

# Essential<sup>®</sup>

Essential electric water heaters are engineered for longer life – resisted heating elements and premium grade anode rod

## EFFICIENCY

- 61 - 87 Standby Watts Loss
- Isolated tank design reduces conductive heat loss
- 4500 Watt resisted copper elements to prolong anode rod and tank life

## PERFORMANCE

- FHR: 62 - 87 gallons, based on gallon capacity
- Recovery: 21 GPH at a 90° F rise<sup>†</sup>

## 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...

- Enhanced-flow brass drain valve
- EverKleen<sup>®</sup> 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
- HUD certified for manufactured housing and modular construction
- Low lead compliant

## WARRANTY

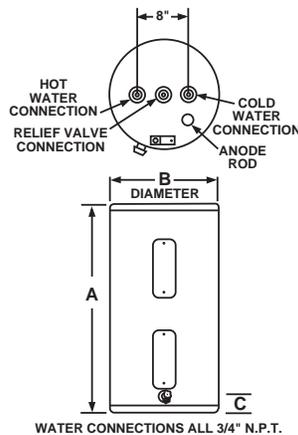
- 6-Year limited tank and parts warranty\*

\*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.



Essential  
40 and 60-Gallon Capacities  
240 Volt AC/Single Phase  
Electric



MODEL NUMBER	DESCRIPTION			ELEMENT QUANTITY	FEATURES				ROUGHING IN DIMENSIONS (SHOWN IN INCHES)				ENERGY INFO.				
	STORAGE CAP.				HEATING ELEMENTS				HEIGHT A	OUTSIDE DIAMETER B	HT. TO DRAIN VALVE C	APPROX. SHIP WT.		STANDBY WATTS LOSS	FIRST HOUR RATING (GPH)		
	U.S. GAL	IMP. GAL	LITRES		120 VOLT		208 VOLT					240 VOLT				LBS.	KG
6CE40S-2-1	45	39	178	2	-	-	2255	10.8	3000	12.5	46	21-3/4	3-1/2	117	53	69	62
6CE40BC-3	45	39	178	2	-	-	2255	10.8	3000	12.5	48	21-3/4	3-1/2	117	53	61	68
6CE40C-3	45	39	178	2	-	-	2855	13.7	3800	15.8	48	21-3/4	3-1/2	117	53	61	68
6CEM40*	45	39	178	2	-	-	2855	13.7	3800	15.8	48	21-3/4	3-1/2	117	53	61	68
6CE60-2	72	63	285	2	-	-	3380	16.3	4500	18.75	59	23	3-1/2	177	80	87	87
6CET60-D	72	63	285	2	-	-			3800	18.3	59.55	23-3/4	3-1/2	176	80	80	78

<sup>†</sup>Recovery calculations used are based on 4500 watt elements used in non-simultaneous operation.

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

\*Insulation blanket(s) required to achieve UEF value. Water heater dimensions prior to installing insulation blanket(s). Blanket(s) will be included with water heater. The blanket(s) add 2-1/2 inches to the tank height and 10 inches to tank diameter.

\*\*Insulation blanket(s) required to achieve UEF value. Water heater dimensions prior to installing insulation blanket(s). Blanket(s) will be included with water heater. The blanket(s) add 2 inches to the tank height and 4 inches to tank diameter.

- 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.

# Essential Plus®

Essential Plus electric water heaters are engineered for longer life, high performance and lower operating cost

## EFFICIENCY

- Standby Watts Loss 61 to 87
- Isolated tank design reduces conductive heat loss
- Dual 4500 watt elements, stainless steel lower element for longer life

## PERFORMANCE

- FHR: 68-87 gallons, based on gallon capacity
- Recovery: 21 GPH at a 90° F rise

## FEATURES

- High performance and lower operating cost
- 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...

- Enhanced-flow brass drain valve
- 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

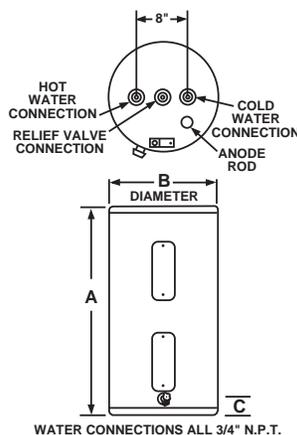
- 9-Year limited tank and parts warranty\*

\*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.



Essential Plus  
40 and 60-Gallon Capacities  
240 Volt AC/Single Phase  
Electric



MODEL NUMBER	DESCRIPTION				FEATURES						ROUGHING IN DIMENSIONS (SHOWN IN INCHES)			ENERGY INFO.			
	STORAGE CAP.			ELEMENT QUANTITY	HEATING ELEMENTS						HEIGHT A	OUTSIDE DIAMETER B	HT. TO DRAIN VALVE C	APPROX. SHIP WT.		STANDBY WATTS LOSS	FIRST HOUR RATING (GPH)
	U.S. GAL	IMP. GAL	LITRES		120 VOLT		208 VOLT		240 VOLT					LBS.	KG		
	WATT.	AMPS.	WATT.	AMPS.	WATT.	AMPS.	WATT.	AMPS.									
9CE40BC-3	45	39	178	2	--	--	2255	10.8	3000	12.5	48	21-3/4	3-1/2	117	53	61	68
9CE40BC-3	45	39	178	2	--	--	2855	13.7	3800	15.8	48	21-3/4	3-1/2	117	53	61	68
9CE60BC-2	72	63	285	2	--	--	3380	16.3	4500	18.75	59	23	3-1/2	117	80	87	87

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

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

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

- 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.

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

# Essential<sup>®</sup>

Essential Point-of-Use electric water heaters feature a space-saving design for installation in limited spaces

## EFFICIENCY

- Standby Watts Loss 53 for 30 gallon model
- Over-temperature protector cuts off power in excess temperature situations

## FEATURES

- High efficiency single 2000 watt resistored heating element
- 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
- 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

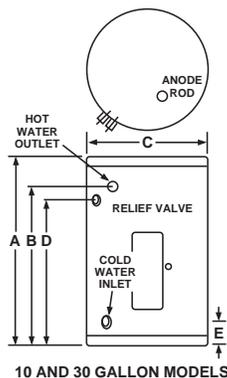
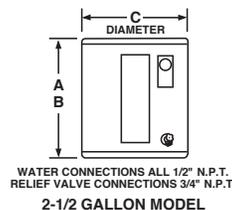
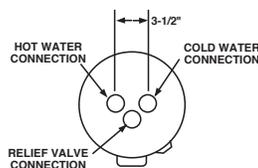
Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



2.5-Gallon



10 and 30-Gallon



Essential  
Point-of-Use  
2.5, 10 and 30-Gallon Capacities  
120 Volt AC  
2-Wire Single Phase  
Electric



MODEL NUMBER	DESCRIPTION			ROUGHING IN DIMENSIONS (SHOWN IN INCHES)						ENERGY INFO.	
	STORAGE CAP.			HEIGHT A	HT. TO HOT WATER OUTLET B	OUTSIDE DIAMETER C	HT. TO SIDE T&P VALVE D	HT. TO COLD WATER INLET E	APPROX. SHIP WT.		STANDBY WATTS LOSS
U.S. GAL	IMP. GAL	LITRES	LBS.						KG		
6CEP2-1	2.5	2	9	14	14	9-3/4	-	-	22	10	-
6CEP10-1	10	8.5	39	23	20-1/2	15-3/4	19-1/2	4-1/4	46	21	-
6CEP30-1	30	23	105	30	23	21-3/4	23	2-3/4	91	41	53

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 volt AC single phase only, 120v (1440w), power cord supplied.
- **10 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.

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

# Essential

Essential tankless electric water heaters offer continuous hot water

## PERFORMANCE FEATURES

- On demand, consistent and continuous hot water
- Compact and stylish with digital temperature control in increments of 1° ranging from 80°F to 140°F\*
- Robust copper immersion heating elements with brass top increases durability and are threaded for easy replacement
- Simple Installation
- Digital temperature display
- External controls to adjust temperature in increments of 1°\*

## WARRANTY

- 5-Year heating chamber and 1-year parts limited warranty
- See Residential Warranty Certificate for complete information

\*RMTEX-04 and RMTEX-06 only show output temperature and are non-thermostatically controlled

## AVERAGE GPM USAGE BY APPLICATION

Standard Hand Sink	0.5 GPM
Washing Machine	1 to 1.5 GPM
Water-Saver Shower Head	1.5 GPM
Dishwasher	1 to 2 GPM
Kitchen Sink	1 to 2 GPM
Standard Shower Head	2.0 GPM
Bath Tub	≥ 4 GPM
Whole-Home	Up to 6 GPM

### POINT-OF-USE

For 0.5 GPM to 2.0 GPM Applications



RMTEX-04, RMTEX-06

### MULTIPLE APPLICATIONS

For 0.5 GPM to 6.0 GPM Applications



RMTEX-08, RMTEX-11, RMTEX-13

RMTEX-18



RMTEX-24, RMTEX-27

RMTEX-36

MODEL NUMBER	TEMPERATURE RISE °F								
	0.5 GPM	1.0 GPM	1.5 GPM	2.0 GPM	2.5 GPM	3.0 GPM	4.0 GPM	5.0 GPM	6.0 GPM
<b>SINGLE POINT-OF-USE</b>									
RMTEX-04	48°	24°	16°	12°	-	-	-	-	-
RMTEX-06	75°	37°	25°	19°	-	-	-	-	-
<b>MULTIPLE APPLICATIONS</b>									
RMTEX-08	+	55°	36°	27°	22°	18°	14°	-	-
RMTEX-11	+	75°	50°	38°	30°	25°	19°	-	-
RMTEX-13	+	89°	59°	44°	36°	30°	22°	-	-
RMTEX-18	+	+	82°	62°	49°	41°	31°	25°	-
RMTEX-24	+	+	109°	82°	66°	55°	41°	33°	27°
RMTEX-27	+	+	+	92°	74°	62°	46°	37°	31°
RMTEX-36	+	+	+	+	98°	82°	62°	49°	41°

+ Temperature electronically limited setting on adjustable thermostat on front cover



Tested and certified by the Water Quality Association against NSF/ANSI 372 for lead free compliance.

See specifications chart on back.



RMTEX-04, RMTEX-06

#### Unique Features:

- External Digital Display – shows outlet temperature
- Durable Copper Immersion single heating element, field serviceable
- Simple Installation – Bottom 1/2" NPT water connections



RMTEX-08, RMTEX-11, RMTEX-13

#### Unique Features:

- External Adjustable Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Durable Copper Immersion two heating elements, field serviceable
- Simple Installation – Side 1/2" compression water connections with 1/2" NPT adapters included



RMTEX-18

#### Unique Features:

- External Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Most advanced self-modulation, adjust power to meet hot water demand
- Durable Copper Immersion two heating elements, field serviceable
- Simple Installation – Bottom 3/4" NPT water connections



RMTEX-24, RMTEX-27

#### Unique Features:

- External Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Most advanced self-modulation, adjust power to meet hot water demand
- Durable Copper Immersion three heating elements, field serviceable
- Simple Installation – Bottom 3/4" NPT water connections



RMTEX-36

#### Unique Features:

- External Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Most advanced self-modulation, adjust power to meet hot water demand
- Durable Copper Immersion four heating elements, field serviceable
- Simple Installation – Bottom 3/4" NPT water connections

# Essential

## Tankless Electric Specifications

DESCRIPTION	FEATURES							ROUGHING IN DIMENSIONS (SHOWN IN INCHES)					
	MODEL NUMBER	kW	AMPS	RECOMMENDED BREAKER SIZE	VOLTAGE	RECOMMENDED WIRE SIZE (CU)	MIN. FLOW (GPM)	MAX. FLOW (GPM)	HEIGHT	WIDTH	DEPTH	WATER CONN.	SHIP WEIGHT (LBS.)
<b>120V* 1 HEATING CHAMBER</b>													
RMTEX-04	3.5	29A	(1x30)A	120	10 AWG	0.3	4.8	5-7/8	10-7/8	2-3/4	1/2 NPT	4.5	
<b>240V* 1 HEATING CHAMBER</b>													
RMTEX-06	6.0	29A	(1x30)A	220	10 AWG	0.3	4.8	5-7/8	10-7/8	2-3/4	1/2 NPT	4.5	
RMTEX-08	7.3	33A	(1x40)A	240	8 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	7	
RMTEX-11	11.8	46A	(1x50)A	240	6 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	8.5	
RMTEX-13	13.0	54A	(1x60)A	240	6 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	8.5	
<b>240V* 2 HEATING CHAMBERS</b>													
RMTEX-18	18.0	75A	(2x40)A	240	8 AWG	0.3	7.0	18-1/4	14-1/2	3-1/2	3/4 NPT	14.78	
<b>240V* 3 HEATING CHAMBERS</b>													
RMTEX-24	24.0	100A	(3x40)A	240	8 AWG	0.3	7.0	18-1/4	17-5/8	3-1/2	3/4 NPT	17.8	
RMTEX-27	27.0	113A	(3x40)A	240	8 AWG	0.3	7.0	18-1/4	17-5/8	3-1/2	3/4 NPT	17.8	
<b>240V* 4 HEATING CHAMBERS</b>													
RMTEX-36	36.0	150A	(4x40)A	240	8 AWG	0.3	8.0	18-1/4	21-5/8	3-1/2	3/4 NPT	22.7	

\* 240V units can be used on 208V single phase with 25% reduced temperature output. Please note per UL standards the rating plate and installation instructions will all be according to a 240V applied voltage. Check with local officials prior to derating the electrical infrastructure.

### PRODUCT SPECIFICATIONS (ALL MODELS)

<b>Rated Pressure</b>	25 PSI min., 150 PSI max.
<b>Certifications</b>	ETL Listed to UL 499 and CSA
<b>Std. Temp. Settings</b>	120°F (Adjustable 80°F-140°F)
<b>Temp. Accuracy</b>	+/-1° at steady state flow
<b>Turn-On</b>	0.3 GPM

### SUGGESTED SPECIFICATIONS

Unit shall have copper clad immersion heating element(s) with brass terminations for increased durability. External temperature control and display adjustable in 1° increments with a range of 80°-140°F. Display shall be capable of displaying setpoint temperature in Celsius or Fahrenheit temperature scales. Unit shall utilize a flow meter with a 0.3 gpm activation point and manage power based on actual flow rate and inlet temperature. Values should be processed 60 times per second. Unit shall be WQA certified lead free, certified to UL499 and CSA22.2.

### OPTIONAL INLINE FLOW REGULATOR

- Enhanced outlet temperature control
- Install on the outlet side of the heater
- Limit maximum volume to the specified flow rate to ensure exiting temperature is within an acceptable range
- Flow Regulators for ½" and ¾" NPT plumbing connections
- Flow range: 1 to 5 gallons per minute

RICHMOND PART NUMBER	GPM RATING OF INSERTS PROVIDED	CONNECTION SIZE
<b>RTE10001A</b>	1.0, 1.5, 2.0	1/2" NPT
<b>RTE10001B</b>	2.0, 3.0, 4.0, 5.0	3/4" NPT

### SUGGESTED SIZING GUIDE

MODEL NUMBER	FLOW REGULATOR PART NO.	GPM INSERT TO USE BASED ON INLET WATER TEMPERATURE			
		40°F	50°F	60°F	70°F
RMTEX-04	N/A	N/A	N/A	N/A	N/A
RMTEX-06	N/A	N/A	N/A	N/A	N/A
RMTEX-08	RTE10001A	1.0	1.0	1.0	1.5
RMTEX-11	RTE10001A	1.0	1.0	1.5	2.0
RMTEX-13	RTE10001A	1.0	1.0	1.5	2.0
RMTEX-18	RTE10001B	2.0	2.0	2.0	3.0
RMTEX-24	RTE10001B	2.0	2.0	3.0	4.0
RMTEX-27	RTE10001B	2.0	3.0	4.0	5.0
RMTEX-36	RTE10001B	3.0	4.0	5.0	5.0