTR. F | HT. TO SIDE T&P G | WATER CONN. H | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST | WARRANTY YEARS |
| 29          | ★ 12G30-60   | 60                             | 61                               | 90                          | 65-1/2                                   | 58-1/4     | 17-3/4  | 14                 | 3 or 4      | 8                   | 51-9/16           | 3/4           | 136             | 0.70          | \$233                        | 12             |
| 29          | ★ 6G30-60    | 60                             | 61                               | 90                          | 65-1/2                                   | 58-1/4     | 17-3/4  | 14                 | 3 or 4      | 8                   | 51-9/16           | 3/4           | 136             | 0.70          | \$233                        | 6              |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

★ ENERGY STAR® compliant model.

**Footprint Comparison**  
Narrow 17-3/4 inch diameter fits in a smaller space than standard 40 or 50-gallon models.



# Encore® Powered Damper

## Efficiency

- .67 - .69 EF
- ENERGY STAR® rated

## Performance

- FHR: 68 - 89 gallons
- Recovery: Up to 40.4 GPH at a 90° F rise, depending on model

## Self-Diagnostic System

- Electronic gas control for improved monitoring and service

## Low Emissions

- Eco-friendly burner, low NOx design
- Meets 40 ng/J NOx requirements

## Technology

- 24 VAC flue damper, 110 VAC outlet required
- Includes 19-foot cord, 3-prong plug
- Standard Cat. I, double-wall, B-vent, 3" (4" adaptor included)

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## High Altitude Compliant

- Certified to 10,100 ft. above sea level (50-gallon 50K Btu/h model certified to 5,999 feet above sea level)

## Plus...

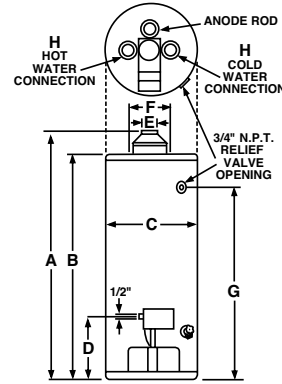
- Dual certified for both potable water and space heating
- Enhanced-flow brass drain valve
- Temperature and pressure relief valve included
- Low lead compliant
- Standard replacement parts

## Warranty

- 12-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION |           |                | FEATURES                  |    |                             |      |                        | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                     |                         |                    |                 | ENERGY INFO.  |                              |
|-------------|-----------|----------------|---------------------------|----|-----------------------------|------|------------------------|--|------------|---------|--------------------|-------------|---------------------|-------------------------|--------------------|-----------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | MODEL NUMBER   | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|             |           |                | NAT.                      | LP | NAT.                        | LP   |                        |  |            |         |                    |             |                     |                         |                    |                 |               |                              |
| Tall        | 38        | ★ 12G40-40E2   | 40                        | –  | 40.4                        | –    | 68                     | 62-3/4                                   | 57-3/4     | 19-3/4  | 14                 | 3 or 4      | 8                   | 52-1/4                  | 3/4                | 140             | 0.69          | \$237                        |
| Tall        | 38        | ★ 12G40-36PE2  | –                         | 36 | –                           | 36.4 | 68                     | 62-3/4                                   | 57-3/4     | 19-3/4  | 14                 | 3 or 4      | 8                   | 52-1/4                  | 3/4                | 140             | 0.69          | \$537                        |
| Tall        | 50        | ★ 12G50-40E2   | 40                        | –  | 40.4                        | –    | 84                     | 63                                       | 58         | 21-3/4  | 14                 | 3 or 4      | 8                   | 52-1/2                  | 3/4                | 160             | 0.67          | \$244                        |
| Tall        | 50        | ★ 12G50-36PE2  | –                         | 36 | –                           | 36.4 | 84                     | 63                                       | 58         | 21-3/4  | 14                 | 3 or 4      | 8                   | 52-1/2                  | 3/4                | 160             | 0.67          | \$590                        |
| Short       | 40        | ★ 12G40S-40E2  | 40                        | –  | 40.4                        | –    | 72                     | 55-1/2                                   | 50-1/2     | 21-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 140             | 0.67          | \$244                        |
| Short       | 40        | ★ 12G40S-36PE2 | –                         | 36 | –                           | 36.4 | 72                     | 55-1/2                                   | 50-1/2     | 21-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 140             | 0.67          | \$590                        |
| Short       | 50        | ★ 12G50S-40E2  | 40                        | –  | 40.4                        | –    | 89                     | 55-1/2                                   | 50-1/2     | 23-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 160             | 0.67          | \$244                        |
| Short       | 50        | ★ 12G50S-36PE2 | –                         | 36 | –                           | 36.4 | 89                     | 55-1/2                                   | 50-1/2     | 23-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 160             | 0.67          | \$590                        |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

★ ENERGY STAR® compliant model.

## Efficiency

- .59 - 62 EF
- More hot water at a low operating cost

## Performance

- FHR: 68 to 103 gallons for natural gas
- Recovery: 36.4 to 51 GPH at a 90° F rise, depending on model

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Low Emissions

- Eco-friendly burner, low NOx design
- Meets 40 ng/J NOx requirements

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Plus...

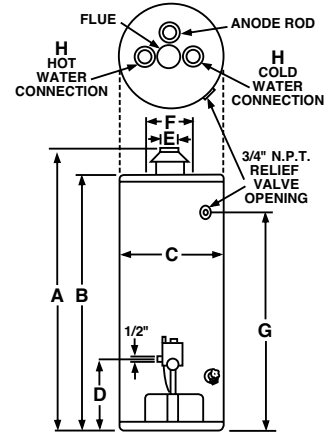
- Easy to light – no matches required
- EverKleen™ patented system fights sediment build-up
- Enhanced flow brass drain valve
- Temperature and pressure relief valve included
- Low lead compliant
- Standard replacement parts

## Warranty

- 12-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION |           |                | FEATURES                  |    |                             |      |                        | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                     |                         |                    |                 | ENERGY INFO.  |                              |
|-------------|-----------|----------------|---------------------------|----|-----------------------------|------|------------------------|--|------------|---------|--------------------|-------------|---------------------|-------------------------|--------------------|-----------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | MODEL NUMBER   | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|             |           |                | NAT.                      | LP | NAT.                        | LP   |                        |  |            |         |                    |             |                     |                         |                    |                 |               |                              |
| Tall        | 40        | 12GR40-40F3†   | 40                        | –  | 40.4                        | –    | 68                     | 63-1/4                                   | 60         | 19-1/2  | 14                 | 3 or 4      | 8                   | 53-1/2                  | 3/4                | 135             | 0.62          | \$263                        |
| Tall        | 40        | 12GR40-36PF3†  | –                         | 36 | –                           | 36.4 | 68                     | 63-1/4                                   | 60         | 19-1/2  | 14                 | 3 or 4      | 8                   | 53-1/2                  | 3/4                | 135             | 0.62          | \$638                        |
| Tall        | 50        | 12GR50-40F3†   | 40                        | –  | 40.4                        | –    | 83                     | 62-1/2                                   | 59-1/4     | 21-1/2  | 14                 | 3 or 4      | 8                   | 52-1/2                  | 3/4                | 165             | 0.62          | \$263                        |
| Tall        | 50        | 12GR50-36PF3†  | –                         | 36 | –                           | 36.4 | 83                     | 62-1/2                                   | 59-1/4     | 21-1/2  | 14                 | 3 or 4      | 8                   | 52-1/2                  | 3/4                | 165             | 0.62          | \$638                        |
| Tall        | 55        | 12G55-50F3     | 50                        | –  | 51                          | –    | 103                    | 59-1/8                                   | 55-7/8     | 23-3/4  | 14-1/4             | 3 or 4      | 8                   | 48-3/4                  | 3/4                | 175             | 0.59          | \$277                        |
| Tall        | 55        | 12G55-45PF3    | –                         | 45 | –                           | 46   | 103                    | 59-1/8                                   | 55-7/8     | 23-3/4  | 14-1/4             | 3 or 4      | 8                   | 48-3/4                  | 3/4                | 175             | 0.59          | \$670                        |
| Short       | 40        | 12GR40S-40F3†  | 40                        | –  | 40.4                        | –    | 72                     | 54                                       | 50-1/2     | 23      | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 135             | 0.62          | \$263                        |
| Short       | 40        | 12GR40S-36PF3† | –                         | 36 | –                           | 36.4 | 72                     | 54                                       | 50-1/2     | 23      | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 135             | 0.62          | \$638                        |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.



LEED Part = 1



# Essential Plus Powered Damper

## Efficiency

- .67 - .69 EF
- ENERGY STAR® rated

## Performance

- FHR: 68 - 89 gallons
- Recovery: 36.4 to 40.4 GPH at a 90° F rise, depending on model

## Self-Diagnostic System

- Electronic gas control for improved monitoring and service

## Low Emissions

- Eco-friendly burner, low NOx design
- Meets 40 ng/J NOx requirements

## Technology

- 24 VAC flue damper, 110 VAC outlet required
- Includes 19-foot cord, 3-prong plug
- Standard Cat. I, double-wall, B-vent, 3" (4" adaptor included)

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## High Altitude Compliant

- Certified to 10,100 ft. above sea level (50-gallon 50K Btu/h model certified to 5,999 feet above sea level)

## Plus...

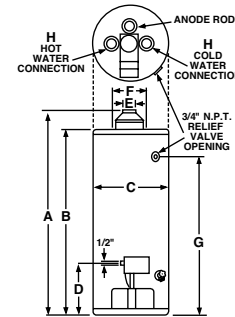
- Dual certified for both potable water and space heating
- Temperature and pressure relief valve included
- Low lead compliant
- Standard replacement parts

## Warranty

- 9-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION |           |               | FEATURES                  |    |                             |      |                        | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                     |                         |                    |                 | ENERGY INFO.  |                              |
|-------------|-----------|---------------|---------------------------|----|-----------------------------|------|------------------------|--|------------|---------|--------------------|-------------|---------------------|-------------------------|--------------------|-----------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | MODEL NUMBER  | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|             |           |               | NAT.                      | LP | NAT.                        | LP   |                        |  |            |         |                    |             |                     |                         |                    |                 |               |                              |
| Tall        | 38        | ★ 9G40-40E2   | 40                        | -  | 40.4                        | -    | 68                     | 62-3/4                                   | 57-3/4     | 19-3/4  | 14                 | 3 or 4      | 8                   | 52-1/4                  | 3/4                | 140             | 0.69          | \$237                        |
| Tall        | 38        | ★ 9G40-36PE2  | -                         | 36 | -                           | 36.4 | 68                     | 62-3/4                                   | 57-3/4     | 19-3/4  | 14                 | 3 or 4      | 8                   | 52-1/4                  | 3/4                | 140             | 0.69          | \$573                        |
| Tall        | 50        | ★ 9G50-40E2   | 40                        | -  | 40.4                        | -    | 84                     | 63                                       | 58         | 21-3/4  | 14                 | 3 or 4      | 8                   | 52-1/2                  | 3/4                | 160             | 0.67          | \$244                        |
| Tall        | 50        | ★ 9G50-36PE2  | -                         | 36 | -                           | 36.4 | 84                     | 63                                       | 58         | 21-3/4  | 14                 | 3 or 4      | 8                   | 52-1/2                  | 3/4                | 160             | 0.67          | \$590                        |
| Short       | 40        | ★ 9G40S-40E2  | 40                        | -  | 40.4                        | -    | 72                     | 55-1/2                                   | 50-1/2     | 21-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 140             | 0.67          | \$244                        |
| Short       | 40        | ★ 9G40S-36PE2 | -                         | 36 | -                           | 36.4 | 72                     | 55-1/2                                   | 50-1/2     | 21-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 140             | 0.67          | \$590                        |
| Short       | 50        | ★ 9G50S-40E2  | 40                        | -  | 40.4                        | -    | 89                     | 55-1/2                                   | 50-1/2     | 23-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 160             | 0.67          | \$244                        |
| Short       | 50        | ★ 9G50S-36PE2 | -                         | 36 | -                           | 36.4 | 89                     | 55-1/2                                   | 50-1/2     | 23-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 160             | 0.67          | \$590                        |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

★ ENERGY STAR® compliant model.

# Essential Plus Atmospheric

## Efficiency

- .60 - .62 EF
- More hot water at a low operating cost

## Performance

- FHR: 73 to 93 gallons
- Recovery: 35.4 to 40.4 GPH at a 90° F rise, depending on model

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Low Emissions

- Eco-friendly burner, low NOx design
- Meets 40 ng/J NOx requirements

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Altitude Certification

- All models certified up to 5,999 ft. above sea level, some certified up to 10,200

## Plus...

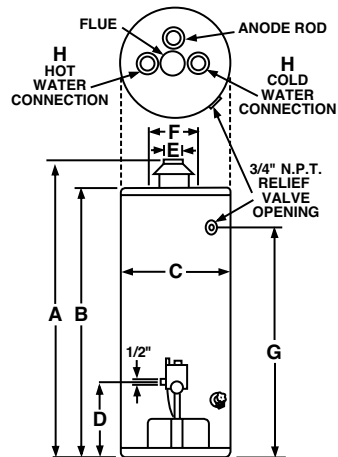
- Easy to light – no matches required
- EverKleen™ patented system fights sediment build-up
- Low lead compliant
- Temperature and pressure relief valve included
- Standard replacement parts

## Warranty

- 9-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION |           |              | FEATURES                  |    |                             |      |                        | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                     |                         |                    |                 | ENERGY INFO.  |                              |
|-------------|-----------|--------------|---------------------------|----|-----------------------------|------|------------------------|--|------------|---------|--------------------|-------------|---------------------|-------------------------|--------------------|-----------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|             |           |              | NAT.                      | LP | NAT.                        | LP   |                        |  |            |         |                    |             |                     |                         |                    |                 |               |                              |
| Tall        | 40        | 9G40-38F3    | 38                        | -  | 38.4                        | -    | 73                     | 61-1/2                                   | 58-1/2     | 19      | 14-1/4             | 3 or 4      | 8                   | 52-1/4                  | 3/4                | 127             | 0.62          | \$263                        |
| Tall        | 50        | 9G50-38F3    | 38                        | -  | 38.4                        | -    | 93                     | 61-1/4                                   | 58-3/8     | 20-1/2  | 14-1/4             | 3 or 4      | 8                   | 51-3/8                  | 3/4                | 150             | 0.60          | \$272                        |
| Short       | 40        | 9G40S-38F3   | 38                        | -  | 38.4                        | -    | 74                     | 53-1/4                                   | 50-1/4     | 21-3/8  | 14-1/4             | 3 or 4      | 8                   | 44                      | 3/4                | 125             | 0.62          | \$263                        |
| Short       | 40        | 9G40S-35PF3  | -                         | 35 | -                           | 35.4 | 74                     | 53-1/4                                   | 50-1/4     | 21-3/8  | 14-1/4             | 3 or 4      | 8                   | 44                      | 3/4                | 125             | 0.62          | \$638                        |
| Short       | 50        | 9G50S-40F3   | 40                        | -  | 40.4                        | -    | 89                     | 54-1/4                                   | 51-1/8     | 23-3/4  | 14-1/4             | 3 or 4      | 8                   | 44                      | 3/4                | 186             | 0.61          | \$268                        |
| Short       | 50        | 9G50S-36PF3  | -                         | 36 | -                           | 36.4 | 89                     | 54-1/4                                   | 51-1/8     | 23-3/4  | 14-1/4             | 3 or 4      | 8                   | 44                      | 3/4                | 186             | 0.61          | \$648                        |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

## Essential Plus Heavy Duty

### Performance

- Recovery Capacity: 72.8 gallons per hour (delivers approximately 113 gallons of hot water in the first hour for 75-gallon models and 115 gallons for 98-gallon models)\*\*

### Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

### Easy to Light

- Piezo Ignitor - no matches required

### Low Emissions

- Eco-friendly burner, low NOx design
- Meets 40 ng/J NOx requirements

### Longer Life

- Premium grade anode rod provides long-lasting tank protection

### Plus...

- Temperature and pressure relief valve included
- Low lead compliant
- Side water connections for space heating applications
- Standard replacement parts

### Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

**Efficiency** | All models tested according to ANSI test procedures, and meet or exceed the thermal efficiency and standby loss requirements of current ASHRAE standard (EPact). Also exceeds energy efficiency codes of all states including California Energy Commission (CEC).

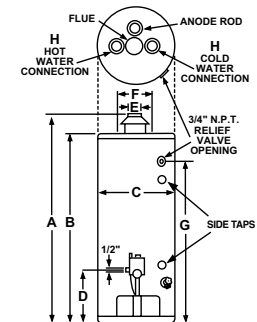
**Safety and Construction** | Design certified by CSA: For operation at 160 degrees; meets all safety and construction requirements of ANSI Z21.10.3; as an automatic storage or instantaneous water heater; as an automatic circulating tank water heater; and for operation on combustible floors and in alcove installations. All models are North Carolina Code compliant. **Certified for 150 PSI maximum working pressure.**



| TYPE | DESCRIPTION |              | FEATURES                  |      |                                |      | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                     |                         |                    |                 |
|------|-------------|--------------|---------------------------|------|--------------------------------|------|--|------------|---------|--------------------|-------------|---------------------|-------------------------|--------------------|-----------------|
|      | GAL. CAP.   | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H |      | RECOVERY IN G.P.H. 100° RISE** |      | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | SHIP. WT. (LBS) |
|      |             |              | NAT.                      | LP   | NAT.                           | LP   |  |            |         |                    |             |                     |                         |                    |                 |
| Tall | 75          | 6G75-76F     | 75.1                      | –    | 72.8                           | –    | 64                                       | 60         | 26-1/4  | 14-3/4             | 4           | 11                  | 53-1/4                  | 1                  | 320             |
| Tall | 75          | 6G75-76PF    | –                         | 75.1 | –                              | 72.8 | 64                                       | 60         | 26-1/4  | 14-3/4             | 4           | 11                  | 53-1/4                  | 1                  | 320             |
| Tall | 98          | 5V100F-76N   | 75.1                      | –    | 72.8                           | –    | 67-7/8                                   | 64         | 28-1/4  | 14-7/8             | 4           | 11                  | 57-3/16                 | 1                  | 350             |
| Tall | 98          | 5V100F-76P   | –                         | 75.1 | –                              | 72.8 | 67-7/8                                   | 64         | 28-1/4  | 14-7/8             | 4           | 11                  | 57-3/16                 | 1                  | 350             |

\*\*Recovery Capacity is based upon a 100° F water temperature rise and calculated per ANSI Z21.10.3 standards. First hour hot water delivery is based upon 77° water temperature rise.

- 160° F Max. temperature setting.



# Essential Plus Heavy Duty Power Direct Vent

## Performance

- Recovery Capacity: 72.8 gallons per hour (delivers approximately 120 gallons of hot water in the first hour)\*\*

## Self-Diagnostic System

- Electronic gas control for improved monitoring and service

## Low Emissions

- Eco-friendly burner, low NOx design

## Features

- Two pipe system: one pipe pulls in outside air for combustion and the other exhausts combustion gases
- 120 VAC powered blower
- New whisper quiet blower

## Flammable Vapor Detection System

- Protective control system that disables the heater in the presence of flammable vapor accumulation

## Flexible Venting Options

- Long venting lengths up to 100 feet
- 3" or 4" PVC, ABS, or CPVC vent pipe options
- Vertical or horizontal termination
- Concentric vent kit available

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Plus...

- Temperature and pressure relief valve included
- Low lead compliant
- Durable silicon nitride igniter (HSI)
- Side taps for space heating applications
- EverKleen™ patented system fights sediment build-up
- Standard replacement parts

## Warranty

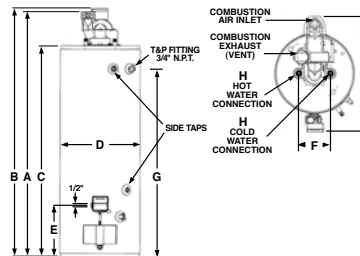
- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information



**Efficiency** | All models tested according to ANSI test procedures, and meet or exceed the thermal efficiency and standby loss requirements of current ASHRAE standard (EPact). Also exceeds energy efficiency codes of all states including California Energy Commission (CEC).

**Safety and Construction** | Design certified by CSA: For operation at 160 degrees; meets all safety and construction requirements of ANSI Z21.10.3; as an automatic storage or instantaneous water heater; as an automatic circulating tank water heater; and for operation on combustible floors and in alcove installations. All models are North Carolina Code compliant. **Certified for 150 PSI maximum working pressure.**



| DESCRIPTION |           |              | FEATURES                  |      |                                |      | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                           |            |         |                    |                     |                         |                    |                 |                 |
|-------------|-----------|--------------|---------------------------|------|--------------------------------|------|--|---------------------------|------------|---------|--------------------|---------------------|-------------------------|--------------------|-----------------|-----------------|
| TYPE        | GAL. CAP. | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H |      | RECOVERY IN G.P.H. 100° RISE** |      | HT. TO TOP OF VENT A                     | HT. TO TOP OF AIR INLET B | TANK HT. C | DIAM. D | HT. TO GAS CONN. E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | FRONT TO BACK I | SHIP. WT. (LBS) |
|             |           |              | NAT.                      | LP   | NAT.                           | LP   |  |                           |            |         |                    |                     |                         |                    |                 |                 |
| Tall        | 75        | 6G75PDV-76   | 75.1                      | -    | 72.8                           | -    | 70-3/8                                   | 71-1/4                    | 60-1/2     | 26-1/4  | 15                 | 11                  | 53                      | 1                  | 36-3/4          | 325             |
| Tall        | 75        | 6G75PDVP-76  | -                         | 75.1 | -                              | 72.8 | 70-3/8                                   | 71-1/4                    | 60-1/2     | 26-1/4  | 15                 | 11                  | 53                      | 1                  | 36-3/4          | 325             |

## Vent and Combustion Air-Inlet System Information

| FROM SEA LEVEL THROUGH 2,000 FT. ABOVE SEA LEVEL                 |  |   |   |   |             |
|--|--|---|---|---|-------------|
| MODEL  | VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES) | MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS - EACH PIPE RUN (FT.) | MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS - EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |             |
| 6G75PDV-76   | 3  | 8   | 50  | 90° Elbows  | -           |
| 6G75PDV-76   | 3  | 8   | 40  | -   | Concentric* |
| 6G75PDV-76   | 4  | 8   | 100   | 90° Elbows  | -           |
| FROM 2,001 FT. ABOVE SEA LEVEL THROUGH 5,999 FT. ABOVE SEA LEVEL |  |   |   |   |             |
| MODEL  | VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES) | MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS - EACH PIPE RUN (FT.) | MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS - EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |             |
| 6G75PDV-76   | 3  | 8   | 25  | 90° Elbows  | -           |
| 6G75PDV-76   | 3  | 8   | 20  | -   | Concentric* |
| 6G75PDV-76   | 4  | 8   | 100   | 90° Elbows  | -           |
| FROM 6,000 FT. ABOVE SEA LEVEL THROUGH 7,700 FT. ABOVE SEA LEVEL |  |   |   |   |             |
| MODEL  | VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES) | MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS - EACH PIPE RUN (FT.) | MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS - EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |             |
| 6G75PDV-76   | 4  | 8   | 50  | 90° Elbows  | -           |

One 90° elbow is approximately equivalent to 5 feet of pipe. One 45° elbow is approximately equivalent to 2.5 feet of pipe. \* Use only Richmond 3 inch concentric termination.

# Essential Plus Heavy Duty Power Vent

## Performance

- Recovery Capacity: 72.8 gallons per hour (delivers approximately 120 gallons of hot water in the first hour)\*\*

## Self-Diagnostic System

- Electronic gas control for improved monitoring and service

## Low Emissions

- Eco-friendly burner, low NOx design

## Features

- Uses indoor air for combustion; blower exhausts the flue gases
- Standard 110 VAC electrical connection
- New whisper quiet blower
- Offers larger capacities than the standard Power Vent

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Flexible Venting Options

- Long venting lengths up to 100 equivalent feet
- PVC, ABS, or CPVC vent pipe options
- Vertical or horizontal termination

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Plus...

- Temperature and pressure relief valve included
- Low lead compliant
- Durable silicon nitride ignitor (HSI)
- EverKleen™ patented system fights sediment build-up
- Standard replacement parts

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

**Efficiency** | All models tested according to ANSI test procedures, and meet or exceed the thermal efficiency and standby loss requirements of current ASHRAE standard (EPact). Also exceeds energy efficiency codes of all states including California Energy Commission (CEC).

**Safety and Construction** | Design certified by CSA: For operation at 160 degrees; meets all safety and construction requirements of ANSI Z21.10.3; as an automatic storage or instantaneous water heater; as an automatic circulating tank water heater; and for operation on combustible floors and in alcove installations. All models are North Carolina Code compliant. **Certified for 150 PSI maximum working pressure.**



| DESCRIPTION |           |              | FEATURES                  |    |                                |    | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |                     |                         |                    |                 |
|-------------|-----------|--------------|---------------------------|----|--------------------------------|----|--|------------|---------|--------------------|---------------------|-------------------------|--------------------|-----------------|
| TYPE        | GAL. CAP. | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 100° RISE** |    | HT. TO TOP OF ASSEMBLY A                 | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | WATER CONN. CNTR. E | HT. TO SIDE T&P VALVE F | WATER CONN. SIZE G | SHIP. WT. (LBS) |
|             |           |              | NAT.                      | LP | NAT.                           | LP |  |            |         |                    |                     |                         |                    |                 |
| Tall        | 75        | 6G75PV-76FW  | 75.1                      | –  | 72.8                           | –  | 72                                       | 60-1/8     | 26-1/4  | 14-1/2             | 11                  | 53-1/4                  | 1                  | 330             |

\*\*Recovery Capacity is based upon a 100° F water temperature rise and calculated per ANSI Z21.10.3 standards. First hour hot water delivery is based upon 77° water temperature rise.

- 160° F Max. temperature setting.
- Features side water connections for space heating applications.

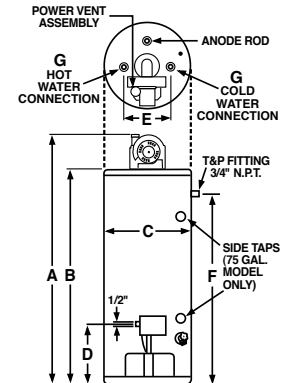
## Maximum and Minimum Vent Lengths for 3" and 4" Vents

| FROM SEA LEVEL THROUGH 2,000 FT. ABOVE SEA LEVEL |                      |  |  |                            |
|--|----------------------|--|--|----------------------------|
| MODEL  | VENT SYSTEM DIAMETER | MIN. ALLOWED EQUIVALENT VENT LENGTHS (EACH PIPE RUN) | MAX. ALLOWED EQUIVALENT VENT LENGTHS (EACH PIPE RUN) | VENT SYSTEM TERMINATION(S) |
| 75-Gallon  | 3 Inches             | 10 Feet  | 50 Feet  | 90° Elbow                  |
|  | 4 Inches             | 10 Feet  | 100 Feet   | 90° Elbow                  |

For the 3" and 4" vent, one 90° elbow is approximately equal to 5 feet of pipe. One 45° elbow is approximately equal to 2.5 feet of pipe.

**NOTICE:** The mixing of 3" and 4" vent pipe is not recommended. If 4" pipe is used, a 3" to 4" reducer fitting is recommended at the rubber coupling.

This water heater is supplied with a 3" Schedule 40 PVC 90° vent terminal. When venting with 4" pipe, a Schedule 40 PVC 90° vent terminal must be used. Screens for both 3" and 4" vent terminals have been included.



# Essential Powered Damper

## Efficiency

- .67 - .69 EF
- ENERGY STAR® rated

## Performance

- FHR: 68 - 89 gallons
- Recovery: Up to 40.4 GPH at a 90° F rise, depending on model

## Self-Diagnostic System

- Electronic gas control for improved monitoring and service

## Low Emissions

- Eco-friendly burner, low NOx design
- Meets 40 ng/J NOx requirements

## Technology

- 24 VAC flue damper, 110 VAC outlet required
- Includes 19-foot cord, 3-prong plug
- Standard Cat. I, double-wall, B-vent, 3" (4" adaptor included)

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## High Altitude Compliant

- Certified to 10,100 ft. above sea level (50-gallon 50K Btu/h model certified to 5,999 feet above sea level)

## Plus...

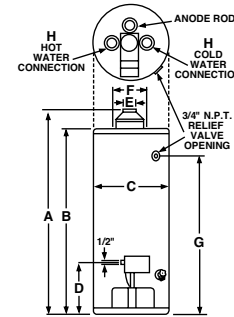
- Dual certified for both potable water and space heating
- Temperature and pressure relief valve included
- Low lead compliant
- Standard replacement parts

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



Gas Tank-Type

| DESCRIPTION |           |               | FEATURES                  |    |                             |      |                        | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                     |                         |                    |                 | ENERGY INFO.  |                              |
|-------------|-----------|---------------|---------------------------|----|-----------------------------|------|------------------------|--|------------|---------|--------------------|-------------|---------------------|-------------------------|--------------------|-----------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | MODEL NUMBER  | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|             |           |               | NAT.                      | LP | NAT.                        | LP   |                        |  |            |         |                    |             |                     |                         |                    |                 |               |                              |
| Tall        | 38        | ★ 6G40-40E2   | 40                        | -  | 40.4                        | -    | 68                     | 62-3/4                                   | 57-3/4     | 19-3/4  | 14                 | 3 or 4      | 8                   | 52-1/4                  | 3/4                | 140             | 0.69          | \$237                        |
| Tall        | 38        | ★ 6G40-36PE2  | -                         | 36 | -                           | 36.4 | 68                     | 62-3/4                                   | 57-3/4     | 19-3/4  | 14                 | 3 or 4      | 8                   | 52-1/4                  | 3/4                | 140             | 0.69          | \$537                        |
| Tall        | 50        | ★ 6G50-40E2   | 40                        | -  | 40.4                        | -    | 84                     | 63                                       | 58         | 21-3/4  | 14                 | 3 or 4      | 8                   | 52-1/2                  | 3/4                | 160             | 0.67          | \$244                        |
| Tall        | 50        | ★ 6G50-36PE2  | -                         | 36 | -                           | 36.4 | 84                     | 63                                       | 58         | 21-3/4  | 14                 | 3 or 4      | 8                   | 52-1/2                  | 3/4                | 160             | 0.67          | \$590                        |
| Short       | 40        | ★ 6G40S-40E2  | 40                        | -  | 40.4                        | -    | 72                     | 55-1/2                                   | 50-1/2     | 21-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 140             | 0.67          | \$244                        |
| Short       | 40        | ★ 6G40S-36PE2 | -                         | 36 | -                           | 36.4 | 72                     | 55-1/2                                   | 50-1/2     | 21-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 140             | 0.67          | \$590                        |
| Short       | 50        | ★ 6G50S-40E2  | 40                        | -  | 40.4                        | -    | 89                     | 55-1/2                                   | 50-1/2     | 23-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 160             | 0.67          | \$244                        |
| Short       | 50        | ★ 6G50S-36PE2 | -                         | 36 | -                           | 36.4 | 89                     | 55-1/2                                   | 50-1/2     | 23-3/4  | 14                 | 3 or 4      | 8                   | 44                      | 3/4                | 160             | 0.67          | \$590                        |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

★ ENERGY STAR® compliant model.

# Essential Atmospheric

## Efficiency

- .59 - .63 EF
- More hot water at a low operating cost

## Performance

- FHR: 55 to 103 gallons
- Recovery: 30.3 to 61 GPH at a 90° F rise, depending on model

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Low Emissions

- Eco-friendly burner, low NOx design
- Meets 40 ng/J NOx requirements

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Altitude Certification

- All models certified up to 5,999 ft. above sea level, some certified up to 10,200

## Plus...

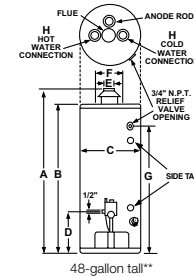
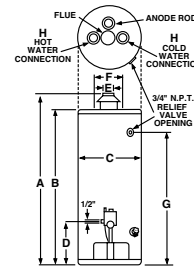
- Easy to light – no matches required
- EverKleen™ patented system fights sediment build-up
- Side water connections for space heating applications on the 48-gallon tall model\*\*
- Low lead compliant
- Temperature and pressure relief valve included
- Standard replacement parts

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



\*\*48-gallon tall model with side water connections

| DESCRIPTION |           |              | FEATURES                  |    |                             |      |                        | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                     |                         |                    | ENERGY INFO.    |               |                              |
|-------------|-----------|--------------|---------------------------|----|-----------------------------|------|------------------------|--|------------|---------|--------------------|-------------|---------------------|-------------------------|--------------------|-----------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|             |           |              | NAT.                      | LP | NAT.                        | LP   |                        |  |            |         |                    |             |                     |                         |                    |                 |               |                              |
| Tall        | 29        | 6G30-32F3    | 32                        | -  | 32.3                        | -    | 55                     | 59-3/4                                   | 56-7/8     | 16-1/2  | 14-1/4             | 3 or 4      | 8                   | 50-3/4                  | 3/4                | 110             | 0.63          | \$259                        |
| Tall        | 29        | 6G30-30PF3   | -                         | 30 | -                           | 30.3 | 55                     | 59-3/4                                   | 56-7/8     | 16-1/2  | 14-1/4             | 3 or 4      | 8                   | 50-3/4                  | 3/4                | 110             | 0.63          | \$628                        |
| Tall        | 40        | 6G40-36F3†   | 36                        | -  | 36.4                        | -    | 67                     | 61-1/2                                   | 58-1/2     | 19      | 14-1/4             | 3 or 4      | 8                   | 52-1/4                  | 3/4                | 127             | 0.62          | \$263                        |
| Tall        | 40        | 6G40-32PF3†  | -                         | 32 | -                           | 32.3 | -                      | 61-1/2                                   | 58-1/2     | 18-1/2  | 14-1/4             | 3 or 4      | 8                   | 52-1/4                  | 3/4                | 125             | 0.62          | \$638                        |
| Tall        | 40        | 6GR40-40F3†  | 40                        | -  | 40.4                        | -    | 68                     | 63-1/4                                   | 60         | 19-1/2  | 14                 | 3 or 4      | 8                   | 53-1/2                  | 3/4                | 135             | 0.62          | \$263                        |
| Tall        | 40        | 6GR40-36PF3† | -                         | 36 | -                           | 36.3 | 68                     | 63-1/4                                   | 60         | 19-1/2  | 14                 | 3 or 4      | 8                   | 53-1/2                  | 3/4                | 135             | 0.62          | \$638                        |
| Tall        | 48        | 6G50-60F3    | 60                        | -  | 61                          | -    | 93                     | 61-3/4                                   | 58-1/2     | 21-3/4  | 14-3/8             | 4           | 11                  | 51-7/8                  | 3/4                | 150             | 0.60          | \$272                        |
| Tall        | 48        | 6G50-54PF3   | -                         | 54 | -                           | 55   | 93                     | 61-3/4                                   | 58-1/2     | 21-3/4  | 14-3/8             | 4           | 11                  | 51-7/8                  | 3/4                | 150             | 0.60          | \$659                        |
| Tall        | 50        | 6GR50-40F3†  | 40                        | -  | 40.4                        | -    | 83                     | 62-1/2                                   | 59-1/4     | 21-1/2  | 14-1/2             | 3 or 4      | 8                   | 52-1/2                  | 3/4                | 165             | 0.62          | \$263                        |
| Tall        | 50        | 6GR50-36PF3† | -                         | 36 | -                           | 36.4 | 83                     | 62-1/2                                   | 59-1/4     | 21-1/2  | 14-1/2             | 3 or 4      | 8                   | 52-1/2                  | 3/4                | 165             | 0.62          | \$638                        |
| Tall        | 50        | 6G50-38F3†   | 38                        | -  | 38.4                        | -    | 93                     | 61-1/4                                   | 58-3/8     | 20-1/2  | 14-1/4             | 3 or 4      | 8                   | 51-3/8                  | 3/4                | 150             | 0.60          | \$272                        |
| Tall        | 50        | 6G50-36PF3†  | -                         | 36 | -                           | 36.4 | 93                     | 61-1/4                                   | 58-3/8     | 20-1/2  | 14-1/4             | 3 or 4      | 8                   | 51-3/8                  | 3/4                | 150             | 0.60          | \$659                        |
| Tall        | 55        | 6G55-50F3    | 50                        | -  | 51                          | -    | 103                    | 59-1/8                                   | 55-7/8     | 23-3/4  | 14-1/4             | 3 or 4      | 8                   | 48-3/4                  | 3/4                | 175             | 0.59          | \$277                        |
| Tall        | 55        | 6G55-45PF3   | -                         | 45 | -                           | 46   | 103                    | 59-1/8                                   | 55-7/8     | 23-3/4  | 14-1/4             | 3 or 4      | 8                   | 48-3/4                  | 3/4                | 175             | 0.59          | \$670                        |
| Short       | 30        | 6G30S-30F3   | 30                        | -  | 30.3                        | -    | 54                     | 49-7/8                                   | 47         | 19-3/4  | 14-1/4             | 3 or 4      | 8                   | 40-3/8                  | 3/4                | 112             | 0.63          | \$259                        |
| Short       | 40        | 6G40S-34F3†  | 34                        | -  | 34.3                        | -    | 75                     | 52-1/8                                   | 49-1/4     | 21      | 14-1/4             | 3 or 4      | 8                   | 42-3/4                  | 3/4                | 120             | 0.62          | \$263                        |
| Short       | 40        | 6G40S-31PF3† | -                         | 31 | -                           | 31.3 | 75                     | 52-1/8                                   | 49-1/4     | 21      | 14-1/4             | 3 or 4      | 8                   | 42-3/4                  | 3/4                | 120             | 0.62          | \$638                        |
| Short       | 40        | 6G40S-38F3†  | 38                        | -  | 38.4                        | -    | 74                     | 53-1/4                                   | 50-1/4     | 21-3/8  | 14-1/4             | 3 or 4      | 8                   | 44                      | 3/4                | 125             | 0.62          | \$263                        |
| Short       | 40        | 6G40S-35PF3† | -                         | 35 | -                           | 35.4 | 74                     | 53-1/4                                   | 50-1/4     | 21-3/8  | 14-1/4             | 3 or 4      | 8                   | 44                      | 3/4                | 125             | 0.62          | \$638                        |
| Short       | 50        | 6G50S-40F3†  | 40                        | -  | 40.4                        | -    | 89                     | 53-1/4                                   | 51-1/8     | 23-3/4  | 14-1/4             | 3 or 4      | 8                   | 44                      | 3/4                | 186             | 0.61          | \$268                        |
| Short       | 50        | 6G50S-36PF3† | -                         | 36 | -                           | 36.4 | 89                     | 54-1/4                                   | 51-1/8     | 23-3/4  | 14-1/4             | 3 or 4      | 8                   | 44                      | 3/4                | 186             | 0.61          | \$648                        |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

# Essential Power Vent

## Efficiency

- .67 EF
- ENERGY STAR® rated

## Performance

- FHR: Up to 87 gallons for 50-gallon models and up to 73 gallons for 40-gallon models
- Recovery: 32.4 to 42.4 GPH at a 90° F rise, depending on model

## Self-Diagnostic System

- Electronic gas control for improved monitoring and service

## Low Emissions

- Eco-friendly burner, low NOx design

## Features

- Uses indoor air for combustion; blower exhausts the flue gases
- Standard 120 VAC electrical connection
- New whisper quiet blower

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Flexible Venting Options

- Long venting lengths up to 100 equivalent feet
- 2" or 3" PVC, ABS, or CPVC vent pipe options
- Vertical or horizontal termination

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## High Altitude Compliant

- Tall models certified for applications up to 7,700 ft. above sea level and short models up to 5,999 feet above sea level

## Plus...

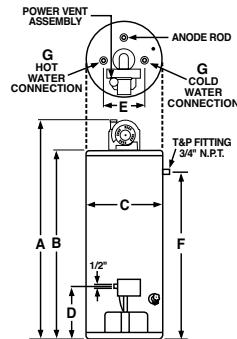
- Temperature and pressure relief valve included
- Low lead compliant
- Durable Silicon Nitride Ignitor (HSI)
- EverKleen™ patented system fights sediment build-up
- Standard replacement parts

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



Gas Tank-Type

| TYPE  | DESCRIPTION |                  | FEATURES                  |    |                             |      |                        | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |                     |                         |                    | ENERGY INFO.    |               |                              |
|-------|-------------|------------------|---------------------------|----|-----------------------------|------|------------------------|--|------------|---------|--------------------|---------------------|-------------------------|--------------------|-----------------|---------------|------------------------------|
|       | GAL. CAP.   | MODEL NUMBER     | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. | HT. TO TOP OF ASSEMBLY A                 | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | WATER CONN. CNTR. E | HT. TO SIDE T&P VALVE F | WATER CONN. SIZE G | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|       |             |                  | NAT.                      | LP | NAT.                        | LP   |                        |  |            |         |                    |                     |                         |                    |                 |               |                              |
| Tall  | 40          | ★ 6GR40PVE2-40   | 40                        | –  | 40.4                        | –    | 68                     | 67-3/8                                   | 59         | 19-3/4  | 14                 | 8                   | 53-1/2                  | 3/4                | 140             | 0.67          | \$244                        |
| Tall  | 40          | ★ 6GR40PVE2-36P  | –                         | 36 | –                           | 36.4 | 68                     | 67-3/8                                   | 59         | 19-3/4  | 14                 | 8                   | 53-1/2                  | 3/4                | 140             | 0.67          | \$590                        |
| Tall  | 50          | ★ 6GR50PVE2-42   | 42                        | –  | 42.4                        | –    | 87                     | 66-3/8                                   | 58         | 21-3/4  | 14                 | 8                   | 52-1/2                  | 3/4                | 170             | 0.67          | \$244                        |
| Tall  | 50          | ★ 6GR50PVE2-42P  | –                         | 42 | –                           | 42.4 | 87                     | 66-3/8                                   | 58         | 21-3/4  | 14                 | 8                   | 52-1/2                  | 3/4                | 170             | 0.67          | \$590                        |
| Short | 40          | ★ 6GR40SPVE2-36  | 36                        | –  | 36.4                        | –    | 73                     | 62-1/2                                   | 51-1/4     | 21-3/4  | 14                 | 8                   | 44-1/4                  | 3/4                | 155             | 0.67          | \$244                        |
| Short | 40          | ★ 6GR40SPVE2-32P | –                         | 32 | –                           | 32.4 | 73                     | 62-1/2                                   | 51-1/4     | 21-3/4  | 14                 | 8                   | 44-1/4                  | 3/4                | 155             | 0.67          | \$590                        |
| Short | 50          | ★ 6GR50SPVE2-36  | 36                        | –  | 36.4                        | –    | 87                     | 62-1/2                                   | 51-1/4     | 23-3/4  | 14                 | 8                   | 44                      | 3/4                | 175             | 0.67          | \$244                        |
| Short | 50          | ★ 6GR50SPVE2-32P | –                         | 32 | –                           | 32.4 | 87                     | 62-1/2                                   | 51-1/4     | 23-3/4  | 14                 | 8                   | 44                      | 3/4                | 175             | 0.67          | \$590                        |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

★ ENERGY STAR® compliant model.

### Maximum and Minimum Vent Lengths for 2" Vents

| NUMBER OF 90° ELBOWS WITH VENT TERMINAL | NUMBER OF 45° ELBOWS | MINIMUM PIPE LENGTH REQ. (FT.) | MAXIMUM PIPE LENGTH (FT.) 0' - 2000' | MAXIMUM PIPE LENGTH (FT.) 2000' - 7700' * |
|---|----------------------|--------------------------------|--------------------------------------|---|
| One (1)                                 | None                 | 4.0                            | 44.0                                 | 24.0                                      |
| One (1)                                 | One (1)              | 4.0                            | 41.0                                 | 21.0                                      |
| Two (2)                                 | None                 | 4.0                            | 38.0                                 | 18.0                                      |
| Two (2)                                 | One (1)              | 4.0                            | 35.0                                 | 15.0                                      |
| Three (3)                               | None                 | 4.0                            | 32.0                                 | 12.0                                      |

For the 2" vent, one 90° elbow is approximately equal to 6 feet of pipe. One 45° elbow is approximately equal to 3 feet of pipe. \*2,000' – 6,000' for short models.

### Maximum and Minimum Vent Lengths for 3" Vents

| NUMBER OF 90° ELBOWS WITH VENT TERMINAL | NUMBER OF 45° ELBOWS | MINIMUM PIPE LENGTH REQ. (FT.) | MAXIMUM PIPE LENGTH (FT.) 0' - 2000' | MAXIMUM PIPE LENGTH (FT.) 2000' - 7700' * |
|---|----------------------|--------------------------------|--------------------------------------|---|
| One (1)                                 | None                 | 5.0                            | 95.0                                 | 75.0                                      |
| One (1)                                 | One (1)              | 5.0                            | 92.5                                 | 72.5                                      |
| Two (2)                                 | None                 | 5.0                            | 90.0                                 | 70.0                                      |
| Two (2)                                 | One (1)              | 5.0                            | 87.5                                 | 67.5                                      |
| Three (3)                               | None                 | 5.0                            | 85.0                                 | 65.0                                      |

For the 3" vent, one 90° elbow is approximately equal to 5 feet of pipe. One 45° elbow is approximately equal to 2.5 feet of pipe. \*2,000' – 6,000' for short models.



# Essential Power Direct Vent

## Efficiency

- .62 - .67 EF
- ENERGY STAR® rated on select models

## Performance

- FHR: Up to 111 gallons for natural and LP gas
- Recovery: 38.4 to 65.7 GPH at a 90° F rise, depending on model

## Self-Diagnostic System

- Electronic gas control for improved monitoring and service

## Low Emissions

- Eco-friendly burner, low NOx design

## Features

- Two pipe system: one pipe pulls in outside air for combustion and the other exhausts combustion gases
- 120 VAC powered blower
- New whisper quiet blower

## Flammable Vapor Detection System

- Disables the heater in the presence of flammable vapors

## Flexible Venting Options

- Long venting lengths up to 100 feet
- PVC, ABS, or CPVC vent pipe options
- Vertical or horizontal termination
- Concentric vent kit available

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## High Altitude Compliant

- Models are certified for applications up to 10,200 feet above sea level

## Plus...

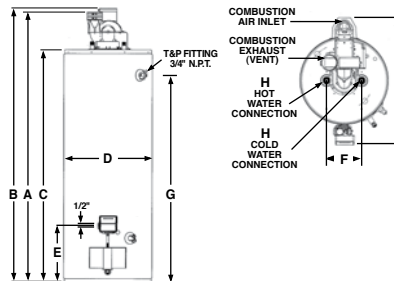
- Temperature and pressure relief valve included
- Low lead compliant
- Durable silicon nitride igniter (HSI)
- EverKleen™ patented system fights sediment build-up
- Standard replacement parts

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION |           |                           | FEATURES                  |    |                             |      |                        |    | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                           |            |         |                    |                     |                         |                    |                 |                 | ENERGY INFO.  |                              |
|-------------|-----------|---------------------------|---------------------------|----|-----------------------------|------|------------------------|----|--|---------------------------|------------|---------|--------------------|---------------------|-------------------------|--------------------|-----------------|-----------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | NATURAL GAS MODEL NUMBER* | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. |    | HT. TO TOP OF VENT A                     | HT. TO TOP OF AIR INLET B | TANK HT. C | DIAM. D | HT. TO GAS CONN. E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | FRONT TO BACK I | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|             |           |                           | NAT.                      | LP | NAT.                        | LP   | NAT.                   | LP |  |                           |            |         |                    |                     |                         |                    |                 |                 |               |                              |
| Tall        | 40        | ★ 6G40PDV-40              | 40                        | -  | 40.4                        | -    | 73                     | -  | 68-1/2                                   | 69-1/4                    | 60-1/4     | 19-3/4  | 14                 | 8                   | 53-3/4                  | 3/4                | 29-1/2          | 180             | 0.67          | \$244                        |
| Tall        | 40        | ★ 6G40PDVP-38             | -                         | 38 | -                           | 38.4 | -                      | 73 | 68-1/2                                   | 69-1/4                    | 60-1/4     | 19-3/4  | 14                 | 8                   | 53-3/4                  | 3/4                | 29-1/2          | 180             | 0.67          | \$590                        |
| Tall        | 50        | ★ 6G50PDV-40              | 40                        | -  | 40.4                        | -    | 93                     | -  | 67-5/8                                   | 67-7/8                    | 59-3/8     | 21-3/4  | 14                 | 8                   | 52-3/4                  | 3/4                | 31-1/2          | 205             | 0.67          | \$244                        |
| Tall        | 50        | ★ 6G50PDVP-40             | -                         | 40 | -                           | 40.4 | -                      | 93 | 67-5/8                                   | 67-7/8                    | 59-3/8     | 21-3/4  | 14                 | 8                   | 52-3/4                  | 3/4                | 31-1/2          | 205             | 0.67          | \$590                        |
| Tall        | 50        | 6G50PDV-65†               | 65                        | -  | 65.7                        | -    | 111                    | -  | 67-5/8                                   | 68-3/8                    | 59-3/8     | 21-3/4  | 14                 | 8                   | 52-3/4                  | 3/4                | 31-1/2          | 210             | 0.62          | \$263                        |
| Tall        | 50        | 6G50PDVP-50†              | -                         | 47 | -                           | 47.5 | -                      | 92 | 67-5/8                                   | 68-3/8                    | 59-3/8     | 21-3/4  | 14                 | 8                   | 52-3/4                  | 3/4                | 31-1/2          | 210             | 0.62          | \$638                        |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

★ ENERGY STAR® compliant model.

† These models feature side water connections for space heating applications.

Air-Inlet and Venting Information – See Next Page.

# Essential Power Direct Vent

## Air-Inlet and Venting Information

| FROM SEA LEVEL THROUGH 5,999 FT. ABOVE SEA LEVEL |  |   |   |   |             |
|--|--|---|---|---|-------------|
| MODEL  | VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES) | MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |             |
| 6G40PDV  | 2  | 7   | 30  | 90° Elbows  | Concentric* |
| 6G40PDV  | 3  | 7   | 60  | 90° Elbows  | –           |
| 6G40PDV  | 3  | 7   | 50  | –   | Concentric* |
| 6G50PDV  | 2  | 7   | 30  | 90° Elbows  | Concentric* |
| 6G50PDV  | 3  | 7   | 60  | 90° Elbows  | –           |
| 6G50PDV  | 3  | 7   | 50  | –   | Concentric* |

| FROM 6,000 FT. ABOVE SEA LEVEL THROUGH 7,700 FT. ABOVE SEA LEVEL |  |   |   |   |             |
|--|--|---|---|---|-------------|
| MODEL  | VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES) | MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |             |
| 6G40PDV  | 2  | 7   | 15  | 90° Elbows  | –           |
| 6G40PDV  | 2  | 7   | 30  | –   | Concentric* |
| 6G40PDV  | 3  | 7   | 60  | 90° Elbows  | –           |
| 6G40PDV  | 3  | 7   | 50  | –   | Concentric* |
| 6G50PDV  | 2  | 7   | 15  | –   | Concentric* |
| 6G50PDV  | 3  | 7   | 60  | 90° Elbows  | –           |
| 6G50PDV  | 3  | 7   | 50  | –   | Concentric* |

## Air-Inlet and Venting Information

| FROM 7,701 FT. ABOVE SEA LEVEL THROUGH 10,200 FT. ABOVE SEA LEVEL |  |   |   |   |             |
|---|--|---|---|---|-------------|
| MODEL   | VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES) | MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |             |
| 6G40PDV   | 2  | 7   | 15  | –   | Concentric* |
| 6G40PDV   | 3  | 7   | 60  | 90° Elbows  | –           |
| 6G40PDV   | 3  | 7   | 50  | –   | Concentric* |
| 6G50PDV   | 3  | 7   | 60  | 90° Elbows  | –           |
| 6G50PDV   | 3  | 7   | 50  | –   | Concentric* |

One 90° elbow is approximately equivalent to 5 feet of pipe. One 45° elbow is approximately equivalent to 2.5 feet of pipe.

\* Use only Richmond 3 inch concentric termination.

# Essential Power Direct Vent

## Air-Inlet and Venting Information

| FROM SEA LEVEL THROUGH 2,000 FT. ABOVE SEA LEVEL |  |   |   |   |             |
|--|--|---|---|---|-------------|
| MODEL  | VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES) | MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |             |
| 6G50PDV-65                                       | 3  | 7   | 50  | 90° Elbows  | –           |
| 6G50PDV-65                                       | 3  | 7   | 40  | –   | Concentric* |
| 6G50PDV-65                                       | 4  | 7   | 100   | 90° Elbows  | –           |

| FROM 2,001 FT. ABOVE SEA LEVEL THROUGH 5,999 FT. ABOVE SEA LEVEL |  |   |   |   |             |
|--|--|---|---|---|-------------|
| MODEL  | VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES) | MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |             |
| 6G50PDV-65   | 3  | 7   | 50  | 90° Elbows  | –           |
| 6G50PDV-65   | 3  | 7   | 40  | –   | Concentric* |
| 6G50PDV-65   | 4  | 7   | 100   | 90° Elbows  | –           |

One 90° elbow is approximately equivalent to 5 feet of pipe. One 45° elbow is approximately equivalent to 2.5 feet of pipe.

\* Use only Richmond 3 inch concentric termination.

## Air-Inlet and Venting Information

| FROM 6,000 FT. ABOVE SEA LEVEL THROUGH 7,700 FT. ABOVE SEA LEVEL |  |   |   |   |             |
|--|--|---|---|---|-------------|
| MODEL  | VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES) | MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |             |
| 6G50PDV-65   | 3  | 7   | 50  | 90° Elbows  | –           |
| 6G50PDV-65   | 3  | 7   | 40  | –   | Concentric* |
| 6G50PDV-65   | 4  | 7   | 100   | 90° Elbows  | –           |

| FROM 7,701 FT. ABOVE SEA LEVEL THROUGH 10,200 FT. ABOVE SEA LEVEL |  |   |   |   |             |
|---|--|---|---|---|-------------|
| MODEL   | VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES) | MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.) | VENT AND COMBUSTION AIR-INLET SYSTEM TERMINATION(S) |             |
| 6G50PDV-65  | 3  | 7   | 25  | 90° Elbows  | –           |
| 6G50PDV-65  | 3  | 7   | 20  | –   | Concentric* |
| 6G50PDV-65  | 4  | 7   | 100   | 90° Elbows  | –           |

One 90° elbow is approximately equivalent to 5 feet of pipe. One 45° elbow is approximately equivalent to 2.5 feet of pipe.

\* Use only Richmond 3 inch concentric termination.

# Essential Direct Vent

## Efficiency

- .60 - .62 EF
- Well insulated for reduced stand-by heat loss

## Performance

- FHR: 80 gallons for 50-gallon model and 66 gallons for 40-gallon model
- Recovery: 30.3 to 36.4 GPH at a 90° F rise, depending on model

## Technology

- Adjustable coaxial vent allows flexibility of installation, can swivel 360 degrees and uses outside air for combustion and requires no electrical power
- Aluminum vent and cap base to prevent staining of building exterior



## Longer Venting

- Up to 4 feet above the water heater and 4 feet from an outside wall
- Order Horizontal Vent Kit: #SP20131
- Order Vertical Vent Kit: #SP20132

## Altitude Certification

- All models certified up to 5,999 ft. above sea level

## Low Emissions

- Meets 40 ng/J NOx requirements

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Plus...

- Temperature and pressure relief valve included
- Low lead compliant
- Specially formulated glass lining prevents corrosion and extends the life of the tank
- Heat saving flue baffle design
- Gas control and combination thermostat
- Piezo ignition
- High temperature silicone bands reduce venting installation time
- Internal air tube for reduced footprint
- EverKleen™ patented system fights sediment build-up

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



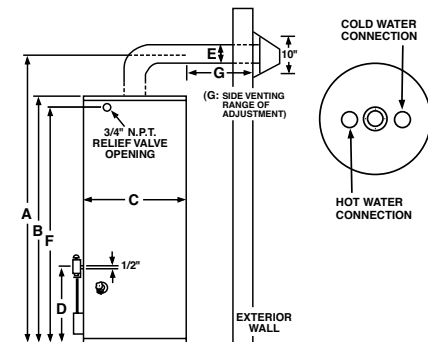
| DESCRIPTION |           |              | FEATURES                  |    |                             |      |                        |    | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                         |                 | ENERGY INFO.  |                              |
|-------------|-----------|--------------|---------------------------|----|-----------------------------|------|------------------------|----|--|------------|---------|--------------------|-------------|-------------------------|-----------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. |    | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | HT. TO SIDE T&P VALVE F | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|             |           |              | NAT.                      | LP | NAT.                        | LP   | NAT.                   | LP |  |            |         |                    |             |                         |                 |               |                              |
| Tall        | 40        | 6GDV40F3     | 36                        | -  | 36.4                        | -    | 66                     | -  | 68-1/4                                   | 60-7/8     | 19-3/4  | 14-1/4             | 6           | 51-5/8                  | 155             | 0.62          | \$263                        |
| Tall        | 40        | 6GDV40PF3    | -                         | 30 | -                           | 30.3 | -                      | 66 | 68-1/4                                   | 60-7/8     | 19-3/4  | 14-1/4             | 6           | 51-5/8                  | 155             | 0.62          | \$638                        |
| Tall        | 50        | 6GDV50F3     | 36                        | -  | 36.4                        | -    | 80                     | -  | 68                                       | 59-5/8     | 21-3/4  | 14-1/4             | 6           | 52-1/2                  | 165             | 0.60          | \$272                        |
| Tall        | 50        | 6GDV50PF3    | -                         | 33 | -                           | 33.3 | -                      | 80 | 68                                       | 59-5/8     | 21-3/4  | 14-1/4             | 6           | 52-1/2                  | 165             | 0.60          | \$659                        |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

| VENTING - ROUGHING IN DIMENSIONS (INCHES) |              |                          | SIDE VENTING (G) WITH INCLUDED VENT KIT |        | SIDE VENTING (G) WITH OPTIONAL VENT KIT |      | OPTIONAL HEIGHT (A) WITH VENT KIT |
|---|--------------|--------------------------|---|--------|---|------|-----------------------------------|
| TYPE                                      | MODEL NUMBER | 4 FEET VENTING AVAILABLE | MIN.                                    | MAX.   | MIN.                                    | MAX. |                                   |
| Tall                                      | 6DV40F3      | Horiz. & Vertical        | 9-1/8                                   | 19-1/8 | 9-1/8                                   | 48** | 68-1/4 - 107-3/4†                 |
| Tall                                      | 6DV50F3      | Horiz. & Vertical        | 8-1/8                                   | 18-1/8 | 8-1/8                                   | 48** | 68 - 107†                         |

\*\*Horizontal Vent Kit #SP20131 for applications up to 2,000 ft. above sea level. Optional horizontal venting not applicable for installations above 2,000 ft. Venting dimensions are approximate.

†Vertical Vent Kit #SP20132. Venting dimensions are approximate.



# Essential Atmospheric for Manufactured Housing

## Efficiency

- .62 - .63 EF

## Performance

- FHR: 59 gallons for 40-gallon model and 58 gallons for 29-gallon model
- Recovery: 30.3 to 34.3 GPH at a 90° F rise, depending on model

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Flexibility

- Field convertible controls and burner assembly for natural gas or LP operation included

## Low Emissions

- Eco-friendly burner, low NOx design

## Altitude Certification

- Up to 8,400 ft. above sea level for the 40-gallon model
- Up to 5,999 ft. above sea level for the 29-gallon model
- High altitude models available for 29-gallon

## Plus...

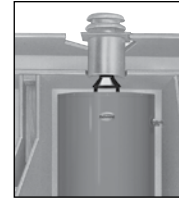
- Certified for manufactured (HUD) and modular construction
- Side inlet temperature and pressure relief valve opening
- Factory installed temperature and pressure relief valve – side location
- Low lead compliant
- Two hole top for anode rod and hot water outlet
- Specially formulated glass lining prevents corrosion and extends the life of the tank
- Piezo ignition – easy light pilot, no matches required
- Cold water inlet – side connection allows for quick, economical hook-up
- Optional leg kit for replacement units
- EverKleen™ patented system fights sediment build-up

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



## Draft Diverter

Improved design provides efficient heating with down-draft protection.



| DESCRIPTION |           |              | FEATURES                  |    |                             |      |                        |    | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                     |                         | ENERGY INFO.    |               |                              |
|-------------|-----------|--------------|---------------------------|----|-----------------------------|------|------------------------|----|--|------------|---------|--------------------|-------------|---------------------|-------------------------|-----------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. |    | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | WATER CONN. CNTR. F | HT. TO SIDE T&P VALVE G | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|             |           |              | NAT.                      | LP | NAT.                        | LP   | NAT.                   | LP |  |            |         |                    |             |                     |                         |                 |               |                              |
| Tall        | 29        | 6V30FT3      | 32                        | 30 | 32.3                        | 30.3 | 58                     | 58 | 59-5/8                                   | 56-7/8     | 16-1/2  | 14-3/8             | 3 or 4      | 8                   | 50-7/8                  | 110             | 0.63          | \$259 Nat                    |
| Tall        | 40        | 6V40FT3      | 34                        | 32 | 34.3                        | 32.3 | 59                     | 59 | 61-1/2                                   | 58-1/2     | 18-1/2  | 14-3/8             | 3 or 4      | 8                   | 52-1/4                  | 125             | 0.62          | \$263 Nat                    |

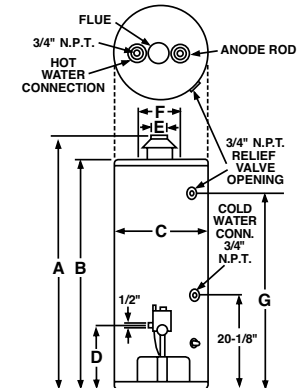
Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

| ROOF JACKS PART NO. | ROOF OPENING TO FLOOR DIM. | ROOF JACK ADJ. RANGE |
|---------------------|----------------------------|----------------------|
| AP12118B*           | 98" Min./126" Max.         | 16" Min./32" Max.    |
| AP12118C*           | 112" Min./154" Max.        | 30" Min./60" Max.    |
| AP12118D*           | 130" Min./189" Max.        | 48" Min./95" Max.    |
| AP12119B†           | 94" Min./106" Max.         | 12"                  |

\*Adjustable length roof jacks

†Fixed length roof jacks

Roof jack must be ordered separately with 29 and 40-gallon atmospheric models and must be in accordance with instructions furnished with the heater. Clamps and secure strapping are packed in water heater carton.



# Essential Direct Vent for Manufactured Housing

## Efficiency

- .62 - .63 EF

## Performance

- FHR: 64 gallons for 40-gallon model and 49 gallons for 30-gallon model
- Recovery: 30.3 GPH at a 90° F rise

## Flexibility

- Field convertible controls for natural gas or LP operation included
- No external door is required
- Provides maximum design freedom since it can be placed anywhere within the home
- Hot water outlet located at top
- Cold water inlet at side for fast, economical hook-up

## Altitude Certification

- All models certified up to 5,999 ft. above sea level

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Plus...

- Certified for manufactured (HUD) and modular construction
- Piezo ignition – easy light pilot
- Factory installed temperature and pressure relief valve – side location
- Low lead compliant
- EverKleen™ patented system fights sediment build-up

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



## Adjustable Roof Jack Vent

Design allows adjustment to roof pitches of up to 5/12". Four roof jacks available to accommodate roof thickness of 12" up to 95".

## Direct Combustion Air Inlet

Air is drawn directly into combustion chamber through air inlet fixed to base; 1/2" screen for rodent protection.

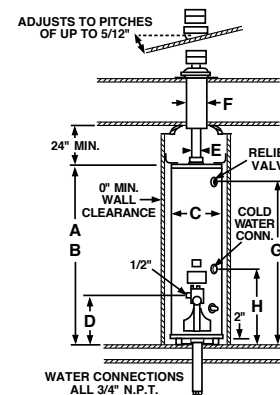


| TYPE | DESCRIPTION |              | FEATURES                          |                                     |                                | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |            |         |                    |             |                       |                         | ENERGY INFO.       |                 |               |                              |
|------|-------------|--------------|-----------------------------------|-------------------------------------|--------------------------------|--|------------|---------|--------------------|-------------|-----------------------|-------------------------|--------------------|-----------------|---------------|------------------------------|
|      | GAL. CAP.   | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H NAT./LP | RECOVERY IN G.P.H. 90° RISE NAT./LP | FIRST HOUR DEL. G.P.H. NAT./LP | HT. TO VENT A                            | TANK HT. B | DIAM. C | HT. TO GAS CONN. D | VENT SIZE E | ROOF JACK VENT SIZE F | HT. TO SIDE T&P VALVE G | WATER CONN. SIZE H | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
| Tall | 30          | MVR30DV3     | 30                                | 30.3                                | 49                             | 56-5/8                                   | 56-5/8     | 17-3/4  | 14-1/8             | 3           | 5                     | 51-1/8                  | 20                 | 110             | 0.63          | \$259 Nat                    |
| Tall | 40          | MVR40DV3     | 30                                | 30.3                                | 64                             | 57-3/8                                   | 57-3/8     | 19-3/4  | 14-1/8             | 3           | 5                     | 51-1/8                  | 20                 | 125             | 0.62          | \$263 Nat                    |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

| ROOF JACKS                     |          |
|--------------------------------|----------|
| 12" Non-Adjustable & Air Inlet | AP12032E |
| 15-32" Adjustable & Air Inlet  | AP12032B |
| 30-60" Adjustable & Air Inlet  | AP12032C |
| 48-95" Adjustable & Air Inlet  | AP12032D |
| AIR INLET                      |          |
| 6" Non-Adjustable              | AP12019B |
| 11-22" Adjustable              | AP12017B |
| EXTENSION PIPE KIT             |          |
| Roof Jack Extension Pipe Kit   | AP12021  |

Roof jack and air inlet must be ordered separately with 30 and 40-gallon direct vent models and must be in accordance with instructions furnished with the heater. No other roof jack or air inlet assemblies are approved for installation with this heater. Clamps and secure strapping are packed in water heater carton.



# Essential Direct Vent Co-Axial for Manufactured Housing

## Efficiency

- .60 - .62 EF

## Performance

- FHR: 80 gallons for 50-gallon model and 65 gallons for 40-gallon model
- Recovery: 30.3 to 36.4 GPH at a 90° F rise, depending on model

## Flexibility

- Field convertible controls and burner assembly for natural gas or LP operation included
- Roof jack flange adjustment range available up to 34° (8 - 12)
- New smaller foot print – no external air tube
- Can be installed anywhere in the home
- 3/4" hot and cold top connections
- Easily fits into a standard drain pan

## Altitude Certification

- All models certified up to 7,700 ft. above sea level

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Self Cleaning

- EverKleen™ patented system fights sediment build-up

## Plus...

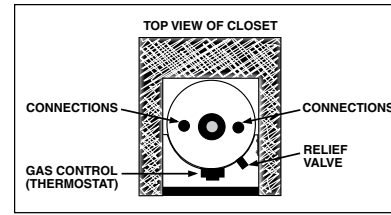
- Certified for manufactured (HUD) and modular construction
- Factory installed temperature and pressure relief valve – side location
- Low lead compliant
- Piezo ignition – easy light pilot, no matches required

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



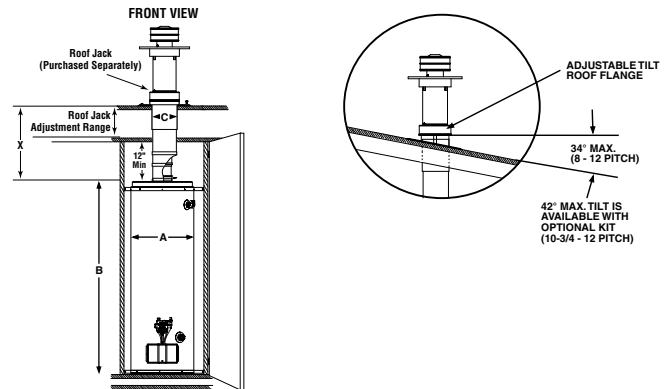
| DESCRIPTION |           |              | FEATURES                  |    |                             |      |                        |         | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |             |                  |                 |               | ENERGY INFO.                 |  |
|-------------|-----------|--------------|---------------------------|----|-----------------------------|------|------------------------|---------|--|-------------|------------------|-----------------|---------------|------------------------------|--|
| TYPE        | GAL. CAP. | MODEL NUMBER | GAS INPUT IN THOUS. BTU/H |    | RECOVERY IN G.P.H. 90° RISE |      | FIRST HOUR DEL. G.P.H. | DIAM. A | TANK HT. B                               | VENT SIZE C | WATER CONNECTION | SHIP. WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |  |
|             |           |              | NAT.                      | LP | NAT.                        | LP   | NAT.                   |         |  |             |                  |                 |               |                              |  |
| Tall        | 40        | MV40FDVX3    | 36                        | 30 | 36.4                        | 30.3 | 65                     | 19-3/4  | 60-1/2                                   | 5           | 3/4              | 155             | 0.62          | \$263 Nat                    |  |
| Tall        | 50        | MV50FDVX3    | 36                        | 32 | 36.4                        | 32.3 | 80                     | 21-3/4  | 59-5/8                                   | 5           | 3/4              | 165             | 0.60          | \$272 Nat                    |  |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

Co-Axial Roof Jack Sizing Table

| 34° MAX. (8 - 12 PITCH)<br>ROOF JACK<br>KIT PART NO. | ROOF JACK<br>ADJUSTMENT<br>RANGE (SEE X) |
|--|--|
| AP14363A   | 24 - 37"                                 |
| AP14363B   | 33 - 68"                                 |
| AP14363C   | 45 - 97"                                 |
| AP14363D   | 60 - 130"                                |
| AP14363E   | 72 - 160"                                |

NOTE: 42° Max. adjustment roof jacks available. Roof Jacks must be ordered separately with this direct vent water heater and installed in accordance with the instructions furnished with the heater. No other roof jack or vertical vent kit is approved for installation with this heater.



# Powered Damper Ultra Low NOx

## Efficiency

- .68 EF
- ENERGY STAR® rated

## Performance

- FHR: 93 gallons for 50-gallon model and 71 gallons for 40-gallon
- Recovery: 36.4 GPH at a 90° F rise

## Self-Diagnostic System

- Electronic gas control for improved monitoring and service

## Low Emissions

- Ultra low NOx 36,000 Btu/h burner
- Meets 10 ng/J NOx requirements
- SCAQMD Rule 1121 compliant

## Technology

- 24 VAC flue damper, 110 VAC outlet required
- Includes 19-foot cord, 3-prong plug
- Standard Cat. I, double-wall, B-vent, 3" (4" adaptor included)

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## High Altitude Compliant

- Certified to 10,200 ft. above sea level

## Plus...

- Dual certified for both potable water and space heating
- Enhanced-flow brass drain valve on 12-year models
- Temperature and pressure relief valve included
- Low lead compliant
- EverKleen™ patented system fights sediment build-up, on 12 and 9-year models
- Standard replacement parts

## Warranty

- 12, 9 and 6-Year limited tank and parts warranties available\*

\*See Residential Warranty Certificate for complete information

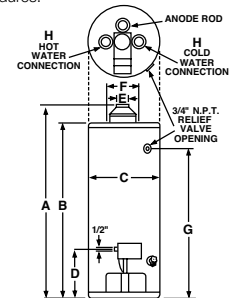
Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION      |              |                 | FEATURES                             |  |                                   | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                  |            |                             |                   |                              |                            |                     |                       | ENERGY INFO.     |                                       |                   |
|------------------|--------------|-----------------|--------------------------------------|--|-----------------------------------|--|------------------|------------|-----------------------------|-------------------|------------------------------|----------------------------|---------------------|-----------------------|------------------|---------------------------------------|-------------------|
| T<br>Y<br>P<br>E | GAL.<br>CAP. | MODEL<br>NUMBER | GAS INPUT IN<br>THOUS. BTU/H<br>NAT. | RECOVERY IN<br>G.P.H. 90° RISE<br>NAT. | FIRST HOUR<br>DEL. G.P.H.<br>NAT. | HT. TO<br>VENT<br>A                      | TANK<br>HT.<br>B | DIAM.<br>C | HT. TO<br>GAS<br>CONN.<br>D | VENT<br>SIZE<br>E | WATER<br>CONN.<br>CNTR.<br>F | HT. TO<br>SIDE<br>T&P<br>G | WATER<br>CONN.<br>H | SHIP.<br>WT.<br>(LBS) | ENERGY<br>FACTOR | ESTIMATED<br>YEARLY<br>ENERGY<br>COST | WARRANTY<br>YEARS |
| Tall             | 40           | ★ 12G40-36NE2   | 36                                   | 36.4                                   | 71                                | 65                                       | 60               | 21         | 17-3/8                      | 3 or 4            | 8                            | 54                         | 3/4                 | 150                   | 0.68             | \$240                                 | 12                |
| Tall             | 50           | ★ 12G50-36NE2   | 36                                   | 36.4                                   | 93                                | 64-3/4                                   | 59-3/4           | 23         | 17-3/8                      | 3 or 4            | 8                            | 53-3/4                     | 3/4                 | 180                   | 0.68             | \$240                                 | 12                |
| Tall             | 40           | ★ 9G40-36NE2    | 36                                   | 36.4                                   | 71                                | 65                                       | 60               | 21         | 17-3/8                      | 3 or 4            | 8                            | 54                         | 3/4                 | 150                   | 0.68             | \$240                                 | 9                 |
| Tall             | 50           | ★ 9G50-36NE2    | 36                                   | 36.4                                   | 93                                | 64-3/4                                   | 59-3/4           | 23         | 17-3/8                      | 3 or 4            | 8                            | 53-3/4                     | 3/4                 | 180                   | 0.68             | \$240                                 | 9                 |
| Tall             | 40           | ★ 6G40-36NE2    | 36                                   | 36.4                                   | 71                                | 65                                       | 60               | 21         | 17-3/8                      | 3 or 4            | 8                            | 54                         | 3/4                 | 150                   | 0.68             | \$240                                 | 6                 |
| Tall             | 50           | ★ 6G50-36NE2    | 36                                   | 36.4                                   | 93                                | 64-3/4                                   | 59-3/4           | 23         | 17-3/8                      | 3 or 4            | 8                            | 53-3/4                     | 3/4                 | 180                   | 0.68             | \$240                                 | 6                 |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

★ ENERGY STAR® compliant model.





# Atmospheric Ultra Low NOx

## Efficiency

- .59 - .63 EF
- More hot water at a low operating cost

## Performance

- FHR: 53 - 104 gallons for natural gas
- Recovery: 30.3 to 45.5 GPH at a 90° rise, depending on model

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device for double protection
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Low Emissions

- Ultra Low NOx radiant burner design
- Stainless steel construction
- SCAQMD Rule 1121 compliant
- Meets 10 ng/J NOx requirements

## Self-Cleaning

- EverKleen™ patented system fights sediment build-up
- Reduces fuel costs
- Provides more hot water

## Easy to Light

- No matches required

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## High Altitude Compliant

- All models certified up to 5,999 ft. above sea level
- 38-Gallon short model certified up to 8,400 ft. above sea level

## Plus...

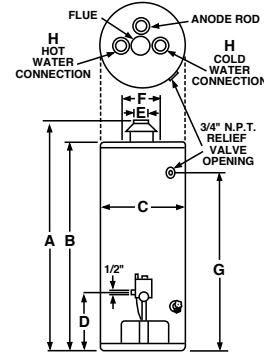
- Enhanced-flow brass drain valve on 12-year models
- Temperature and pressure relief valve included
- Low lead compliant
- Specially formulated glass lining prevents corrosion and extends the life of the tank

## Warranty

- 12, 9 and 6-Year limited tank and parts warranties available\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION      |              |                 | FEATURES                             |  |                                   | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                  |            |                             |                   |                              |                            |                     |                      |                  | ENERGY INFO.                          |                   |  |
|------------------|--------------|-----------------|--------------------------------------|--|-----------------------------------|--|------------------|------------|-----------------------------|-------------------|------------------------------|----------------------------|---------------------|----------------------|------------------|---------------------------------------|-------------------|--|
| T<br>Y<br>P<br>E | GAL.<br>CAP. | MODEL<br>NUMBER | GAS INPUT IN<br>THOUS. BTU/H<br>NAT. | RECOVERY IN<br>G.P.H. 90° RISE<br>NAT. | FIRST HOUR<br>DEL. G.P.H.<br>NAT. | HT. TO<br>VENT<br>A                      | TANK<br>HT.<br>B | DIAM.<br>C | HT. TO<br>GAS<br>CONN.<br>D | VENT<br>SIZE<br>E | WATER<br>CONN.<br>CNTR.<br>F | HT. TO<br>SIDE<br>T&P<br>G | WATER<br>CONN.<br>H | SHIP<br>WT.<br>(LBS) | ENERGY<br>FACTOR | ESTIMATED<br>YEARLY<br>ENERGY<br>COST | WARRANTY<br>YEARS |  |
| Tall             | 38           | 12G40-38FN3     | 38                                   | 38.4                                   | 72                                | 60-1/2                                   | 57-3/4           | 19         | 17-1/2                      | 3 or 4            | 8                            | 51-3/4                     | 3/4                 | 141                  | 0.62             | \$263                                 | 12                |  |
| Tall             | 48           | 12G50-40FN3     | 40                                   | 40.4                                   | 91                                | 60-5/8                                   | 57-7/8           | 20-1/2     | 17-1/2                      | 3 or 4            | 8                            | 51-3/4                     | 3/4                 | 163                  | 0.60             | \$272                                 | 12                |  |
| Tall             | 55           | 1255-45FN       | 45                                   | 45.5                                   | 104                               | 60-3/4                                   | 57-1/2           | 23-3/4     | 17-1/2                      | 4                 | 8                            | 50-3/4                     | 3/4                 | 182                  | 0.59             | \$277                                 | 12                |  |
| Tall             | 38           | 9G40-38FN3      | 38                                   | 38.4                                   | 72                                | 60-1/2                                   | 57-3/4           | 19         | 17-1/2                      | 3 or 4            | 8                            | 51-3/4                     | 3/4                 | 141                  | 0.62             | \$263                                 | 9                 |  |
| Tall             | 48           | 9G50-40FN3      | 40                                   | 40.4                                   | 91                                | 60-5/8                                   | 57-7/8           | 20-1/2     | 17-1/2                      | 3 or 4            | 8                            | 51-3/4                     | 3/4                 | 163                  | 0.60             | \$272                                 | 9                 |  |
| Short            | 38           | 9G40S-36FN3     | 36                                   | 36.4                                   | 68                                | 51-7/8                                   | 49-1/8           | 21         | 17-1/2                      | 3 or 4            | 8                            | 43                         | 3/4                 | 150                  | 0.62             | \$263                                 | 9                 |  |
| Tall             | 28           | 6G30-30FN3      | 30                                   | 30.3                                   | 53                                | 58-7/8                                   | 56-1/8           | 16-1/2     | 17-1/2                      | 3 or 4            | 8                            | 50-1/8                     | 3/4                 | 114                  | 0.63             | \$259                                 | 6                 |  |
| Tall             | 38           | 6G40-38FN3      | 38                                   | 38.4                                   | 72                                | 60-1/2                                   | 57-3/4           | 19         | 17-1/2                      | 3 or 4            | 8                            | 51-3/4                     | 3/4                 | 141                  | 0.62             | \$263                                 | 6                 |  |
| Tall             | 48           | 6G50-40FN3      | 40                                   | 40.4                                   | 91                                | 60-5/8                                   | 57-7/8           | 20-1/2     | 17-1/2                      | 3 or 4            | 8                            | 51-3/4                     | 3/4                 | 163                  | 0.60             | \$272                                 | 6                 |  |
| Tall             | 55           | 6G55-45FN       | 45                                   | 45.5                                   | 104                               | 60-3/4                                   | 57-1/2           | 23-3/4     | 17-1/2                      | 4                 | 8                            | 50-3/4                     | 3/4                 | 182                  | 0.59             | \$277                                 | 6                 |  |
| Short            | 38           | 6G40S-36FN3     | 36                                   | 36.4                                   | 68                                | 51-7/8                                   | 49-1/8           | 21         | 17-1/2                      | 3 or 4            | 8                            | 43                         | 3/4                 | 150                  | 0.62             | \$263                                 | 6                 |  |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

# Heavy Duty Ultra Low NOx

## Performance

- Recovery Capacity: 72.8 gallons per hour (delivers approximately 113 gallons of hot water in the first hour for 75-gallon models and 115 gallons for 98-gallon models)\*\*

## Flammable Vapor Detection System

- Disables the heater in the presence of flammable vapors
- Maintenance free – no filter to clean

## High Altitude Compliant

- All models are certified for applications up to 8,500 feet above sea level

## Plus...

- Integrated self diagnostic system control for easy installation and service
- Eco-friendly burner, ultra low NOx design meets 14 ng/J NOx requirements
- Premium grade anode rod provides long-lasting tank protection
- Enhanced-flow brass drain valve
- Temperature and pressure relief valve included
- Low lead compliant
- Side water connections for space heating applications
- Standard replacement parts
- Standard 110-volt electrical connection
- Durable silicon nitride igniter – Hot Surface Ignition (HSI)

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

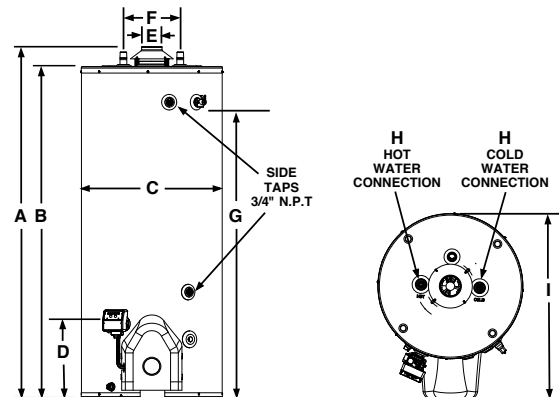
**Efficiency** | All models tested according to ANSI test procedures, and meet or exceed the thermal efficiency and standby loss requirements of current ASHRAE standard (EPact). Also exceeds energy efficiency codes of all states including California Energy Commission (CEC).

**Safety and Construction** | Design certified by CSA: For operation at 160 degrees; meets all safety and construction requirements of ANSI Z21.10.3; as an automatic storage or instantaneous water heater; as an automatic circulating tank water heater; and for operation on combustible floors and in alcove installations. All models are North Carolina Code compliant. **Certified for 150 PSI maximum working pressure.**



| DESCRIPTION      |              |                 | FEATURES                             |   | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                  |            |                             |                   |                              |                                  |                             |                          |                       |
|------------------|--------------|-----------------|--------------------------------------|---|--|------------------|------------|-----------------------------|-------------------|------------------------------|----------------------------------|-----------------------------|--------------------------|-----------------------|
| T<br>Y<br>P<br>E | GAL.<br>CAP. | MODEL<br>NUMBER | GAS INPUT IN<br>THOUS. BTU/H<br>NAT. | RECOVERY IN<br>G.P.H. 100° RISE**<br>NAT. | HT. TO<br>VENT<br>A                      | TANK<br>HT.<br>B | DIAM.<br>C | HT. TO<br>GAS<br>CONN.<br>D | VENT<br>SIZE<br>E | WATER<br>CONN.<br>CNTR.<br>F | HT. TO<br>SIDE T&P<br>VALVE<br>G | WATER<br>CONN.<br>SIZE<br>H | FRONT<br>TO<br>BACK<br>I | SHIP.<br>WT.<br>(LBS) |
| Tall             | 75           | 6G75-75UF       | 75.1                                 | 72.8                                      | 64-1/8                                   | 60-1/4           | 26-1/4     | 14-1/4                      | 4                 | 11                           | 52-1/4                           | 1                           | 33-3/4                   | 300                   |
| Tall             | 98           | 5V100UF         | 75.1                                 | 72.8                                      | 67-7/8                                   | 64               | 27-1/8     | 14-1/4                      | 4                 | 11                           | 56-1/8                           | 1                           | 34-3/4                   | 370                   |

\*\*Recovery Capacity is based upon a 100° F water temperature rise and calculated per ANSI Z21.10.3 standards. First hour hot water delivery is based upon 77° water temperature rise.



# Power Vent Ultra Low NOx

## Efficiency

- .67 EF
- ENERGY STAR® rated
- More hot water at a low operating cost

## Performance

- FHR: 72 - 94 gallons for natural gas
- Recovery: 36.4 to 38.4 GPH at a 90° F rise, depending on model

## Flammable Vapor Detection System

- Exclusive air/fuel shut-off device for double protection
- Maintenance free – no filter to clean
- Disables the heater in the presence of flammable vapor accumulation

## Low Emissions

- Ultra Low NOx radiant burner design
- Stainless steel construction
- SCAQMD Rule 1121 compliant
- Meets 10 ng/J NOx requirements

## Self-Cleaning

- EverKleen™ patented system fights sediment build-up
- Reduces fuel costs
- Provides more hot water

## Flexible Venting Options

- Long venting lengths up to 100 feet
- PVC, ABS, or CPVC vent pipe options
- Vertical or horizontal termination

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## High Altitude Compliant

- Certified to 5,999 ft. above sea level

## Plus...

- Whisper quiet blower
- Temperature and pressure relief valve included
- Low lead compliant
- Durable spark-to-pilot ignitor

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION      |              |                 | FEATURES                             |  |                                   | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                  |            |                             |                              |                                  |                             | ENERGY INFO.          |                          |                                       |
|------------------|--------------|-----------------|--------------------------------------|--|-----------------------------------|--|------------------|------------|-----------------------------|------------------------------|----------------------------------|-----------------------------|-----------------------|--------------------------|---------------------------------------|
| T<br>Y<br>P<br>E | GAL.<br>CAP. | MODEL<br>NUMBER | GAS INPUT IN<br>THOUS. BTU/H<br>NAT. | RECOVERY IN<br>G.P.H. 90° RISE<br>NAT. | FIRST HOUR<br>DEL. G.P.H.<br>NAT. | HT. TO<br>TOP OF<br>ASSEMBLY<br>A        | TANK<br>HT.<br>B | DIAM.<br>C | HT. TO<br>GAS<br>CONN.<br>D | WATER<br>CONN.<br>CNTR.<br>E | HT. TO<br>SIDE T&P<br>VALVE<br>F | WATER<br>CONN.<br>SIZE<br>G | SHIP.<br>WT.<br>(LBS) | ENERGY<br>FACTOR<br>NAT. | ESTIMATED<br>YEARLY<br>ENERGY<br>COST |
| Tall             | 40           | ★ 6G40PV-36FN   | 36                                   | 36.4                                   | 72                                | 69-3/4                                   | 60               | 21         | 17-3/8                      | 8                            | 54                               | 3/4                         | 170                   | 0.67                     | \$244                                 |
| Tall             | 50           | ★ 6G50PV-38FN   | 38                                   | 38.4                                   | 94                                | 69-1/2                                   | 59-3/4           | 23         | 17-3/8                      | 8                            | 53-3/4                           | 3/4                         | 200                   | 0.67                     | \$244                                 |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

★ ENERGY STAR® compliant model.

## Maximum and Minimum Vent Lengths for 2" Vents

| NUMBER OF<br>90° ELBOWS<br>WITH VENT<br>TERMINAL | NUMBER<br>OF 45°<br>ELBOWS | MINIMUM<br>PIPE<br>LENGTH<br>REQ. (FT.) | MAXIMUM<br>PIPE<br>LENGTH<br>(FT.) |
|--|----------------------------|---|------------------------------------|
| One (1)  | None                       | 3.0                                     | 44.0                               |
| One (1)  | One (1)                    | 3.0                                     | 41.0                               |
| Two (2)  | None                       | 3.0                                     | 38.0                               |
| Two (2)  | One (1)                    | 3.0                                     | 35.0                               |
| Three (3)  | None                       | 3.0                                     | 32.0                               |

For the 2" vent, one 90° elbow is approximately equal to 6 feet of pipe.  
One 45° elbow is approximately equal to 3 feet of pipe.

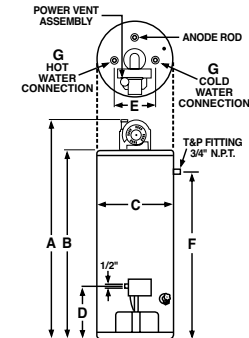
**NOTICE:** The mixing of 2" and 3" vent pipe is not recommended. If 3" pipe is used, a 2" to 3" reducer fitting is recommended at the rubber coupling.

This water heater is supplied with a 2" Schedule 40 PVC 45° vent terminal.  
When venting with 3" pipe, a Schedule 40 PVC 45° vent terminal must be used.  
Screens for both 2" and 3" vent terminals have been included.

## Maximum and Minimum Vent Lengths for 3" Vents

| NUMBER OF<br>90° ELBOWS<br>WITH VENT<br>TERMINAL | NUMBER<br>OF 45°<br>ELBOWS | MINIMUM<br>PIPE<br>LENGTH<br>REQ. (FT.) | MAXIMUM<br>PIPE<br>LENGTH<br>(FT.) |
|--|----------------------------|---|------------------------------------|
| One (1)  | None                       | 3.0                                     | 95.0                               |
| One (1)  | One (1)                    | 3.0                                     | 92.5                               |
| Two (2)  | None                       | 3.0                                     | 90.0                               |
| Two (2)  | One (1)                    | 3.0                                     | 87.5                               |
| Three (3)  | None                       | 3.0                                     | 85.0                               |
| Three (3)  | One (1)                    | 3.0                                     | 82.5                               |
| Four (4)   | None                       | 3.0                                     | 80.0                               |
| Four (4)   | One (1)                    | 3.0                                     | 77.5                               |
| Five (5)   | None                       | 3.0                                     | 75.0                               |

For the 3" vent, one 90° elbow is approximately equal to 5 feet of pipe.  
One 45° elbow is approximately equal to 2.5 feet of pipe.



# Encore® High Efficiency Condensing Tankless

## Efficiency

- .92 - .94 EF with stainless steel condensing heat exchanger
- ENERGY STAR® rated
- Intelligent electronic controls designed to increase energy efficiency and safety
- Third party efficiency listed by AHRI

## Performance

- Industry First! 0.26 GPM minimum flow rate, 0.40 GPM minimum activation flow rate
- SCAQMD rule 1146.2 compliant
- RMTGH-95 for 3 bathroom homes\*– 9.5 gal./min. at 35°F rise max., 8.4 gal./min. at 45°F rise
- RMTGH-84 for 2-3 bathroom homes\*– 8.4 gal./min. at 35°F rise max., 6.6 gal./min. at 45°F rise

\*Based on simultaneous showers using 2.5 gallons per minute. Flow rates vary depending on temperature of cold water supply.

## Compact Size

- Compact space saving design – about the size of a medicine cabinet

## Self-Diagnostic System

- Self-diagnostic system for easy installation and service
- Digital display shows temperature setting and maintenance codes

## Technology

- Two-pipe direct vent system designed for PVC pipe (up to 38 ft. of 3" PVC Pipe or 5 ft. of 2" PVC Pipe). See instructions for details
- Hot start programming helps minimize fluctuation in water temperature, referred to as “cold water sandwich,” during periods of frequent on/off operation
- Built-in electric blower
- Exclusive! Guardian OFW™ overheat film wrap
- EZ-Link™ cable available for higher demand applications to connect two tankless units to operate as one
- Manifold up to six units with an optional MIC-60 manifold control board
- Manifold up to 20 units with the optional MIC-185 plus the MICS-180 manifold control assembly

## High Altitude Compliant

- High-altitude capability – up to 9,840 ft. elevation above sea level

## Plus...

- Digital remote control and 10 ft. of thermostat wire included
- Supplied with a 120 volt power cord (indoor models only)
- Freeze protection to -30°F
- Low lead compliant
- Required manual gas isolation valve included

## Warranty

- 12-Year limited heat exchanger, 5-year limited parts warranty\*
- 1-Year labor warranty\*

\*See Residential Warranty Certificate for complete information



## Indoor Direct Vent



Outdoor

| DESCRIPTION    |                |                    | FEATURES      |                          |                     |                     |          |            | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |        |        |       |                     |                     | ENERGY INFO.  |                     |                                     |  |
|----------------|----------------|--------------------|---------------|--------------------------|---------------------|---------------------|----------|------------|--|--------|--------|-------|---------------------|---------------------|---------------|---------------------|-------------------------------------|--|
| MODEL NUMBER   | INPUT BTU/H    | TYPE               | TEMP. RANGE   | MIN. FLOW/ACTIVATION GPM | GPM @ 77° RISE MAX. | GPM @ 45° RISE MAX. | MAX. GPM | CONNECTION |  | HEIGHT | WIDTH  | DEPTH | VENT DIAM.          | SHIP. WEIGHT (LBS.) | ENERGY FACTOR | RECOVERY EFFICIENCY | ESTIMATED YEARLY ENERGY COST NAT/LP |  |
|                |                |                    |               |                          |                     |                     |          | WATER      | GAS                                      |        |        |       |                     |                     |               |                     |                                     |  |
| ★ RMTGH-95DVLN | 11,000-199,900 | Indoor Direct Vent | 85° to 140° F | 0.26/0.40                | 4.9                 | 8.4                 | 9.5      | 3/4        | 3/4                                      | 27-1/2 | 18-1/2 | 9-3/4 | 2" or 3" PVC 2-Pipe | 82                  | .94           | 94%                 | \$174/\$421                         |  |
| ★ RMTGH-95XLN  | 11,000-199,900 | Outdoor            | 85° to 140° F | 0.26/0.40                | 4.9                 | 8.4                 | 9.5      | 3/4        | 3/4                                      | 27-1/2 | 18-1/2 | 9-3/4 | N/A                 | 82                  | .94           | 94%                 | \$174/\$421                         |  |
| ★ RMTGH-84DVLN | 11,000-157,000 | Indoor Direct Vent | 85° to 140° F | 0.26/0.40                | 3.9                 | 6.6                 | 8.4      | 3/4        | 3/4                                      | 27-1/2 | 18-1/2 | 9-3/4 | 2" or 3" PVC 2-Pipe | 82                  | .92           | 92%                 | \$178/\$430                         |  |
| ★ RMTGH-84XLN  | 11,000-157,000 | Outdoor            | 85° to 140° F | 0.26/0.40                | 3.9                 | 6.6                 | 8.4      | 3/4        | 3/4                                      | 27-1/2 | 18-1/2 | 9-3/4 | N/A                 | 82                  | .92           | 92%                 | \$178/\$430                         |  |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

### ★ ENERGY STAR® compliant model.

All models are available in Natural Gas and Propane (LP). For Propane replace N" with P" in model number. Example RMTGH-95DVLN.

- SCAQMD 1146.2 compliant.
- Factory set maximum temperature is 120° F. See Use and Care Manual for setting.
- Consult factory for information on sizing the application.

Vent Termination Kits are required for Direct Vent models. Contact your distributor for details.

Proper gas pressure must be ensured to supply tankless gas water heaters – up to 199,900 Btu/h for RMTGH-95 models, up to 180,000 Btu/h for RMTGH-90 models and up to 157,000 Btu/h for RMTGH-84 models. (Consult your gas supplier)

- Approved for use with Centrotherm Polypropylene venting (U.S. and Canada).

# Essential Plus Mid-Efficiency Tankless Ultra Low NOx

Indoor Direct Vent

## Efficiency

- .82 EF
- Intelligent electronic controls designed to increase energy efficiency and safety
- Third party efficiency listed by AHRI

## Performance

- Industry First! 0.26 GPM minimum flow rate, 0.40 GPM minimum activation flow rate
- RMTG-95 for 3 bathroom homes\*– 9.5 gal./min. at 35°F rise max., 8.4 gal./min. at 45°F rise
- RMTG-84 for 2-3 bathroom homes\*– 8.4 gal./min. at 35°F rise max., 6.6 gal./min. at 45°F rise
- RMTG-64 for 1-2 bathroom homes\*– 6.4 gal./min. at 35°F rise max., 5.6 gal./min. at 45°F rise

\*Based on simultaneous showers using 2.5 gallons per minute. Flow rates vary depending on temperature of cold water supply.

## Self-Diagnostic System

- Self-diagnostic system for easy installation and service
- Digital display shows temperature setting and maintenance codes

## Technology

- 3”/5” concentric vent system with Integrated condensate collector
- Hot start programming helps minimize fluctuation in water temperature, referred to as cold water sandwich\*, during periods of frequent on/off operation
- Connects to Metal Fab. Inc., 3”/5” concentric venting without an adapter
- Built-in electric blower
- Exclusive! Guardian OFW™ overheat film wrap
- EZ-Link™ cable available for higher demand applications to connect two tankless units to operate as one
- Manifold up to six units with an optional MIC-6 manifold control board
- Manifold up to 20 units with the optional MIC-185 plus the MICS-180 manifold control assembly

## Low Emissions

- Environmentally friendly Ultra Low NOx burner meets SCAQMD rule 1146.2 requirements

## High Altitude Compliant

- High-altitude capability – up to 9,840 ft. elevation above sea level

## Plus...

- Digital remote control and 10 ft. of thermostat wire included
- Supplied with a 120 volt power cord (indoor models only)
- Freeze protection to -30°F
- Low lead compliant

## Warranty

- 12-Year limited heat exchanger, 5-year limited parts warranty\*
- 1-Year labor warranty\*

\*See Residential Warranty Certificate for complete information



Tankless Gas

56

| DESCRIPTION  |                |                    | FEATURES      |                          |                     |                     |          |            | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |        |        |       |                   |                     | ENERGY INFO.  |                     |                                     |  |
|--------------|----------------|--------------------|---------------|--------------------------|---------------------|---------------------|----------|------------|--|--------|--------|-------|-------------------|---------------------|---------------|---------------------|-------------------------------------|--|
| MODEL NUMBER | INPUT BTU/H    | TYPE               | TEMP. RANGE   | MIN. FLOW/ACTIVATION GPM | GPM @ 77° RISE MAX. | GPM @ 45° RISE MAX. | MAX. GPM | CONNECTION |  | HEIGHT | WIDTH  | DEPTH | VENT DIAM.        | SHIP. WEIGHT (LBS.) | ENERGY FACTOR | RECOVERY EFFICIENCY | ESTIMATED YEARLY ENERGY COST NAT/LP |  |
|              |                |                    |               |                          |                     |                     |          | WATER      | GAS                                      |        |        |       |                   |                     |               |                     |                                     |  |
| RMTG-95DVLN  | 11,000-199,900 | Indoor Direct Vent | 85° to 140° F | 0.26/0.40                | 4.3                 | 7.4                 | 9.5      | 3/4        | 3/4                                      | 25-5/8 | 13-7/8 | 9-7/8 | 3 by 5 Concentric | 54                  | .82           | 84%                 | \$199/\$482                         |  |
| RMTG-95XLN   | 11,000-199,900 | Outdoor            | 85° to 140° F | 0.26/0.40                | 4.3                 | 7.4                 | 9.5      | 3/4        | 3/4                                      | 23-5/8 | 13-7/8 | 8-7/8 | N/A               | 54                  | .82           | 83%                 | \$199/\$482                         |  |
| RMTG-84DVLN  | 11,000-180,000 | Indoor Direct Vent | 85° to 140° F | 0.26/0.40                | 3.9                 | 6.7                 | 8.4      | 3/4        | 3/4                                      | 25-5/8 | 13-7/8 | 9-7/8 | 3 by 5 Concentric | 54                  | .82           | 84%                 | \$199/\$482                         |  |
| RMTG-84XLN   | 11,000-180,000 | Outdoor            | 85° to 140° F | 0.26/0.40                | 3.9                 | 6.7                 | 8.4      | 3/4        | 3/4                                      | 23-5/8 | 13-7/8 | 8-7/8 | N/A               | 54                  | .82           | 83%                 | \$199/\$482                         |  |
| RMTG-64DVLN  | 11,000-150,000 | Indoor Direct Vent | 85° to 140° F | 0.26/0.40                | 3.3                 | 5.6                 | 6.4      | 3/4        | 3/4                                      | 25-5/8 | 13-7/8 | 9-7/8 | 3 by 5 Concentric | 54                  | .82           | 84%                 | \$199/\$482                         |  |
| RMTG-64XLN   | 11,000-150,000 | Outdoor            | 85° to 140° F | 0.26/0.40                | 3.3                 | 5.6                 | 6.4      | 3/4        | 3/4                                      | 23-5/8 | 13-7/8 | 8-7/8 | N/A               | 54                  | .82           | 83%                 | \$199/\$482                         |  |

Estimated energy cost based on a national average fuel cost of \$1.09/therm for natural gas and \$2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures. All models are available in Natural Gas and Propane (LP). For Propane replace N" with P" in model number. Example RMTG-95DVLN.

- SCAQMD 1146.2 compliant.
- Factory set maximum temperature is 120° F. See Use and Care Manual for setting.
- Consult factory for information on sizing the application.

Vent Termination Kits are required for Direct Vent models. Contact your distributor for details.

Proper gas pressure must be ensured to supply tankless gas water heaters – up to 199,900 Btu/h for RMTG-95 models, up to 180,000 Btu/h for RMTG-84 models and up to 150,000 Btu/h for RMTG-64 models. (Consult your gas supplier)

57

# Encore® Hybrid Heat Pump

## Efficiency

- 2.45 EF reduces operating cost
- ENERGY STAR® rated

## Performance

- 8700 Btu/h compressor: the most powerful in its class – more heat can be created by the heat pump and less by the costly electric elements. This translates into significant fuel saving in real life applications. For still more savings, the Richmond hybrid has a wider temperature operating range, which means the heat pump can be used to heat water more days throughout the year.
- Ambient operating range: 37-120° F is widest in class, offering more days of HP operation annually; designed to meet Northern Climate Spec (Tier 1)

## Easy Installation

- Easy access side connections
- Narrow 21" diameter, fits through access doors
- Easily replaces a standard electric water heater

## Full-Color LCD Display

- Intuitive, back lit touch screen with diagnostics

## Operation Modes

- Energy Saver
- Heat Pump Only
- High Demand
- Electric Heat Only
- Vacation: 2-28 days (or placed on hold indefinitely)

## Plus...

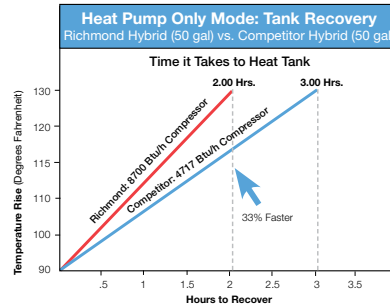
- Premium grade anode rod provides long-lasting tank protection
- 3/4" NPT water inlet, outlet and condensate drain connections
- Incoloy stainless steel resistor elements
- Dry-fire protection
- Easy access, top mounted washable air filter
- 2-1/2" Non-CFC foam insulation
- Improved flow brass drain valve
- Temperature and pressure relief valve
- Low lead compliant

## Warranty

- 12-Year limited tank and parts warranty\*
- 1-Year labor warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION      |              |                 | FEATURES            |                                |                                     | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |               |                   |                              | ENERGY INFO.    |                                       |
|------------------|--------------|-----------------|---------------------|--------------------------------|-------------------------------------|--|---------------|-------------------|------------------------------|-----------------|---------------------------------------|
| T<br>Y<br>P<br>E | GAL.<br>CAP. | MODEL<br>NUMBER | COMPRESSOR<br>BTU/H | FIRST HOUR<br>RATING<br>G.P.H. | RECOVERY<br>IN G.P.H.<br>90° F RISE | HEIGHT<br>A                              | DIAMETER<br>B | UNIT<br>WT. (LBS) | APPROX.<br>SHIP WT.<br>(LBS) | ENERGY<br>SAVER | ESTIMATED<br>YEARLY<br>ENERGY<br>COST |
| Tall             | 50           | ★ HB50RM        | 8700                | 57                             | 21                                  | 75-1/2                                   | 21            | 180               | 226                          | 2.45 EF         | \$215                                 |

Estimated energy cost based on a national average fuel rate electricity 12.00¢/kWh. Energy factor determined by the U.S. Department of Energy (DOE) test procedures.

★ ENERGY STAR® compliant model.

## Full-Color LCD Display Screens



Start Up Screen

Press Standby" to start

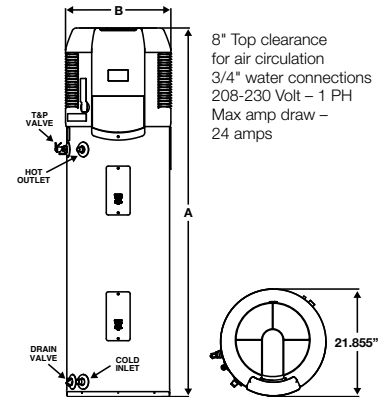


## Energy Saver Mode 1

Best energy efficiency for typical hot water demands

## Home Screen

Factory set to default to the Energy Saver" mode screen



**Efficiency**

- .95 EF
- Isolated tank design reduces conductive heat loss
- Dual 5500 watt stainless steel heating elements

**Performance**

- FHR: 58 - 68 gallons based on gallon capacity
- Recovery: 25 GPH at a 90° F rise

**Super Sentinel Diagnostic System**

- Simple easy to read diagnostics
- Controls multiple operating models
- Digital thermostat setting
- Leak detection with audible alarm

**Features**

- High performance and lower operating cost
- Compliant with many electric utility incentive programs
- Premium grade anode rod provides long-lasting tank protection
- Electric junction box located above heating elements for easy installation
- Over-temperature protector cuts off power in excess temperature situations

**Plus...**

- EverKleen™ self cleaning device fights harmful sediment build-up with a high-velocity spiraling water stream – helps operating efficiency by saving energy, money and improving tank life
- Enhanced-flow brass drain valve
- Temperature and pressure relief valve included
- Low lead compliant

**Warranty**

- 12-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION      |              |                 | FEATURES                       |                                     | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                               |               |                              | ENERGY INFO.     |                                       |
|------------------|--------------|-----------------|--------------------------------|-------------------------------------|--|-------------------------------|---------------|------------------------------|------------------|---------------------------------------|
| T<br>Y<br>P<br>E | GAL.<br>CAP. | MODEL<br>NUMBER | FIRST HOUR<br>RATING<br>G.P.H. | RECOVERY<br>IN G.P.H.<br>90° F RISE | TANK<br>HEIGHT<br>A                      | HEIGHT TO<br>WATER CONN.<br>B | DIAMETER<br>C | APPROX.<br>SHIP WT.<br>(LBS) | ENERGY<br>FACTOR | ESTIMATED<br>YEARLY<br>ENERGY<br>COST |
| Tall             | 50           | 12E50-DEC       | 68                             | 25                                  | 58-3/8                                   | 61-5/8                        | 20-1/4        | 121                          | 0.95             | \$555                                 |
| Med.             | 40           | 12EM40-DEC      | 55                             | 21                                  | 48-1/4                                   | 50-1/2                        | 20-1/4        | 106                          | 0.95             | \$555                                 |
| Med.             | 50           | 12EM50-DEC      | 65                             | 21                                  | 48                                       | 50-1/2                        | 22-1/4        | 132                          | 0.95             | \$555                                 |
| Med.             | 50           | 12EMR50-DEC     | 65                             | 21                                  | 48                                       | 50-1/2                        | 22-1/4        | 132                          | 0.95             | \$555                                 |

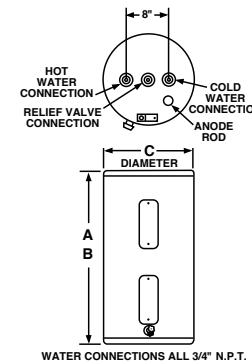
Estimated energy cost based on a national average fuel rate electricity 12.00¢/kWh. Energy factor determined by the U.S. Department of Energy (DOE) test procedures.

**Super Sentinel not available on single element models, available on dual element models only. Super Sentinel not available in excess of 5 kW on 208 V models.**

- Heaters furnished with standard 240 volt AC, single phase non-simultaneous wiring, and 4500 watt upper and lower heating elements.

\*\*Recovery = wattage/2.42 x temp. rise °F.  
 Example:  $\frac{4500W}{2.42 \times 90^\circ} = 21 \text{ GPH}$

\*\*Recovery calculations used are based on 4500 watt elements used in non-simultaneous operation.



WATER CONNECTIONS ALL 3/4" N.P.T.

# Essential Plus

## Efficiency

- .95 EF
- Isolated tank design reduces conductive heat loss
- Dual 4500 watt elements, stainless steel lower element for longer life

## Performance

- FHR: 44 - 71 gallons, based on gallon capacity
- Recovery: 21 GPH at a 90° F rise

## System Sentinel

- Exclusive diagnostic system with glowing LEDs that verify heating element operation. LEDs pin point the exact location of functioning or non-functioning heating elements

## Features

- High performance and lower operating cost
- Compliant with many electric utility incentive programs
- Premium grade anode rod provides long-lasting tank protection
- Electric junction box located above heating elements for easy installation

- Over-temperature protector cuts off power in excess temperature situations
- Automatic thermostat keeps water at desired temperature

## Plus...

- EverKleen™ self cleaning device fights harmful sediment build-up with a high-velocity spiraling water stream – helps operating efficiency by saving energy, money and improving tank life
- Temperature and pressure relief valve included
- Low lead compliant

## Warranty

- 9-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



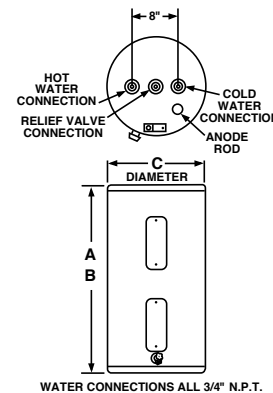
| DESCRIPTION      |              |                 | FEATURES                       |                                     | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                               |               |                               | ENERGY INFO.     |                                       |
|------------------|--------------|-----------------|--------------------------------|-------------------------------------|--|-------------------------------|---------------|-------------------------------|------------------|---------------------------------------|
| T<br>Y<br>P<br>E | GAL.<br>CAP. | MODEL<br>NUMBER | FIRST HOUR<br>RATING<br>G.P.H. | RECOVERY<br>IN G.P.H.<br>90° F RISE | TANK<br>HEIGHT<br>A                      | HEIGHT TO<br>WATER CONN.<br>B | DIAMETER<br>C | APPROX.<br>SHIP WT.<br>(LBS.) | ENERGY<br>FACTOR | ESTIMATED<br>YEARLY<br>ENERGY<br>COST |
| Tall             | 50           | 9E50-DEL        | 67                             | 21                                  | 58-5/8                                   | 61-5/8                        | 20-3/8        | 121                           | 0.95             | \$555                                 |
| Med.             | 40           | 9EM40-DEL       | 55                             | 21                                  | 48-1/4                                   | 50-1/2                        | 20-1/4        | 106                           | 0.95             | \$555                                 |
| Med.             | 50           | 9EM50-DEL       | 65                             | 21                                  | 48                                       | 50-1/2                        | 23            | 132                           | 0.95             | \$555                                 |

Estimated energy cost based on a national average fuel rate electricity 12.00¢/kWh. Energy factor determined by the U.S. Department of Energy (DOE) test procedures.

- Heaters furnished with standard 240 volt AC, single phase non-simultaneous wiring, and 4500 watt upper and lower heating elements.
- **If heating elements of different wattages than those shown are demanded by zone requirements, they must be specifically requested.**
- Special Wiring Options – A limited number of special wiring options are available. Consult factory for price and availability.
- All models equipped with heat traps.

\*\*Recovery = wattage/2.42 x temp. rise °F.  
Example:  $\frac{4500W}{2.42 \times 90^\circ} = 21 \text{ GPH}$

\*\*Recovery calculations used are based on 4500 watt elements used in non-simultaneous operation.





# Essential

## Efficiency

- .95 EF
- Isolated tank design reduces conductive heat loss
- 4500 Watt resistored copper elements to prolong anode rod and tank life

## Performance

- FHR: 42 - 71 gallons, based on gallon capacity
- Recovery: 21 GPH at a 90° F rise

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Features

- Electric junction box located above heating elements for easy installation
- Over-temperature protector cuts off power in excess temperature situations
- Automatic thermostat keeps water at desired temperature

## Plus...

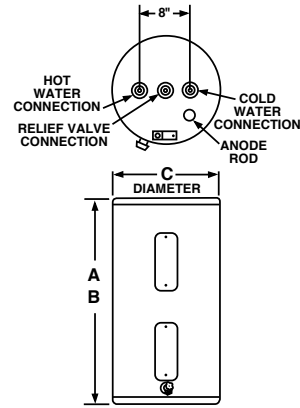
- EverKleen™ self cleaning device fights harmful sediment build-up with a high-velocity spiraling water stream – helps operating efficiency by saving energy, money and improving tank life
- Temperature and pressure relief valve included
- Low lead compliant

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



WATER CONNECTIONS ALL 3/4" N.P.T.



| DESCRIPTION |           |              | FEATURES                 |                               | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                         |            | ENERGY INFO.           |               |                              |
|-------------|-----------|--------------|--------------------------|-------------------------------|--|-------------------------|------------|------------------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | MODEL NUMBER | FIRST HOUR RATING G.P.H. | RECOVERY IN G.P.H. 90° F RISE | TANK HEIGHT A                            | HEIGHT TO WATER CONN. B | DIAMETER C | APPROX. SHIP WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
| Tall        | 30        | 6E30-D       | 48                       | 21                            | 47-1/2                                   | 50-3/8                  | 19-3/4     | 92                     | 0.95          | \$555                        |
| Tall        | 40        | 6E40-D       | 57                       | 21                            | 60-3/4                                   | 63-5/8                  | 19-1/4     | 109                    | 0.95          | \$555                        |
| Tall        | 50        | 6E50-D       | 67                       | 21                            | 58-5/8                                   | 61-5/8                  | 20-3/8     | 121                    | 0.95          | \$555                        |
| Med.        | 30        | 6EM30-D      | 44                       | 21                            | 37-1/2                                   | 40-1/2                  | 20-1/4     | 92                     | 0.95          | \$555                        |
| Med.        | 40        | 6EM40-D      | 55                       | 21                            | 48-3/8                                   | 50-1/2                  | 20-1/4     | 106                    | 0.95          | \$555                        |
| Med.        | 50        | 6EM50-D      | 65                       | 21                            | 48                                       | 50-1/2                  | 23         | 132                    | 0.95          | \$555                        |
| Short       | 28        | 6ES30-D      | 42                       | 21                            | 30                                       | 31-1/8                  | 23         | 95                     | 0.95          | \$555                        |
| Short       | 30        | 6ESB30-2**   | 42                       | 21                            | 30-1/8                                   | 32                      | 19-3/4     | 95                     | 0.95          | \$555                        |
| Short       | 36        | 6ES40-D      | 45                       | 21                            | 31-1/2                                   | 33                      | 24-1/4     | 118                    | 0.95          | \$555                        |
| Short       | 38        | 6ESB40-2**   | 45                       | 21                            | 31-1/2                                   | 32-5/8                  | 23         | 108                    | 0.95          | \$555                        |
| Short       | 47        | 6ESB50-2**   | 55                       | 21                            | 32                                       | 32                      | 26-1/4     | 149                    | 0.95          | \$555                        |

Estimated energy cost based on a national average fuel rate electricity 12.00¢/kWh. Energy factor determined by the U.S. Department of Energy (DOE) test procedures.

\*\* Water heater dimensions prior to installing insulation blanket that is included with water heater

• Heaters furnished with standard 240 volt AC, single phase non-simultaneous wiring, and 4500 watt upper and lower heating elements.

• **If heating elements of different wattages than those shown are demanded by zone requirements, they must be specifically requested.**

• Single element models available on special order (6000W max.). Substitute "1" for "2" in model number.

• Special Wiring Options – A limited number of special wiring options are available. Consult factory for price and availability.

• All models equipped with heat traps.

$$\text{Recovery} = \frac{\text{wattage}}{2.42 \times \text{temp. rise } ^\circ\text{F}}$$

Example:  $\frac{4500\text{W}}{2.42 \times 90^\circ} = 21 \text{ GPH}$

Recovery calculations used are based on 4500 watt elements used in non-simultaneous operation.

## Essential Point-of-Use

### Efficiency

- .95 EF for 30-gallon model
- Over-temperature protector cuts off power in excess temperature situations

### Features

- High efficiency single 2000 watt resistored heating element, except 6EP30-D which has dual 4500 watt elements
- Automatic thermostat keeps water at desired temperature
- Wall bracket for easy wall mount installations and corrosion resistant 1/4 turn drain valve included with 2.5 gallon model

### Plus...

- Temperature and pressure relief valve
- Specially formulated glass lining prevents corrosion and extends the life of the tank
- Meets or exceeds National Appliance Energy Conservation Act (NAECA) requirements
- These units are U.L. listed and comply with Underwriter's Laboratories Specifications 174
- Enhanced-flow brass drain valve on 2.5-gallon model
- Low lead compliant

### Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



2.5-Gallon



6, 10, 15, 19.9 and 30-Gallon

| DESCRIPTION |              | FEATURES |                           | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                         |                           |                         | ENERGY INFO.  |                              |
|-------------|--------------|----------|---------------------------|--|-------------------------|---------------------------|-------------------------|---------------|------------------------------|
| GAL. CAP.   | MODEL NUMBER | HEIGHT A | HT. TO HOT WATER OUTLET B | DIAMETER C                               | HT. TO SIDE T&P VALVE D | HT. TO COLD WATER INLET E | APPROX. SHIP WT. (LBS.) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
| 2.5         | 6EP2-1       | 14       | 14                        | 9-3/4                                    | -                       | -                         | 22                      | -             | -                            |
| 6           | 6EP6-1       | 15-1/4   | 12-1/2                    | 15-3/4                                   | 11-1/2                  | 4-1/4                     | 36                      | -             | -                            |
| 10          | 6EP10-1      | 23       | 20-1/2                    | 15-3/4                                   | 19-1/2                  | 4-1/4                     | 46                      | -             | -                            |
| 15          | 6EP15-1      | 24-1/4   | 22                        | 17-3/4                                   | 21                      | 4-1/2                     | 54                      | -             | -                            |
| 19.9        | 6EP20-1      | 25-1/4   | 22-3/4                    | 19-3/4                                   | 21-3/4                  | 5                         | 69                      | -             | -                            |
| 30          | 6EP30-S      | 31-7/8   | 23-1/8                    | 22-1/4                                   | 23                      | 3                         | 91                      | 0.95          | \$555                        |
| 30          | 6EP30-D      | 31-7/8   | 23-1/8                    | 22-1/4                                   | 23                      | 3                         | 91                      | 0.95          | \$555                        |

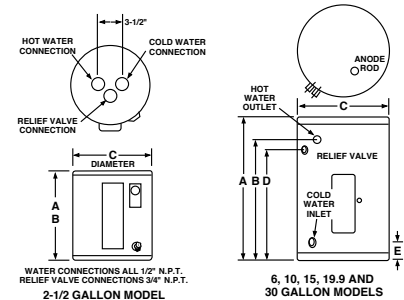
Estimated energy cost based on a national average fuel rate electricity 12.00¢/kWh. Energy factor determined by the U.S. Department of Energy (DOE) test procedures. Not available in 120 volt. Available with 2-wire (single phase) outlet only. (6000 watt max.).

- **2.5 gallon model:** 1/2" N.P.T. inlet and outlet. Relief valve connection 3/4". Available with 120 or 240 volt AC single phase only, 120v (1440w) 240v (1500w) Power cord supplied with 120 volt models only.

- **6 through 30 gallon models:** 3/4" N.P.T. outlet, inlet, anode rod, T & P valve connections. Not available with 3 phase wiring. Water heaters furnished standard with 120 volt AC, 2000 watt single element.

Special wiring options – a limited number of wiring options are available. Consult factory for price and availability.

**CONSTRUCTION DETAILS:** The cold water enters the tank a few inches from the bottom. Both hot and cold water lines may be connected directly to the water heater without special nipples or tees. The relief valve simply screws into the opening provided.



# Essential for Manufactured Housing

## Efficiency

- .95 EF
- Isolated tank design reduces conductive heat loss
- Dual 4500 watt heating elements for faster recovery

## Performance

- FHR: Up to 54 gallons, based on model
- Recovery: 17 GPH for 3500 watts and 21 GPH for 4500 watts at a 90° F rise\*\*

## Longer Life

- Premium grade anode rod provides long-lasting tank protection

## Features

- High performance and lower operating cost
- Compliant with H.U.D., ASHRAE 90A-80 and NAECA requirements
- Single and double element models available. High efficiency resistored heating element in single element models.
- Electric junction box located above heating elements for easy installation

- Over-temperature protector cuts off power in excess temperature situations
- Automatic thermostat keeps water at desired temperature

## Plus...

- Certified for manufactured (HUD) and modular construction
- Specially formulated glass lining prevents corrosion and extends the life of the tank
- EverKleen™ self cleaning device fights harmful sediment build-up with a high-velocity spiraling water stream – helps operating efficiency by saving energy, money and improving tank life
- Temperature and pressure relief valve included
- Low lead compliant

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



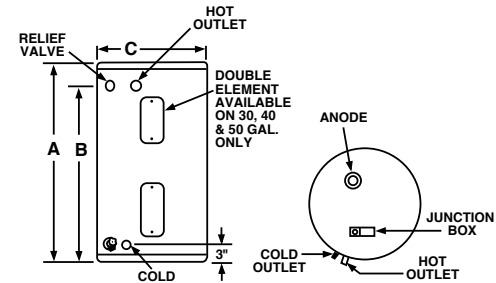
| DESCRIPTION |           |              | FEATURES                 |            |                               |            | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                         |            |                        | ENERGY INFO.  |                              |
|-------------|-----------|--------------|--------------------------|------------|-------------------------------|------------|--|-------------------------|------------|------------------------|---------------|------------------------------|
| TYPE        | GAL. CAP. | MODEL NUMBER | FIRST HOUR RATING G.P.H. |            | RECOVERY IN G.P.H. 90° F RISE |            | TANK HEIGHT A                            | HEIGHT TO WATER CONN. B | DIAMETER C | APPROX. SHIP WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
|             |           |              | 3500 WATTS               | 4500 WATTS | 3500 WATTS                    | 4500 WATTS |  |                         |            |                        |               |                              |
| Tall        | 30        | T2V30-D      | 25                       | 46         | 17                            | 21         | 47-3/4                                   | 39-1/2                  | 19-1/4     | 92                     | 0.95          | \$555                        |
| Tall        | 40        | T2V40-D      | 30                       | 50         | 17                            | 21         | 48-1/2                                   | 40-1/8                  | 21-1/8     | 106                    | 0.95          | \$555                        |

Estimated energy cost based on a national average fuel rate electricity 12.00¢/kWh. Energy factor determined by the U.S. Department of Energy (DOE) test procedures.

- **If heating elements of different wattages than those shown are demanded by zone requirements, they must be specifically requested.**
- Heaters furnished with standard 240 volt AC, single phase non-simultaneous wiring, and 3500 watt or 4500 watt heating elements.
- Special Wiring Options – A limited number of special wiring options are available. Consult factory for price and availability.

\*\*Recovery = wattage/2.42 x temp. rise °F.  
Example:  $\frac{4500W}{2.42 \times 90^\circ} = 21 \text{ GPH}$

\*\*Recovery calculations used are based on 4500 watt elements used in non-simultaneous operation.



WATER CONNECTIONS ALL 3/4" N.P.T.

## Essential Table Top

### Table Top Features

- Baked enamel counter top is acid and heat resistant
- Four inch high backsplash protects interior wall from spills and stains
- Recessed base provides comfortable standing area while working
- Channel at rear accommodates piping and permits water heater to fit snugly against back wall
- More hot water at a low operating cost

### Efficiency

- .88 EF
- Well insulated for reduced standby heat loss

### Performance

- FHR: 45 gallons
- Recovery: 21 GPH at a 90° F rise

### Capacity & Dimensions

- 40 Gallon model: 24 inch diameter: 25 inch depth and 36 inches high

### Easy Installation & Service

- Table top surface is easily removed for access to cold and hot water outlets at top of tank, electrical connections and anode rod replacement

### Longer Life

- Patented magnesium anode rod with resistor protects the tank from rust

### Plus...

- Durable direct immersion resistored heating element
- Temperature and pressure relief valve
- Low lead compliant
- Standard replacement parts

### Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

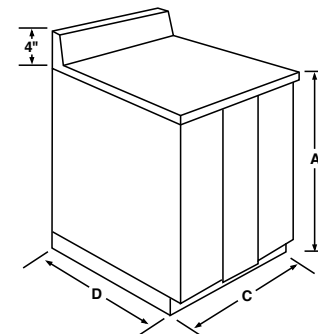
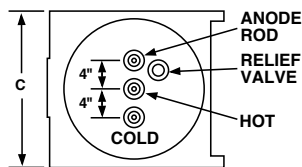
Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



| DESCRIPTION |              | FEATURES                 |                               | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                         |            |         | ENERGY INFO.           |               |                              |
|-------------|--------------|--------------------------|-------------------------------|--|-------------------------|------------|---------|------------------------|---------------|------------------------------|
| GAL. CAP.   | MODEL NUMBER | FIRST HOUR RATING G.P.H. | RECOVERY IN G.P.H. 90° F RISE | HEIGHT A                                 | HEIGHT TO WATER CONN. B | DIAMETER C | DEPTH D | APPROX. SHIP WT. (LBS) | ENERGY FACTOR | ESTIMATED YEARLY ENERGY COST |
| 40          | 8TV40-2      | 45                       | 21                            | 36                                       | 33                      | 24         | 25      | 156                    | 0.88          | \$599                        |

Estimated energy cost based on a national average fuel rate electricity 12.00¢/kWh. Energy factor determined by the U.S. Department of Energy (DOE) test procedures.

- Heaters furnished with standard 240 volt AC, single phase non-simultaneous wiring, and 4500 watt upper and lower heating elements.
- **If heating elements of different wattages than those shown are demanded by zone requirements, they must be specifically requested.**
- Special Wiring Options – A limited number of special wiring options are available. Consult factory for price and availability.



# Essential Tankless

## Features

- Continuous hot water on demand
- Industry leading low-flow activation
- External temperature control
- LEDs indicate active element and standby mode
- 1/2-Inch water connections
- Rugged brass/copper heat exchanger
- Pre-wired 2-foot power supply cord(s) included
- Low lead compliant

## Efficiency

- Modulating heat exchanger improves energy efficiency
- No standby heat loss aids in energy consumption
- No venting needed – eliminates greenhouse gases

## Easy Installation

- Complete install without removing the cover
- Easy water connections using 1/2-inch compression fittings
- Lightweight

## Space Savings

- No T&P valve required
- Compact size - fits almost anywhere

## Applications

- Homes
- Apartments
- Condos
- Hospitals
- Rest rooms
- Restaurants
- Offices
- Laboratories
- Anywhere hot water is needed

## Warranty

- 10-Year limited heat exchanger and 1-year limited parts warranty.\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



## RMTE 3 and RMTE 7

- Ideal for fast, continuous hot water at a single point-of-use faucet or other fixture
- RMTE 3 (3kW/120V) requires a dedicated 30 AMP breaker
- RMTE 7 (7kW/240V) requires a dedicated 30 AMP breaker

## RMTE 9 and RMTE 13

- Ideal for fast, continuous hot water at a lavatory or sink
- RMTE 9 (9kW/240V) requires a dedicated 40 AMP breaker
- RMTE 13 (13kW/240V) requires a dedicated 60 AMP breaker

## RMTE 18 and RMTE 27

- Designed for fast, continuous hot water in a bathroom addition/renovation or single shower
  - RMTE 18 (18kW/240V) requires two dedicated 40 AMP breakers
  - RMTE 27 (27kW/240V) requires two dedicated 60 AMP breakers
- All come with an on-unit temperature control with LED lights



RMTE 3  
RMTE 7



RMTE 9  
RMTE 13



RMTE 18  
RMTE 27

| APPLICATION                 | FLOW RATE IN GPM AT 60 PSI |
|-----------------------------|----------------------------|
| Typical Shower              | 2.0 GPM                    |
| Typical Bath Tub Faucet     | 2.5 GPM                    |
| Bathroom Vanity Sink Faucet | 1.0 GPM                    |
| Kitchen Sink Faucet         | 1.5 GPM                    |
| Washer                      | 2.0 GPM                    |

| TEMPERATURE RISE AND GPM FLOW |                                    |                      |   |      |      |      |      |      |      |      |      |
|-------------------------------|------------------------------------|----------------------|---|------|------|------|------|------|------|------|------|
| MODEL NUMBER                  | MINIMUM ACTIVATION FLOW RATE (GPM) | MAX. FLOW RATE (GPM) | TEMPERATURE RISE CHART (F°) AND FLOW RATES BY MODEL |      |      |      |      |      |      |      |      |
|                               |                                    |                      | 20°   | 30°  | 40°  | 50°  | 60°  | 70°  | 80°  | 90°  | 100° |
| RMTE 3                        | 0.4                                | 1.5                  | 1.09  | 0.73 | 0.55 | 0.44 | --   | --   | --   | --   | --   |
| RMTE 7                        | 0.4                                | 2.5                  | 2.50  | 1.59 | 1.20 | 0.96 | 0.80 | 0.68 | 0.60 | 0.53 | 0.48 |
| RMTE 9                        | 0.4                                | 3                    | 3.00  | 2.05 | 1.54 | 1.23 | 1.02 | 0.88 | 0.77 | 0.68 | 0.61 |
| RMTE 13                       | 0.4                                | 4                    | 4.00  | 2.96 | 2.22 | 1.78 | 1.48 | 1.27 | 1.11 | 0.99 | 0.89 |
| RMTE 18                       | 0.4                                | 5                    | 5.00  | 4.10 | 3.07 | 2.46 | 2.05 | 1.76 | 1.54 | 1.37 | 1.23 |
| RMTE 27                       | 0.4                                | 5                    | 5.00  | 5.00 | 4.61 | 3.69 | 3.07 | 2.63 | 2.31 | 2.05 | 1.84 |

| ELECTRICAL SPECIFICATIONS |    |       |                          |                 |          |
|---------------------------|----|-------|--------------------------|-----------------|----------|
| MODEL                     | KW | VOLTS | RECOMMENDED BREAKER SIZE | MAX POWER (AMP) | AWG WIRE |
| RMTE 3                    | 3  | 120   | 30                       | 29              | 10       |
| RMTE 7                    | 7  | 240   | 30                       | 29              | 10       |
| RMTE 9                    | 9  | 240   | 40                       | 38              | 8        |
| RMTE 13                   | 13 | 240   | 60                       | 54              | 6        |
| RMTE 18                   | 18 | 240   | (2) 40                   | 75              | (2) 8    |
| RMTE 27                   | 27 | 240   | (2) 60                   | 112             | (2) 6    |

| DIMENSIONS (INCHES/POUNDS) |        |        |       |        |
|----------------------------|--------|--------|-------|--------|
| MODEL/SKU                  | HEIGHT | WIDTH  | DEPTH | WEIGHT |
| RMTE 3                     | 10-1/4 | 5-3/8  | 3-1/4 | 6      |
| RMTE 7                     | 10-1/4 | 5-3/8  | 3-1/4 | 6      |
| RMTE 9                     | 10     | 7-1/4  | 3-1/4 | 8      |
| RMTE 13                    | 10     | 7-1/4  | 3-1/4 | 8      |
| RMTE 18                    | 10-1/2 | 11-1/4 | 3-1/4 | 12     |
| RMTE 27                    | 10-1/2 | 11-1/4 | 3-1/4 | 12     |

• Plumbing connections: 1/2 NPT • Minimum flow rate: 1/2 gal. min

# SolPak™ Active System with Electric Backup

## System

- Closed loop system – glycol design
- Single and double collector systems
- System includes – Solaraide HE tank, collectors and pump station

## Heat Exchanger Tank

- 65, 80 and 120-Gallon capacities
- 4500 Watts
- Provides at least 40 gallons of stored hot water
- Double wall, high efficiency solar heat exchanger includes copper tubing wrapped around the tank and secured within the jacket for positive leak protection
- Collector feed and return fittings conveniently located on front of tank for easy installation
- Cold water inlet brings cold water to tank bottom to prevent mixing with heated water
- Rheemglas® tank lining resists corrosion and prolongs tank life
- T&P Valve included
- Low lead compliant
- Automatic temperature control and over heat protection

## Collector

- OG-100 certified by SRCC
- Available in three sizes
- Durable low iron tempered glass – improves efficiency and heat transfer
- Integral mounting channel for easy installation
- Stainless steel fasteners
- Type-M copper riser tubes
- Black paint absorber coating

## Pump Station

- Pre-engineered assembly of quality components in a neat, compact insulated enclosure
- Simple, labor saving, attractive solution for closed loop glycol solar systems
- Includes cast iron three speed pump, advanced differential controller and balancing valve and flow meter

## System Certifications

- OG-300 certification by SRCC

## Warranty

- 6-Year limited tank, 10-year limited collector and 6-year limited pump station warranty.\*

\*See Residential and SolPak Warranty Certificate for complete information



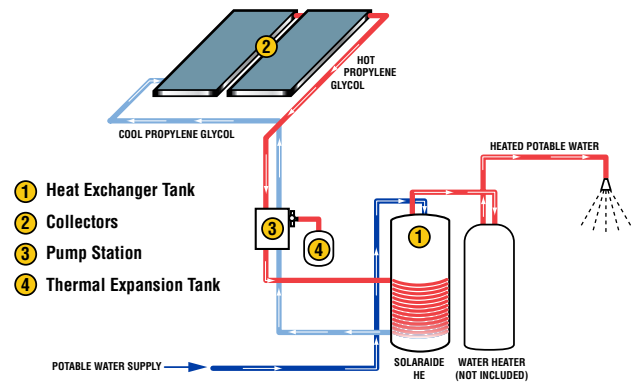
| SYSTEM INFORMATION        |                     |                      | COLLECTOR INFORMATION      |                  |                |                 |                |                      |                  |                         |                        |                     | WATER HEATER INFO.      |                 |                   |                      |                 |
|---------------------------|---------------------|----------------------|----------------------------|------------------|----------------|-----------------|----------------|----------------------|------------------|-------------------------|------------------------|---------------------|-------------------------|-----------------|-------------------|----------------------|-----------------|
| STORAGE CAPACITY (US GAL) | SYSTEM MODEL NUMBER | SOLAR ENERGY FACTOR* | NUMBER OF COLLECTOR PANELS | ABSORBER COATING | WIDTH (INCHES) | LENGTH (INCHES) | DEPTH (INCHES) | AREA SQ. FT. (GROSS) | DRY WEIGHT (LBS) | FLUID CAPACITY (US GAL) | DESIGN FLOW RATE (GPM) | MAX FLOW RATE (GPM) | MAX. OPERATING PRESSURE | HEIGHT (INCHES) | DIAMETER (INCHES) | APPROX. WEIGHT (LBS) | ELEMENT WATTAGE |
| 80                        | RS80-40BP           | 2.4                  | 1                          | Black Paint      | 48-1/8         | 122-1/4         | 3-1/4          | 40.81                | 141              | 1.2                     | 1.04                   | 12                  | 160                     | 58-3/4          | 24-1/2            | 222                  | 4500 W          |
| 80                        | RS80-48BP           | 2.6                  | 2                          | Black Paint      | 36-1/8         | 98-1/4          | 3-1/4          | 24.61                | 80               | .78                     | 0.62                   | 12                  | 160                     | 58-3/4          | 24-1/2            | 222                  | 4500 W          |
| 120                       | RS120-64BP          | 3.2                  | 2                          | Black Paint      | 48-1/8         | 98-1/4          | 3-1/4          | 32.79                | 106              | 1.0                     | 0.83                   | 12                  | 160                     | 62              | 28-1/4            | 380                  | 4500 W          |

\* As rated by the Solar Rating & Certification Corporation (SRCC)

**Get a Federal Tax Credit up to 30% of the cost of equipment and installation with a Solar Water Heater.**

Applies to existing or new residential construction. Tax credit available through Dec. 2016.

See your Tax Advisor for details.



# Solaraide™ HE Tanks

## Features & Benefits

- Double wall heat exchanger includes copper tubing wrapped around the tank and secured within the jacket for positive leak protection
- Two well insulated models to choose from... a storage tank or a high efficiency 4500 Watt backup electric water heater
- Electric backup model provides at least 40-gallons of stored hot water

## Easy Installation and Maintenance

- Collector feed and return fittings conveniently located on front of tank for easy installation
- A special 1/2" NPT opening is provided for installation of a probe type" thermostat
- Durable brass drain valve for easy maintenance

## Tank Design & Construction

- Cold water inlet brings cold water to tank bottom to prevent mixing with heated water
- Rheemglas® tank lining resists corrosion and prolongs tank life
- Anode rod equalizes aggressive action for prolonged tank life
- Temperature and pressure relief valve included
- Electric backup model has automatic temperature control and over heat protection
- Low lead compliant

## Warranty

- 6-Year limited tank and parts warranty\*

\*See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.

## Copper Heat Exchanger Coil Type L Copper 5/8" I.D.

| SOLARAIDE HE TANK CAPACITY | COIL CAPACITY GALLONS | LENGTH OF TUBING AROUND TANK (FT) |
|----------------------------|-----------------------|-----------------------------------|
| 65 Gallons                 | 2.2                   | 120                               |
| 80 Gallons                 | 2.2                   | 120                               |
| 120 Gallons                | 2.6                   | 143                               |

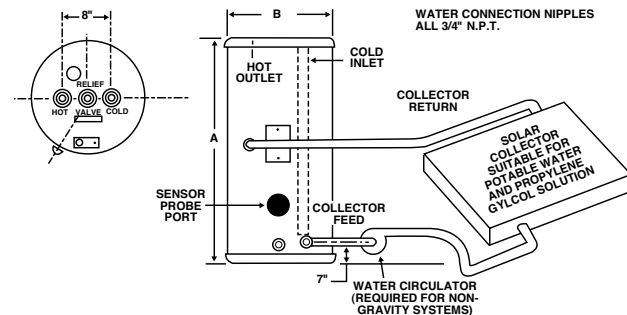
| FLOW RATE | PRESSURE DROP THROUGH COIL (FEET OF H <sub>2</sub> O) |            |
|-----------|---|------------|
|           | HEAD LOSS (FEET)                                      |            |
|           | 65 & 80-GALLON  | 120-GALLON |
| 1 GPM     | 1.3   | 1.6        |
| 2 GPM     | 4.8   | 5.7        |
| 3 GPM     | 10.0  | 12.0       |



| DESCRIPTION      |              |                 | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |             |               | ENERGY INFO.                |                     |
|------------------|--------------|-----------------|--|-------------|---------------|-----------------------------|---------------------|
| T<br>Y<br>P<br>E | GAL.<br>CAP. | MODEL<br>NUMBER | ELEMENT<br>WATTAGE<br>UPPER              | HEIGHT<br>A | DIAMETER<br>B | APPROX<br>SHIP WT.<br>(LBS) | APPROX.<br>R-FACTOR |
| Tall             | 65           | 82V65HE         | 4500 W*                                  | 59          | 21            | 170                         | R-17.3              |
| Tall             | 80           | 81V80HE-1       | 4500 W*                                  | 58-3/4      | 24-1/2        | 222                         | R-17.3              |
| Tall             | 80           | 81V80HE-T       | Storage only                             | 58-3/4      | 24-1/2        | 222                         | R-17.3              |
| Tall             | 120          | 82V120HE-1      | 4500 W*                                  | 62          | 28-1/4        | 380                         | R-17.3              |
| Tall             | 120          | 82V120HE-T      | Storage only                             | 62          | 28-1/4        | 380                         | R-17.3              |

\*Heaters furnished with standard 240 volt AC, single phase non-simultaneous wiring and 4500 watt heating element. If heating elements of different wattages than those shown are demanded by zone requirements, they must be specifically requested.

To prevent corrosion, proper pH levels in transfer fluid must be maintained. Solaraide models meet all current state requirements for solar storage tanks. The tanks are Rheemglas lined and are designed to operate up to 150 PSI.



# Marathon® – Limited Lifetime Warranty

## Non-metallic Tank Features

- Seamless, blow-molded, polybutene tank – impervious to rust and corrosion
- Multiple layers of filament wound fiberglass give the tank unmatched strength
- Polyurethane insulation helps reduce energy consumption
- Recessed drain valve is out of the way brooms and scrubbers
- High temperature polysulfone dip tube
- Tough molded polyethylene outer shell resists dents, scratches, and salt air
- All plastic tank eliminates the need for an anode rod

## Efficiency

- .95 EF
- Well insulated for reduced standby heat loss
- Pipe wrap energy saving kit included to achieve maximum energy savings

## Performance

- FHR: 52 - 61 gallons, depending on model
- Recovery: 21 GPH at a 90° F rise\*\*

## Easy Installation & Service

- Marathon's lightweight tank is easier to maneuver and position
- Bowl shaped tank bottom allows complete sediment draining
- Water tight grommets keep out over-head moisture and condensation

## Plus...

- Thermally fused upper element provides protection against dry-firing
- Titanium lower element for superior resistance to lime build-up
- Full-flow, brass drain valve
- Temperature and pressure relief valve
- Low lead compliant
- Standard replacement parts

## Warranty

- Lifetime limited warranty on tank and 6-years on parts\*

\*See Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



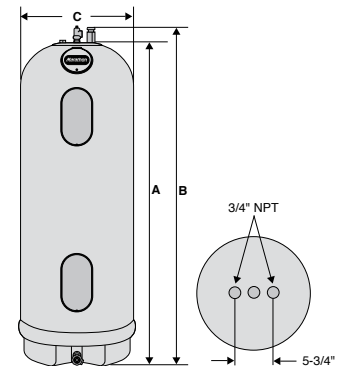
| DESCRIPTION      |              |                 | FEATURES                       |                                     | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                               |               | ENERGY INFO.                 |                  |                                    |
|------------------|--------------|-----------------|--------------------------------|-------------------------------------|--|-------------------------------|---------------|------------------------------|------------------|------------------------------------|
| T<br>Y<br>P<br>E | GAL.<br>CAP. | MODEL<br>NUMBER | FIRST HOUR<br>RATING<br>G.P.H. | RECOVERY<br>IN G.P.H.<br>90° F RISE | TANK<br>HEIGHT<br>A                      | HEIGHT TO<br>WATER CONN.<br>B | DIAMETER<br>C | APPROX.<br>SHIP WT.<br>(LBS) | ENERGY<br>FACTOR | ESTIMATED<br>YEARLY<br>ENERGY COST |
| Tall             | 40           | MR40245         | 52                             | 21                                  | 61-1/2                                   | 65-1/2                        | 21-3/4        | 90                           | 0.95             | \$555                              |
| Tall             | 50           | MR50245         | 61                             | 21                                  | 62-3/4                                   | 66-3/4                        | 23-1/2        | 100                          | 0.95             | \$555                              |
| Short            | 50           | MSR50245        | 54                             | 21                                  | 43-1/4                                   | 47-1/4                        | 28-1/4        | 95                           | 0.95             | \$555                              |

Estimated energy cost based on a national average fuel rate electricity 12.00¢/kWh. Energy factor determined by the U.S. Department of Energy (DOE) test procedures.

Water heaters furnished with standard 240 or 120 volt AC, single phase non-simultaneous wiring. If heating elements of different wattages than those shown are demanded, they must be specifically requested. For height to top of T&P and heat traps add 3-1/2" to the height to water connection. Maximum test pressure: 300 PSI. Maximum working pressure: 150 PSI.

\*\*Recovery = wattage/2.42 x temp. rise °F.  
Example:  $\frac{4500W}{2.42 \times 90^\circ} = 21 \text{ GPH}$

\*\*Recovery calculations used are based on 4500 watt elements used in non-simultaneous operation.





# Marathon® Heavy Duty

## Non-metallic Tank Features

- Seamless, blow-molded, polybutene tank – impervious to rust and corrosion
- Multiple layers of filament wound fiberglass give the tank unmatched strength
- Polyurethane insulation helps reduce energy consumption
- Recessed drain valve is out of the way of brooms and scrubbers
- High temperature polysulfone dip tube
- Tough molded polyethylene outer shell resists dents, scratches, and salt air

## Efficiency

- Well insulated for reduced standby heat loss
- Pipe wrap energy saving kit included to achieve maximum energy savings

## Performance

- Recovery Capacity: 18.2 gallons per hour (delivers approximately 78 gallons of hot water in the first hour for 75-gallon models, 91 gallons for 85-gallon models and 104 gallons for 105-gallon models)\*\*
- Thermostat capable of delivering water temperature up to 180° F for high temperature applications

## Easy Installation & Service

- Marathon's lightweight tank is easier to maneuver and position
- Bowl shaped tank bottom allows complete sediment draining
- Water tight grommets keep out over-head moisture and condensation

## Plus...

- Thermally fused upper element provides protection against dry-firing
- Titanium upper and lower elements for superior resistance to lime build-up
- Full-flow, brass drain valve
- Temperature and pressure relief valve and factory installed vacuum relief valve
- Low lead compliant
- Standard replacement parts

## Warranty

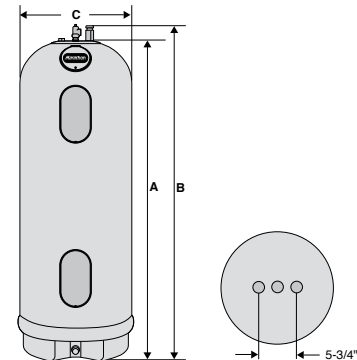
- See Warranty Certificate for complete information



| DESCRIPTION      |              |                 | FEATURES                               |                                  | ROUGHING IN DIMENSIONS (SHOWN IN INCHES) |                               |               |                              |
|------------------|--------------|-----------------|--|----------------------------------|--|-------------------------------|---------------|------------------------------|
| T<br>Y<br>P<br>E | GAL.<br>CAP. | MODEL<br>NUMBER | RECOVERY<br>IN G.P.H.<br>100° F RISE** | FIRST HOUR<br>DELIVERY<br>G.P.H. | TANK<br>HEIGHT<br>A                      | HEIGHT TO<br>WATER CONN.<br>B | DIAMETER<br>C | APPROX.<br>SHIP WT.<br>(LBS) |
| Tall             | 75           | MHD75245        | 18.2                                   | 78                               | 58-5/8                                   | 62-5/8                        | 28-1/4        | 122                          |
| Tall             | 85           | MHD85245        | 18.2                                   | 91                               | 66-1/4                                   | 70-1/4                        | 28-1/4        | 134                          |
| Tall             | 105          | MHD105245       | 18.2                                   | 104                              | 66-3/4                                   | 70-3/4                        | 30-1/4        | 152                          |

\*\*Recovery Capacity is based upon a 100° F water temperature rise and calculated per ANSI Z21.10.3 standards. First hour hot water delivery is based upon 77° water temperature rise.

- Water heaters furnished with standard 240 volt AC, single phase non-simultaneous wiring; available in 3800 and 4500 watt double element configuration (85-gallon 3000 watt).
- For height to top of heat traps add 3-1/2" to the height to water connection.
- Maximum test pressure: 300 PSI; Maximum working pressure: 150 PSI
- 180° F Max. temperature setting



# Thermal Expansion Tanks

## Features

- The Therm-X-Guard is designed to provide control of maximum pressures at a level below the relief valve setting. Therefore, the relief valve does not open and spillage is eliminated. It also provides additional space in the system to accommodate the increased volume of water created by thermal expansion, returning it to the system upon demand.
- Suitable with water heaters up to 120 gallon capacity and supply pressure to 80 P.S.I.
- Easy to install – and are maintenance free

- The safest and most cost effective way to eliminate problems associated with thermal expansion in closed loop systems
- Protects water heater and plumbing fixtures from premature failure
- Low lead compliant

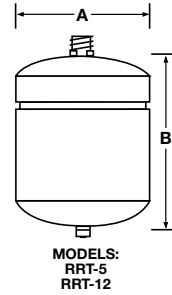
## Warranty

- 5-Year limited tank and parts warranty\*

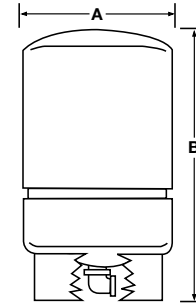
\*See Residential Warranty Certificate for complete information



(RRT-5, RRT-12 Liner only)



MODELS:  
RRT-5  
RRT-12



MODEL:  
RRT-25



| MODEL NUMBER | TOTAL VOLUME (GALLONS) | MAXIMUM ACCEPTANCE (GALS.) | OPERATING TEMPERATURE | WORKING PRESSURE (PSIG)       | DIAMETER (A) | HEIGHT (B) | SHIP. WT. | SYSTEM CONNECTION (BRASS) | STANDARD FACTORY PRE-CHARGE (2.8 KG/CM <sup>2</sup> ) | DIAPHRAGM MATERIAL | LINER MATERIAL |
|--------------|------------------------|----------------------------|-----------------------|-------------------------------|--------------|------------|-----------|---------------------------|---|--------------------|----------------|
| RRT-5        | 2.0                    | .9                         | 200°F (93°C)          | 150 (10.5kg/cm <sup>2</sup> ) | 8"           | 12-5/8"    | 5         | 3/4" NPTM                 | 40 PSIG   | Butyl Rubber       | Polypropylene  |
| RRT-12       | 4.4                    | 3.2                        | 200°F (93°C)          | 150 (10.5kg/cm <sup>2</sup> ) | 11"          | 15"        | 9         | 3/4" NPTM                 | 40 PSIG   | Butyl Rubber       | Polypropylene  |
| RRT-25       | 10.3                   | 10.3                       | 200°F (93°C)          | 150 (10.5kg/cm <sup>2</sup> ) | 15-3/8"      | 19-1/4"    | 23        | 1" NPTF                   | 40 PSIG   | Butyl Rubber       | Polypropylene  |

Maximum Working Pressure: 150 PSI. All Models listed by NSF 61; Maximum Allowable Working Temperature: 200°F; Standard Factory Precharge: 40 PSIG