



208, 240,  
277 and 480  
Voltages

Immersion  
Thermostat  
Models



## Available in 12, 20, 30, and 40 Gallon Tank-Type Models

### ► 3 KW thru 36 KW

Electric Commercial Water Heaters are suitable for general commercial hot water applications and are also ideal for point-of-use installations. Small volume ASME models are designed to meet engineering specifications.

### Construction Features:

- **System Sentinel**  
immersion thermostat models employ an element diagnostic panel, utilizing light emitting diodes (L.E.D.), corresponding to the number and location of each heating element. This system monitors the on-off function of the electric heating elements.
- **Long life ASME tank design**  
proprietary steel formulation with high temperature porcelain enamel to maximize corrosion resistance resulting in a superior tank design.
- **LIFEGUARD heating elements**  
separate screw-in type elements feature a stainless steel outer sheath of INCO-LOY 840, surrounding a Nichrome wire filament, to resist water chemical corrosion and burn-out even in air or sediment...for long element life and long life performance.
- **Elements are directly immersed in the water for maximum recovery efficiency (98%) and are easily changed by simply screwing new ones into the tank. LIFEGUARD elements feature a three (3) year limited warranty.**
- **Full port, full flow brass drain valve**
- **Minimal heat loss design**  
85% of the tank surface area on all Rheem-Ruud Commercial Electric products are insulated with 2-1/2" of rigid polyurethane foam insulation providing superior insulating qualities. Unlike other designs, Rheem-Ruud Commercial Electrics can achieve 85% because of the unique compact layout of the heating elements. **This results in heat losses less than the energy used by a 75 watt light bulb during a 48 hour standby period!**

### Certifications and Ratings:

- **Efficiency** – in accordance with ANSI test procedures, these models tested below the maximum allowable standby loss levels of current ASHRAE Standards (Part of the Federally mandated Energy Policy Act (EPact)). Also exceeds energy efficiency codes of all states including California Energy Commission (CEC).
- **Safety and construction** – These products are design certified by Underwriters Laboratories (UL) to meet UL standard 1453 as electric booster and commercial storage tank water heaters. All models are North Carolina and Massachusetts code compliant. **CERTIFIED FOR A 160 PSI MAXIMUM WORKING PRESSURE.**
- **ASME construction** – standard on E12A, E20A, E30A, and E40A models.

<b>ELECTRICAL CHARACTERISTICS</b>												
INPUT KW	NUMBER OF ELEMENTS	ELEMENT WATTAGE	FULL LOAD CURRENT IN AMPERES							IMMERSION THERMOSTATS		
			208V		240V		277V		480V		Number of Fuses	No. of T'Stats
			Phase		Phase		Phase		Phase			
			1	3	1	3	1	1	3			
3	1	3000	15	-	13	-	11	7	-	2	1	
6	3	2000	29	17	25	14	22	13	8	6	1	
9	3	3000	44	25	38	22	33	19	11	6	1	
12	3	4000	58	34	50	29	44	25	15	6	1	
15	3	5000	73	42	63	37	55	32	18	6	1	
18	3	6000	87	50	75	44	65	38	22	6	1	
18	6	3000	87	50	75	44	65	38	22	12	1	
24	6	4000	116	67	100	58	87	50	29	12	1	
27	6	4500	130	75	113	65	98	57	33	12	1	
30	6	5000	145	84	125	73	109	63	37	12	1	
36	6	6000	173	100	150	87	130	75	44	12	1	

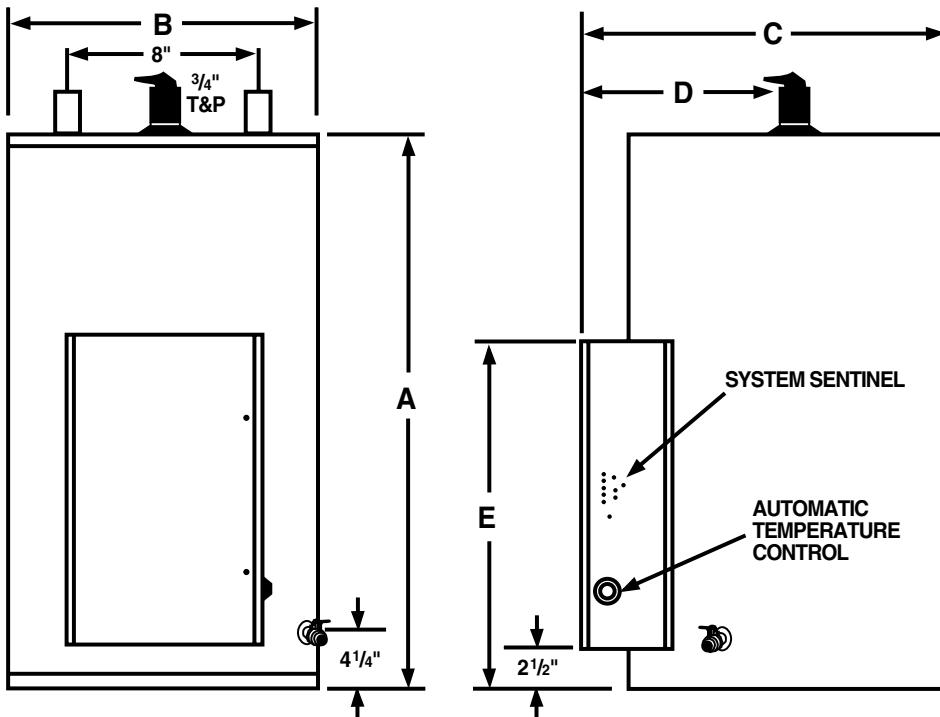
<b>WATER TEMPERATURE RATINGS</b>						
Model Number	Tank Capacity		Thermostat Type	Minimum Delivered Temperature	Maximum Delivered Temperature	High Temperature Limit
	Gallons	Liters				
E12A	13	49	Immersion	90°F	190°F	200°F
				32.2°C	87.8°C	93.3°C
E20A	19.9	75	Immersion	90°F	190°F	200°F
				32.2°C	87.8°C	93.3°C
E30A	30	114	Immersion	90°F	190°F	200°F
				32.2°C	87.8°C	93.3°C
E40A	40	152	Immersion	90°F	190°F	200°F
				32.2°C	87.8°C	93.3°C

<b>RECOVERY CAPACITIES</b> Recovery in U.S. Gallons/Hr. (GPH) and Liters/Hr. (LPH) at Various Temperature Rises													
INPUT KW	EQUIVALENT BTU/HR.	UNITS	40°F (22°C)	50°F (28°C)	60°F (33°C)	70°F (39°C)	80°F (45°C)	90°F (50°C)	100°F (56°C)	110°F (61°C)	120°F (67°C)	130°F (72°C)	140°F (78°C)
3	10,236	GPH	31	25	21	18	16	14	12	11	10	10	9
		LPH	117	95	80	68	61	53	45	42	38	38	34
6	20,473	GPH	62	50	41	35	31	28	25	23	21	19	18
		LPH	235	188	157	134	117	104	94	85	78	72	67
9	30,709	GPH	93	74	62	53	47	41	37	34	31	29	27
		LPH	352	282	235	201	176	157	141	128	117	108	101
12	40,946	GPH	124	99	83	71	62	55	50	45	41	38	35
		LPH	470	376	313	268	235	209	188	171	157	145	134
15	51,183	GPH	155	124	103	89	78	69	62	56	52	48	44
		LPH	587	470	391	335	294	261	235	213	196	181	168
18	61,420	GPH	186	149	124	106	93	83	74	68	62	57	53
		LPH	705	564	470	403	352	313	282	256	235	217	201
24	81,893	GPH	248	199	165	142	124	110	99	90	83	76	71
		LPH	939	751	626	537	470	417	376	342	313	289	268
27	92,129	GPH	279	223	186	160	140	124	112	102	93	86	80
		LPH	1057	845	705	604	528	470	423	384	352	325	302
30	102,366	GPH	310	248	207	177	155	138	124	113	103	95	89
		LPH	1174	939	783	671	587	522	470	427	391	361	335
36	122,839	GPH	372	298	248	213	186	165	149	135	124	115	106
		LPH	1409	1127	939	805	705	626	564	512	470	434	403

MODEL NUMBERS				
INPUT KW	IMMERSION THERMOSTATS			
	Tank Capacity In Gallons			
	12	20	30	40
3	E12A-3-G	E20A-3-G	E30A-3-G	E40A-3-G
6	E12A-6-G	E20A-6-G	E30A-6-G	E40A-6-G
9	E12A-9-G	E20A-9-G	E30A-9-G	E40A-9-G
12	N/A	E20A-12-G	E30A-12-G	E40A-12-G
15	N/A	E20A-15-G	E30A-15-G	E40A-15-G
18	N/A	E20A-18-G	E30A-18-G	E40A-18-G
24	N/A	N/A	E30A-24-G	E40A-24-G
27	N/A	N/A	E30A-27-G	E40A-27-G
30	N/A	N/A	E30A-30-G	E40A-30-G
36	N/A	N/A	E30A-36-G	E40A-36-G

- Fuse type**  
 the "G" in the model number represents Class G fuses.
- UL Sanitation compliance**  
 all models are UL Sanitation (NSF5) compliant when equipped with the optional ring seal kits. E12A, E20A, E30A-(AS39827), E40A-(AS39828) Solid State Low Water Cut-off – units may be ordered with probe type cut-off for field installations (AP8408).

DIMENSIONAL INFORMATION All dimensions shown in English and Metric							
MODEL NUMBER	UNITS	A	B	C	D	E	APPROX. SHIPPING WEIGHT (LBS.)/(KG) ASME
E12A	inches	28-1/2	19	24-1/4	14-3/4	26-1/4	135
	mm	724	483	616	375	667	61
E20A	inches	36-1/2	19	24-1/4	14-3/4	26-1/4	160
	mm	927	483	616	375	667	73
E30A	inches	49-1/4	19	24-1/4	14-3/4	32-1/2	192
	mm	1251	483	616	375	826	87
E40A	inches	53-3/4	21	26-3/4	16-1/2	32-1/2	228
	mm	1365	583	679	419	826	104



- System Sentinel**  
 all models employ a diagnostic panel utilizing light emitting diodes (L.E.D.), corresponding to the number and location of each heating element. L.E.D.'s are energized when the electric elements are operating. An unlit L.E.D. pinpoints the exact location of a non-functioning element, making element operation diagnosis simple and positive.

## Other Features:

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- **Integral Fusing**  
all models have integral fusing for each element.
- **Anode Rods**  
two (2) magnesium anodes are installed in each tank to ensure long life and corrosion resistance.
- **Temperature and Pressure Relief Valve**  
AGA/ASME rated and factory installed.
- **Electrical Connections**  
pre-wired, accessible control box with multiple knock-outs on side in size selections to match the National Electric Code. Sizes range from 1/2" to 2". A grounding screw is provided for attaching an equipment grounding conductor.
- **Single Panel Control Box**  
with hinged door, provides immediate access to all electrical components and elements.
- **Terminal Block**  
all models are equipped with U.L. listed terminal blocks for simplicity of installation. The terminal block will accept either copper or aluminum field connect wire.
- **120 Volt Control Circuit**  
all units are furnished with a fused 120 volt control circuit. This circuit is created by an internal multi-tap transformer of unique design that has four (4) taps for the primary voltages, 208, 240, 277 and 480.
- **Water Connections**  
hot outlet and cold inlet are 3/4" NPT plastic lined nipples which prevent excessive turbulence of heated water and results in optimum tank draw.

## Recommended Specifications:

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Water heater(s) shall be model \_\_\_\_\_, manufactured by RHEEM-RUUD, having electrical input of \_\_\_\_\_ kW and a recovery rate of \_\_\_\_\_ GPH at a 100°F temperature rise. Water heater(s) shall have a storage capacity of \_\_\_\_\_ gallons. Water heater(s) shall have the UL seal of certification and be factory equipped with an AGA/ASME rated temperature and pressure relief valve. Water heater(s) shall be constructed in accordance with the requirements of the ASME Boiler and Pressure Vessel Code, Section IV Part HLW. Tank(s) shall have a coating of high temperature porcelain enamel and furnished with two (2) magnesium anode rods rigidly supported. Water heater(s) shall meet or exceed the standby loss requirements of ASHRAE. Tank(s) shall have a working pressure of 160 psi, and shall be completely assembled. Water heater(s) shall be approved-listed and constructed in accordance with UL Sanitation (NSF5). Water heater(s) shall be equipped with *LIFEGUARD* "screw-in" type elements featuring a stainless steel outer sheath of INCO-LOY 840 material. Tank shall be insulated with 2-1/2" of rigid polyurethane foam insulation. Water heater(s) shall be constructed with a *SYSTEM SENTINEL* element diagnostic panel utilizing light emitting diodes. Each LED will correspond to the number and location of the heating elements and monitor their on-off function. Water heater(s) shall be provided with internal power circuit fusing, control circuit fusing, magnetic contactors, 120 volt control circuit transformer and immersion thermostat(s) with manual reset high limit control. 3/4" inlet and outlet water connections shall be provided. Water heater(s) shall be covered by a three year limited warranty against tank leaks.

## Limited Warranty:

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This product features a three year limited warranty against tank leaks.  
Please refer to Commercial Warranty Information brochure for complete warranty information.



**COMMERCIAL** □  
**WATER HEATERS**

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

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