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

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

Richmond Water Heaters

■ Miscellaneous
- FVIR System 4
- EverKleen System 5
- Lifeguard Electric Element 6

■ ENERGY STAR® 7

■ 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 82

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



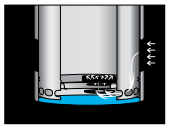
Flammable Vapor Ignition Resistance
We offer the best-in-class FVIR System that's engineered to exceed ANSI standards.



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…

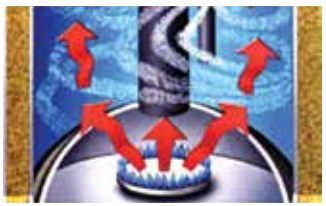
- FVIR System models are high altitude compliant – some models certified for applications up to 6,000 and 10,200 feet above sea level.
- Zero clearance to combustibles, rear and side.
- Energy efficient! Get more hot water at a lower operating cost!
- Available on most Richmond gas water heater models.

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 spiralling 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.



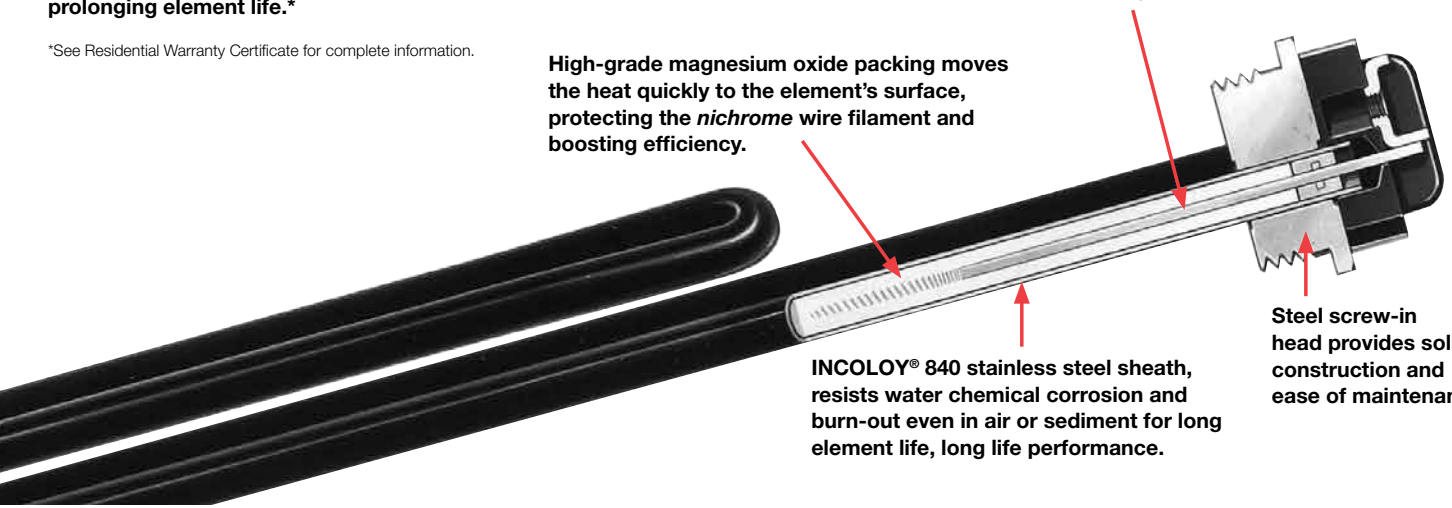
Advantages
Water Heating System

- 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.



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

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

Tank Models

Gas

Induced Draft
- ★ 12G30-60
- ★ 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.

LEED Points = 2



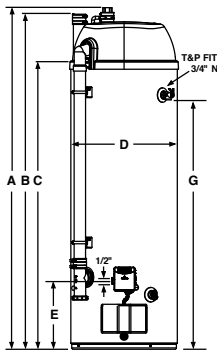
DESCRIPTION			FEATURES						ROUGHING IN DIMENSIONS (SHOWN IN INCHES)										ENERGY INFO.	
TYPE	GAL. CAP.	MODEL NUMBER	GAS INPUT IN THOUS. BTU/H		RECOVERY IN G.P.H. 90° RISE		FIRST HOUR DEL. G.P.H.		HT. TO TOP OF VENT A	HT. TO TOP OF AIR INLET B	TANK HT. C	DIAM. D	HT. TO GAS CONN. E	WATER CONN. CNTR. 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

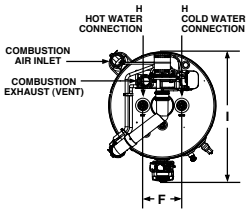
Estimated energy cost based on a national average fuel cost of $1.09/therm for natural gas and $2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.
★ **ENERGY STAR® compliant model.**

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)	
From Sea Level Through 5,999 ft. Above Sea Level					
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*
From 6,000 ft. Above Sea Level Through 8,999 ft. Above Sea Level					
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.

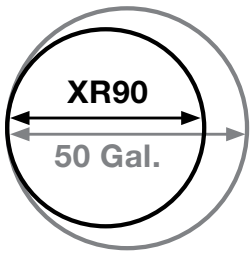
LEED Point = 1

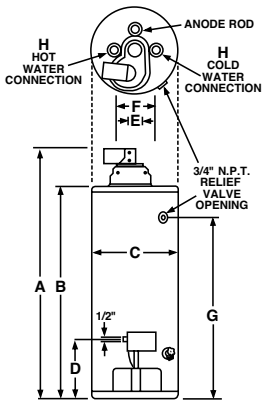


DESCRIPTION		FEATURES			ROUGHING IN DIMENSIONS (SHOWN IN INCHES)									ENERGY INFO.		
GAL. CAP.	MODEL NUMBER	GAS INPUT IN THOUS. BTU/H NAT.	RECOVERY IN G.P.H. 90° RISE NAT.	FIRST HOUR DEL. G.P.H. NAT.	HT. TO VENT A	TANK HT. B	DIAM. C	HT. TO GAS CONN. D	VENT SIZE E	WATER CONN. CNTR. F	HT. TO SIDE T&P 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)

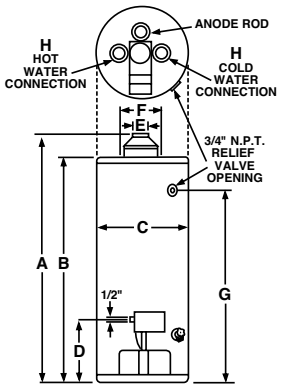
Plus...
- Dual certified for both potable water and space heating
- Enhanced-flow brass drain valve
- Temperature and pressure relief valve included
- Low lead compliant
- Standard replacement parts

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.

LEED Point = 1





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.**

Encore® Atmospheric

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

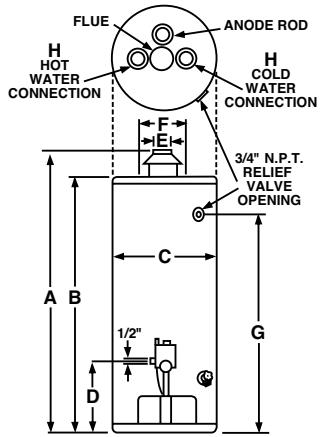
Plus…
- Easy to light – no matches required
- EverKleen™ patented system fights sediment build-up
- Enhanced flow brass drain valve
- Temperature and pressure relief valve included
- Low lead compliant
- Standard replacement parts

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.

†LEED Point = 1





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-40F†	40	–	40.4	–	72	54	50-1/2	23	14	3 or 4	8	44	3/4	135	0.62	$263
Short	40	12GR40S-36PF†	–	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 Point = 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)

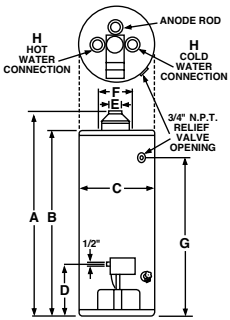
Plus...
- Dual certified for both potable water and space heating
- Temperature and pressure relief valve included
- Low lead compliant
- Standard replacement parts

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.

LEED Point = 1





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

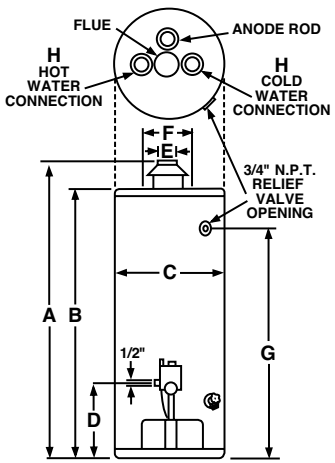
Plus…
- Easy to light – no matches required
- EverKleen™ patented system fights sediment build-up
- Low lead compliant
- Temperature and pressure relief valve included
- Standard replacement parts

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.

LEED Point = 1





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

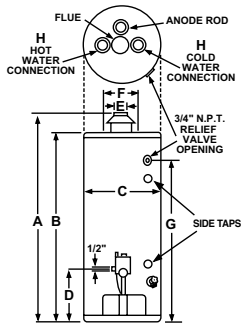
Efficiency | All models tested according to ANSI test procedures, and meet or exceed the thermal efficiency and standby loss requirements of current ASHRAE standard (EPact). Also exceeds energy efficiency codes of all states including California Energy Commission (CEC).

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**.



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 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

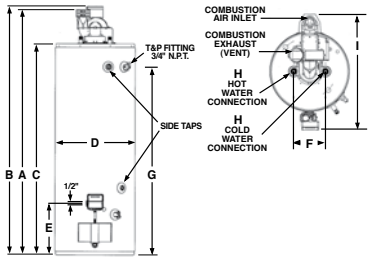
Plus…
- Temperature and pressure relief valve included
- Low lead compliant
- Durable silicon nitride igniter (HSI)
- Side taps for space heating applications
- EverKleen™ patented system fights sediment build-up
- Standard replacement parts

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 Combusion 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.

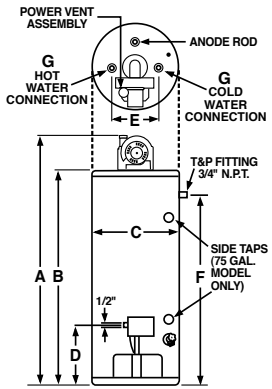
Maximum and Minimum Vent Lengths for 3" and 4" Vents

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)

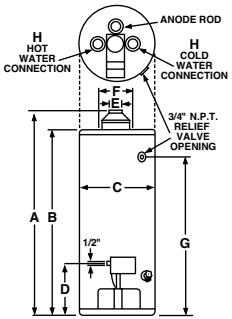
Plus...
- Dual certified for both potable water and space heating
- Temperature and pressure relief valve included
- Low lead compliant
- Standard replacement parts

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.

LEED Point = 1





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

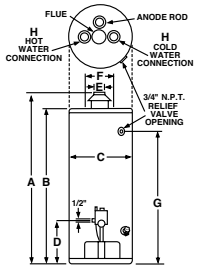
Plus…
- Easy to light – no matches required
- EverKleen™ patented system fights sediment build-up
- Side water connections for space heating applications on the 48-gallon tall model**
- Low lead compliant
- Temperature and pressure relief valve included
- Standard replacement parts

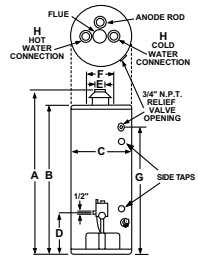
Warranty
- 6-Year limited tank and parts warranty*

*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.

†LEED Point = 1





48-gallon tall**



**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	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	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

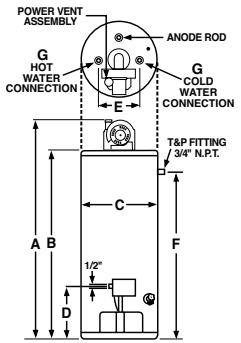
Plus…
- Temperature and pressure relief valve included
- Low lead compliant
- Durable Silicon Nitride Ignitor (HSI)
- EverKleen™ patented system fights sediment build-up
- Standard replacement parts

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.

LEED Point = 1





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 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

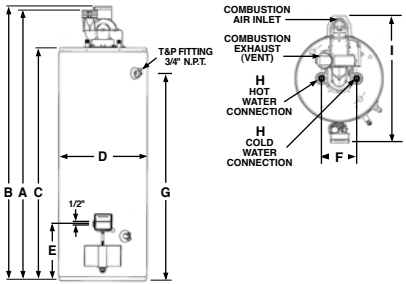
Plus...
- Temperature and pressure relief valve included
- Low lead compliant
- Durable silicon nitride igniter (HSI)
- EverKleen™ patented system fights sediment build-up
- Standard replacement parts

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.

LEED Point = 1





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	–

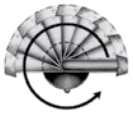
FROM 7,701 FT. ABOVE SEA LEVEL THROUGH 10,200 FT. ABOVE SEA LEVEL					
MODEL	VENT & COMBUSTION AIR-INLET SYSTEM DIAMETER (INCHES)	MIN. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.)	MAX. ALLOWED EQUIV. VENT & COMBUSTION AIR-INLET LENGTHS – EACH PIPE RUN (FT.)	VENT AND COMBUSTION 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.

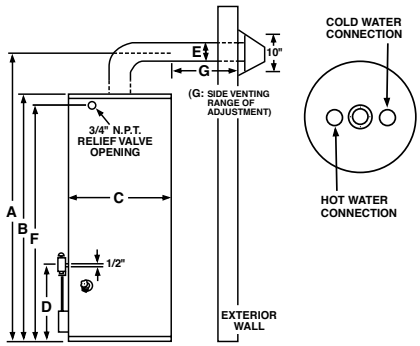


DESCRIPTION			FEATURES						ROUGHING IN DIMENSIONS (SHOWN IN INCHES)							ENERGY INFO.	
TYPE	GAL. CAP.	MODEL NUMBER	GAS INPUT IN THOUS. BTU/H		RECOVERY IN G.P.H. 90° RISE		FIRST HOUR DEL. G.P.H.		HT. TO VENT A	TANK HT. B	DIAM. C	HT. TO GAS CONN. D	VENT SIZE E	HT. TO SIDE T&P VALVE F	SHIP. WT. (LBS)	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

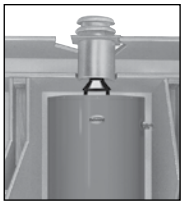
Plus…
- Certified for manufactured (HUD) and modular construction
- Side inlet temperature and pressure relief valve opening
- Factory installed temperature and pressure relief valve – side location
- Low lead compliant
- Two hole top for anode rod and hot water outlet
- Specially formulated glass lining 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.





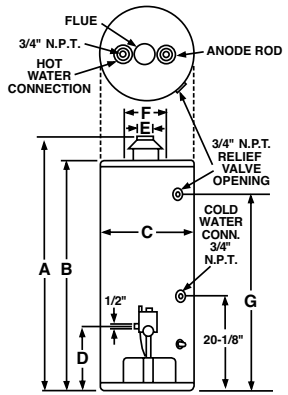
Draft Diverter
Improved design provides efficient heating with down-draft protection.

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

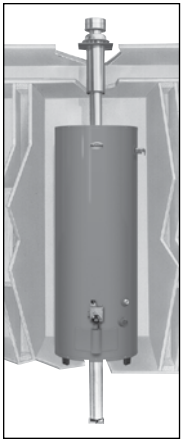
Longer Life
- Premium grade anode rod provides long-lasting tank protection

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.

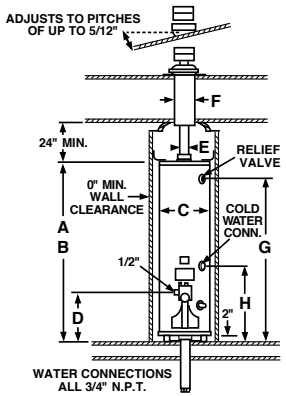


DESCRIPTION			FEATURES			ROUGHING IN DIMENSIONS (SHOWN IN INCHES)									ENERGY INFO.	
TYPE	GAL. CAP.	MODEL NUMBER	GAS INPUT IN THOUS. BTU/H NAT./LP	RECOVERY IN G.P.H. 90° RISE NAT./LP	FIRST HOUR DEL. G.P.H. NAT./LP	HT. TO VENT A	TANK HT. B	DIAM. C	HT. TO GAS CONN. D	VENT SIZE E	ROOF JACK VENT SIZE 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

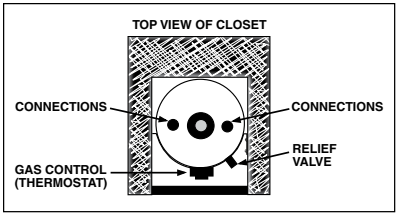
Self Cleaning
- EverKleen™ patented system fights sediment build-up

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.





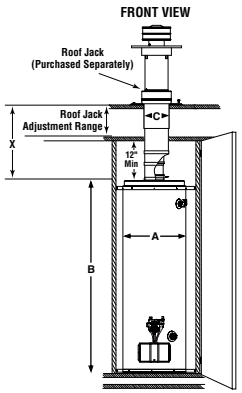
DESCRIPTION			FEATURES					ROUGHING IN DIMENSIONS (SHOWN IN INCHES)					ENERGY INFO.	
TYPE	GAL. CAP.	MODEL NUMBER	GAS INPUT IN THOUS. BTU/H		RECOVERY IN G.P.H. 90° RISE		FIRST HOUR DEL. G.P.H.	DIAM. A	TANK HT. B	VENT SIZE C	WATER CONNECTION	SHIP. WT. (LBS)	ENERGY FACTOR	ESTIMATED YEARLY ENERGY COST
			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

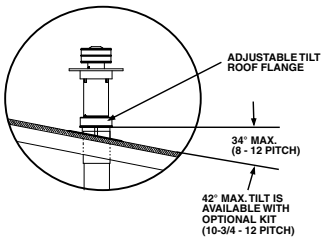
Estimated energy cost based on a national average fuel cost of $1.09/therm for natural gas and $2.41/gallon for LP. Energy Factor based on D.O.E. (Department of Energy) test procedures.

Co-Axial Roof Jack Sizing Table

34° MAX. (8 – 12 PITCH) ROOF JACK KIT PART NO.	ROOF JACK ADJUSTMENT 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

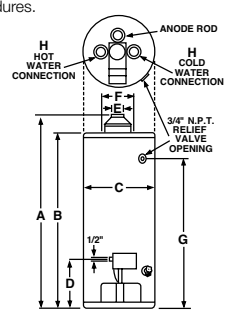
Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



DESCRIPTION			FEATURES			ROUGHING IN DIMENSIONS (SHOWN IN INCHES)									ENERGY INFO.		
TYPE	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
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

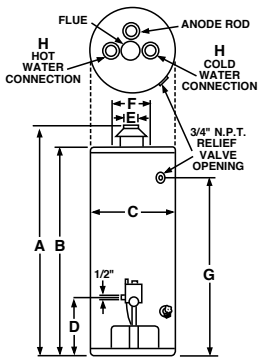
Plus…
- Enhanced-flow brass drain valve on 12-year models
- Temperature and pressure relief valve included
- Low lead compliant
- Specially formula¹ed glass lining prevents corrosion and extends the life of the tank

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.

LEED Point = 1





DESCRIPTION			FEATURES			ROUGHING IN DIMENSIONS (SHOWN IN INCHES)									ENERGY INFO.		
TYPE	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
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 silcon nitride igniter – Hot Surface Ignition (HSI)

Warranty
- 6-Year limited tank and parts warranty*

*See Residential Warranty Certificate for complete information

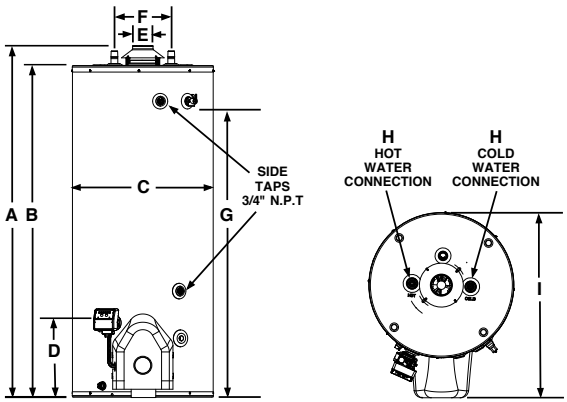
Efficiency | All models tested according to ANSI test procedures, and meet or exceed the thermal efficiency and standby loss requirements of current ASHRAE standard (EPact). Also exceeds energy efficiency codes of all states including California Energy Commission (CEC).

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)									
TYPE	GAL. CAP.	MODEL NUMBER	GAS INPUT IN THOUS. BTU/H NAT.	RECOVERY IN G.P.H. 100° RISE** 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 VALVE G	WATER CONN. SIZE H	FRONT TO BACK I	SHIP. WT. (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.

LEED Point = 1



DESCRIPTION			FEATURES			ROUGHING IN DIMENSIONS (SHOWN IN INCHES)								ENERGY INFO.	
TYPE	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 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 NAT.	ESTIMATED YEARLY ENERGY 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 90° ELBOWS WITH VENT TERMINAL	NUMBER OF 45° ELBOWS	MINIMUM PIPE LENGTH REQ. (FT.)	MAXIMUM PIPE LENGTH (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.

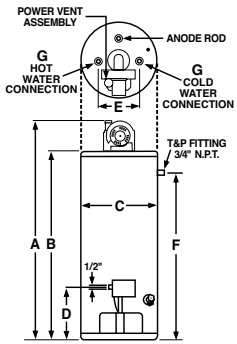
NOTICE: The mixing of 2" and 3" vent pipe is not recommended. If 3" pipe is used, a 2" to 3" reducer fitting is recommended at the rubber coupling.

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 90° ELBOWS WITH VENT TERMINAL	NUMBER OF 45° ELBOWS	MINIMUM PIPE LENGTH REQ. (FT.)	MAXIMUM PIPE LENGTH (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-6 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

LEED Points = 2

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-95DVLP.

- 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 Centroitherm 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

LEED Points – 2



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								
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-95DVLP.
- 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)

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

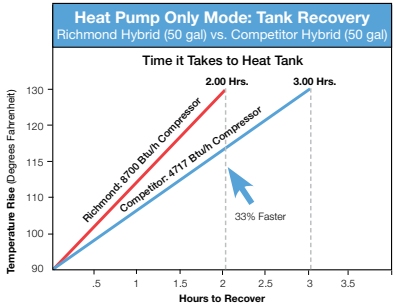
Operation Modes
- Energy Saver
- Heat Pump Only
- High Demand
- Electric Heat Only
- Vacation: 2-28 days (or placed on hold indefinitely)

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.



LEED Points = 3



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

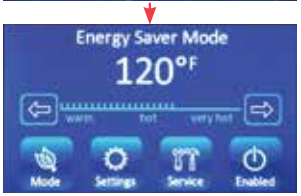
Estimated energy cost based on a national average fuel rate electricity 12.00¢/kWh. Energy factor determined by the U.S. Department of Energy (DOE) test procedures.
★ **ENERGY STAR® compliant model.**

Full-Color LCD Display Screens



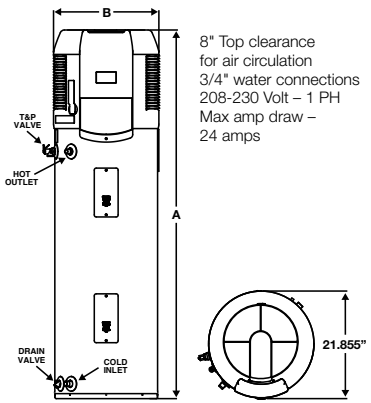
Start Up Screen

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



8" Top clearance
for air circulation
3/4" water connections
208-230 Volt – 1 PH
Max amp draw –
24 amps

Encore®

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.

LEED Point = 1

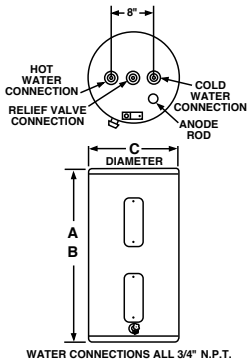


DESCRIPTION			FEATURES		ROUGHING IN DIMENSIONS (SHOWN IN INCHES)				ENERGY INFO.	
TYPE	GAL. CAP.	MODEL NUMBER	FIRST HOUR RATING G.P.H.	RECOVERY IN G.P.H. 90° F RISE	TANK HEIGHT A	HEIGHT TO WATER CONN. B	DIAMETER C	APPROX. SHIP WT. (LBS)	ENERGY FACTOR	ESTIMATED YEARLY ENERGY COST
Tall	50	12E50-DEC	68	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: $\frac{4500W}{2.42 \times 90°}$ = 21 GPH

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



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.

LEED Point = 1

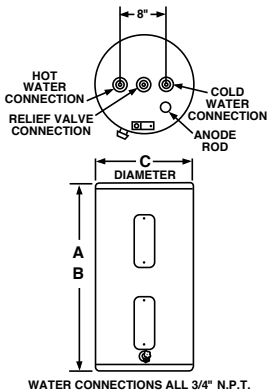


DESCRIPTION			FEATURES		ROUGHING IN DIMENSIONS (SHOWN IN INCHES)				ENERGY INFO.	
TYPE	GAL. CAP.	MODEL NUMBER	FIRST HOUR RATING G.P.H.	RECOVERY IN G.P.H. 90° F RISE	TANK HEIGHT A	HEIGHT TO WATER CONN. B	DIAMETER C	APPROX. SHIP WT. (LBS)	ENERGY FACTOR	ESTIMATED YEARLY ENERGY COST
Tall	50	9E50-DEL	67	21	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: $\frac{4500W}{2.42 \times 90°}$ = 21 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

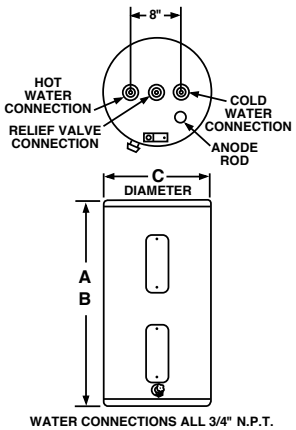
Plus...
- EverKleen™ self cleaning device fights harmful sediment build-up with a high-velocity spiraling water stream – helps operating efficiency by saving energy, money and improving tank life
- Temperature and pressure relief valve included
- Low lead compliant

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.

Ask about LEED Points





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.

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

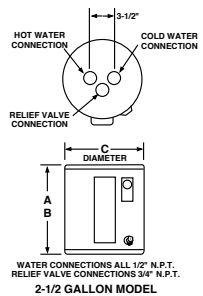


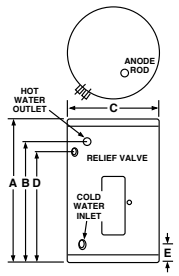
6, 10, 15, 19.9 and 30-Gallon

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.



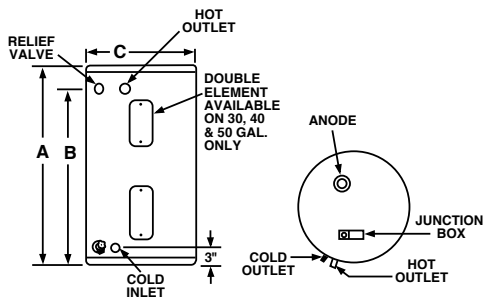
LEED Point = 1

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: $\frac{4500W}{2.42 \times 90°}$ = 21 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*

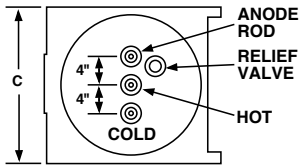
*See Residential Warranty Certificate for complete information

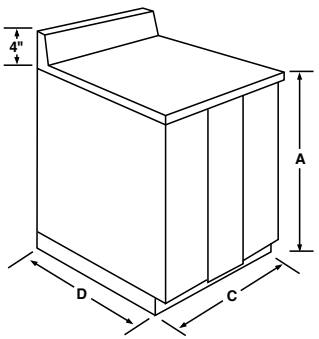
Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



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.





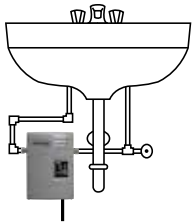
Essential Tankless

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.*

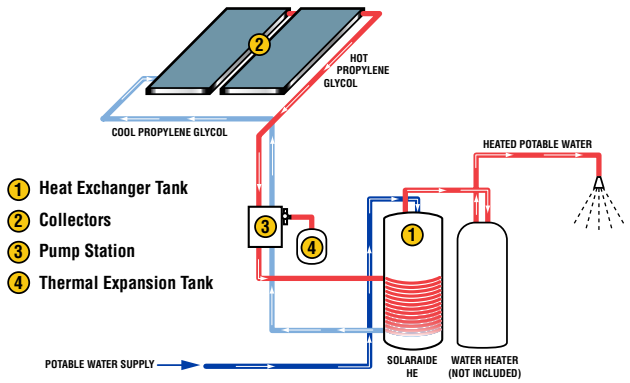
*See Residential and SolPak Warranty Certificate for complete information



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.

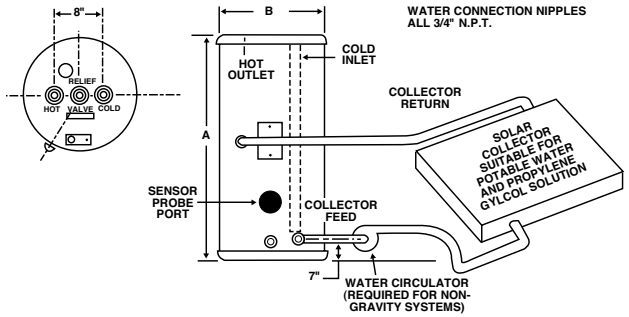
SOLARAIDE HE TANK CAPACITY	COIL CAPACITY GALLONS	LENGTH OF TUBING AROUND TANK (FT)
65 Gallons	2.2	120
80 Gallons	2.2	120
120 Gallons	2.6	143

PRESSURE DROP THROUGH COIL (FEET OF H_2O)		
FLOW RATE	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.
TYPE	GAL. CAP.	MODEL NUMBER	ELEMENT WATTAGE UPPER	HEIGHT A	DIAMETER B	APPROX SHIP WT. (LBS)	APPROX. 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.

LEED Point = 1

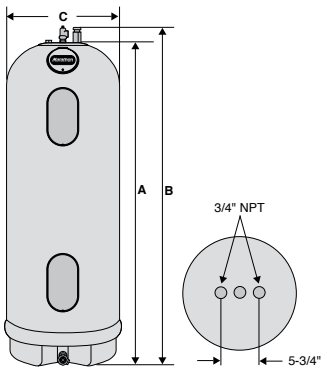


DESCRIPTION			FEATURES		ROUGHING IN DIMENSIONS (SHOWN IN INCHES)				ENERGY INFO.	
TYPE	GAL. CAP.	MODEL NUMBER	FIRST HOUR RATING G.P.H.	RECOVERY IN G.P.H. 90° F RISE	TANK HEIGHT A	HEIGHT TO WATER CONN. B	DIAMETER C	APPROX. SHIP WT. (LBS)	ENERGY FACTOR	ESTIMATED YEARLY ENERGY COST
Tall	40	MR40245	52	21	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: $\frac{4500W}{2.42 \times 90°}$ = 21 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

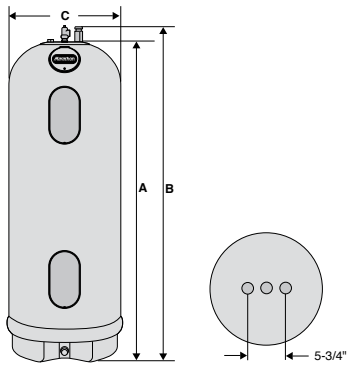
Plus…
- Thermally fused upper element provides protection against dry-firing
- Titanium upper and lower elements for superior resistance to lime build-up
- Full-flow, brass drain valve
- Temperature and pressure relief valve and factory installed vacuum relief valve
- Low lead compliant
- Standard replacement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

Warranty
- See Warranty Certificate for complete information



DESCRIPTION			FEATURES		ROUGHING IN DIMENSIONS (SHOWN IN INCHES)			
TYPE	GAL. CAP.	MODEL NUMBER	RECOVERY IN G.P.H. 100° F RISE**	FIRST HOUR DELiVERY G.P.H.	TANK HEIGHT A	HEIGHT TO WATER CONN. B	DIAMETER C	APPROX. SHIP WT. (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

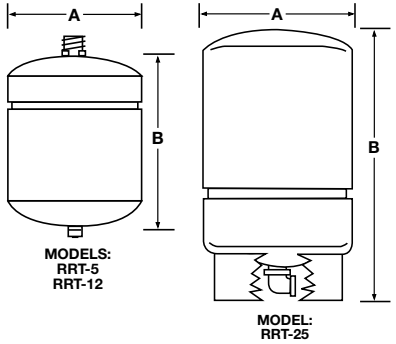
- The Therm-X-Guard is designed to provide control of maximum pressures at a level below the relief valve setting. Therefore, the relief valve does not open and spillage is eliminated. It also provides additional space in the system to accommodate the increased volume of water created by thermal expansion, 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)





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/CM²)	DIAPHRAGM MATERIAL	LINER MATERIAL
RRT-5	2.0	.9	200°F (93°C)	150 (10.5kg/cm²)	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/cm²)	11”	15”	9	3/4” NPTM	40 PSIG	Butyl Rubber	Polypropylene
RRT-25	10.3	10.3	200°F (93°C)	150 (10.5kg/cm²)	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