

# PATRIOT™

## LIGHT-DUTY COMMERCIAL ELECTRIC WATER HEATERS



Designed for use as recovery heaters for light-duty hot water supply service. Patriot™ PCE water heaters are available with tank capacities from 6 through 119 gallons. They can be installed for non-simultaneous and single element operation (maximum input up to 6 KW), or for simultaneous dual-element operation (maximum input up to 12 KW).

### Zinc-Plated Copper Sheath Heating Elements Standard

- Medium watt density design disperses element temperature over larger surface contact area to minimize scale buildup, maximize efficiency and prolong element life
- Element options from 1.5 KW to 6 KW (non-simultaneous or simultaneous operation), recoveries from 6 gph to 49 gph at 100°F rise

### Standard Voltages for Easy Installation

- 120V, 277V single-phase, and 208V, 240V and 480V unbalanced 3-phase delta
- Easily converted to single-phase at terminal block (except for 208V with 6000 watt elements)
- Single-element heater, single-phase only (see chart for dual-element options)

### Factory-Installed Terminal Block

- Provides electrical service to heater and connects to block

### Factory-Wired Controls

- Temperature control (adjustable from 110°F to 170°F on single-element; 120°F to 180°F on dual-element models)

- Manual reset high temperature cutoff per element (dual-element models)
- Factory wired for non-simultaneous operation; easily converted to simultaneous operation

### Glass-Lined Tank with Anode Rod

- Provides long-lasting protection against corrosion

### Maximum Hydrostatic Working Pressure: 150 psi

**Meets or exceeds the thermal efficiency and/or standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/IESNA 90.1**

### Other Patriot™ PCE Series Features

- Simplified, color-coded circuitry for ease of service
- Bonderized undercoat on cabinet with baked enamel finish
- Top inlet and outlet openings
- Foam insulation
- Drain valve
- UL-approved field conversion program

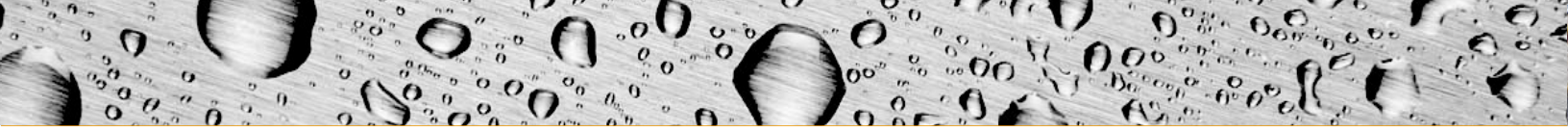
### Three-Year Limited Tank Warranty

- Consult written warranty shipped with water heater, or contact State for complete information

For more information on State® contact:  
State Water Heaters  
500 Tennessee Waltz Parkway, Ashland City, TN 37015  
800-365-0024 Toll-free USA  
[www.statewaterheaters.com](http://www.statewaterheaters.com)

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**WATTAGE, RECOVERY AND ELECTRICAL CHARACTERISTICS**

UPPER AND LOWER ELEMENT WATTAGE	RECOVERY - GALLONS PER HOUR AT °F RISE			FULL LOAD CURRENT IN AMPERES		
	40°F	100°F	140°F	208V	240V	480V
<b>NON-SIMULTANEOUS AND SINGLE-ELEMENT OPERATION-SINGLE-PHASE POWER</b>						
1500	15	6	4	7.2	6.3	3.1
2000	20	8	5	9.6	8.3	4.2
2500	25	10	7	12.0	10.4	5.2
3000/3000	30	12	8	14.4	12.5	6.3
4000/4000	41	16	11	19.2	16.7	8.3
4500/4500	46	18	13	21.6	18.8	9.4
5000/5000	51	20	14	24.0	20.8	10.4
6000/6000	61	24	17	28.8	25.0	12.5
<b>SIMULTANEOUS DUAL-ELEMENT OPERATION-THREE-PHASE POWER (Both elements on when entire tank is cold)</b>						
3000/3000	61	24	17	25.0/14.4*	21.7/12.5*	10.8/6.3*
4000/4000	81	32	23	33.3/19.2*	28.9/16.7*	14.4/8.3*
4500/4500	91	36	26	37.5/21.6*	32.5/18.8*	16.2/9.4*
5000/5000	101	41	29	41.6/24.0*	36.1/20.8*	18.0/10.4
6000/6000	122	49	35	N/A	43.3/25.0*	21.7/12.5

\*Terminal L2 Amperage/Terminals L1 and L3 Amperage

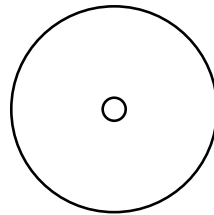
**HEATING ELEMENT AVAILABILITY**

INPUT WATTS	120V	208V	240V	277V	480V
1500	YES	YES	YES	YES	NO
2000	YES	YES	YES	YES	NO
2500	YES	YES	YES	YES	YES
3000	YES	YES	YES	YES	YES
3500	NO	NO	YES	NO	NO
4000	NO	YES	YES	YES	YES
4500	NO	YES	YES	YES	YES
5000	NO	YES*	YES*	YES*	YES*
5500	NO	NO	YES	NO	NO
6000	NO	YES**	YES	YES	YES

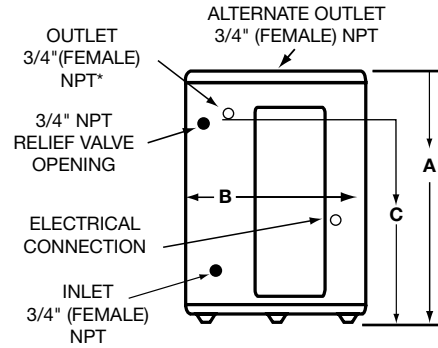
\*Not available in PCE 10 10MSA, PCE 17 10MSA and PCE 30 20RTA.  
 \*\*A6 non-simultaneous circuit only.  
 PCE 6 10MSA not available above 2500 W.  
 PCE 6 10MSA not available in 480V.

**TANK CAPACITY, DIMENSIONS AND WEIGHTS**

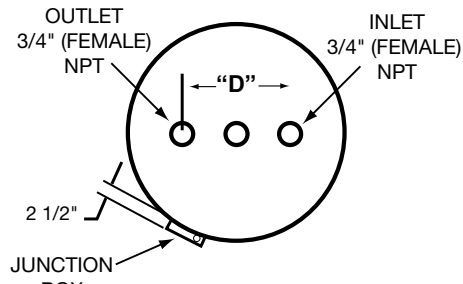
MODEL NUMBER	GALLON CAPACITY	NUMBER OF ELEMENTS	DIMENSIONS IN INCHES				APPROX SHIPPING WEIGHT (LBS.)
			A	B	C	D	
PCE 6 10MSA	6	1	15-1/2	14-1/4	11	N/A	35
PCE 10 10MSA	10	1	18-1/4	18	12-1/2	N/A	54
PCE 17 10MSA	15	1	26	18	20-1/2	N/A	58
PCE 20 10MSA	20	1	22-1/4	21-3/4	15-3/8	N/A	73
PCE 30 20LSA	30	2	30-7/8	21-3/4	24-1/8	8	100
PCE 40 20LSA	40	2	32-1/4	24	25-9/16	8	125
PCE 50 20LSA	50	2	32-1/4	26-1/2	25-1/8	8	166
PCE 30 20RTA	30	2	34-1/2	20-1/2	N/A	8	98
PCE 40 20RTA	40	2	45-1/8	20-1/2	N/A	8	113
PCE 52 20RTA	50	2	54-7/8	20-1/2	N/A	8	131
PCE 66 20RTA	66	2	60-3/4	21-3/4	N/A	8	176
PCE 82 20RTA	80	2	59-3/8	24	N/A	8	211
PCE 120 20RTA	119	2	62-7/16	29-3/8	N/A	8	326



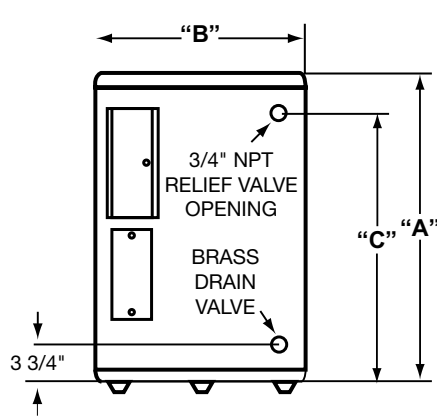
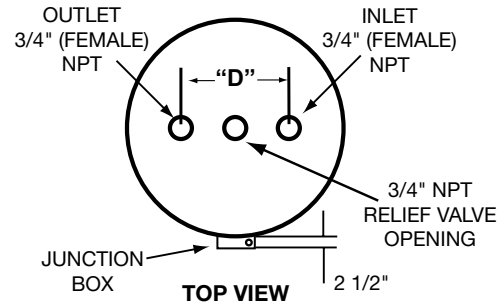
**TOP VIEW**  
 PCE 6 10MSA, PCE 10 10MSA  
 PCE 17 10MSA, PCE 20 10MSA



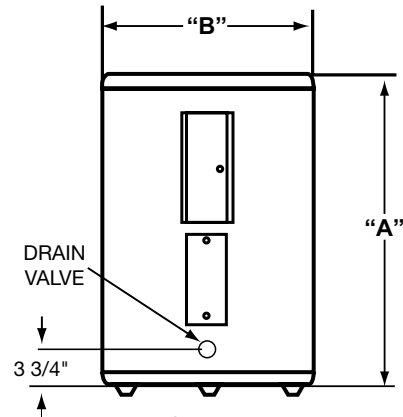
**FRONT VIEW**  
 PCE 6 10MSA, PCE 10 10MSA  
 PCE 17 10MSA, PCE 20 10MSA



**TOP VIEW**  
 PCE 30 20LSA, PCE 40 20LSA,  
 PCE 50 20LSA



**FRONT VIEW**  
 PCE 30 20LSA, PCE 40 20LSA,  
 PCE 50 20LSA



**FRONT VIEW**  
 PCE 30 20RTA - PCE 120 20RTA

## SUGGESTED SPECIFICATION

The water heater(s) shall be State Patriot™ Model(s) \_\_\_\_\_, rated at \_\_\_\_\_ KW, \_\_\_\_\_ volts, \_\_\_\_\_ -phase, 60 cycle AC. Water heater(s) shall be listed by Underwriters Laboratories and meet or exceed the thermal efficiency and/or standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/IESNA 90.1 shall be \_\_\_\_\_ gallon capacity with a recovery capacity of \_\_\_\_\_ GPH at a temperature rise of \_\_\_\_\_ °F with \_\_\_\_\_/\_\_\_\_\_ upper/lower element wattage. Heater(s) shall have 150 psi working pressure and be equipped with extruded high-density anode rod. All internal surfaces of the heater(s) exposed to water shall be glass-lined with an alkaline borosilicate composition that has been fused to steel by firing at a temperature of 1600°F. Electric heating elements shall be medium watt density with zinc-plated copper sheath or Incoloy sheath \_\_\_\_\_.

Each element shall be controlled by an individually mounted thermostat and high-temperature cutoff switch. The outer jacket shall be a baked enamel finish and provided with a full-size control compartment for performance of service and maintenance through a hinged front panel and shall enclose the tank with foam insulation.

Electrical junction box with heavy-duty terminal block shall be provided (except on 120V and 277V [no junction box on PCE 6 10MSA thru PCE 20 10 MSA]). The drain valve shall be located in the front for ease of servicing. Heater tank shall have a 3-year limited warranty as outlined in the written warranty. Fully illustrated instruction manual will be included.