

# Heavy Duty Commercial Electric Water Heater



## 3-Year Limited Tank/1-Year Limited Parts Warranty\*

**Heavy Duty Immersion Thermostat Commercial Electric** - The ITCE models are designed to provide years of reliable operation in commercial applications. Multiple anodes promote longer tank life through even distribution, for protection of the tank interior. Ideal for heavy-duty commercial applications requiring an immersion thermostat, quick recovery and lots of reliable hot water.

- **Economy Mode Operation** Control system automatically lowers the Operating Set Point by a programmed value during user defined time periods. Helps reduce operating costs during unoccupied or off peak demand periods.
- **Linear Sequencing** Banks of heating elements (3 elements per bank) are energized according to adjustable (1 to 20°) differential set points for each bank. First bank on is the last bank off. Helps reduce current surge and provides accurate water temperature control.
- **Gold Plated Elements** The ITCE models ship with gold plated elements. These gold elements provide long life and superior scale resistance.
- **Glass-Lined Tank** Three sizes; 50, 80 and 119 gallon capacity. Tank interior is coated with glass specially developed for water heater use. Tanks rated at 150 psi working pressure; tested at 300 psi. Foam insulation reduces costly heat loss. ASME (optional) maximum working pressure is 150 psi.
- **Power Circuit Fusing** Protects elements and contactors from short circuits, overloading or line surges. Meets National Electric Code requirements (fusing required when current draw exceeds 48 amps).
- **Standard Voltages** 208, 240 and 480V single-phase and three phase delta. Convertible from three-phase to single-phase (in field) and vice versa (except 208/54 KW). 277V single-phase also available.
- **Terminal Block** Factory installed. Allows for easy service connection to block.
- Magnetic Contactors Heavy duty; UL rated 100,000 cycles.
- Meets or exceeds the requirements of ASHRAE 90.1b-1992 and ASHRAE/IESNA 90.1-2004.
- Other Standard Features Simplified circuitry, color coded for ease of service Hinged control compartment door for quick, easy access Two anode rods for maximum corrosion protection Cabinet has bonderized undercoat with baked enamel finish Top outlet, side inlet and relief valve openings Nipple and brass drain valve CSA / ASME temperature and pressure relief valve.
- Options MANIFOLD KITS WITH ISOLATION VALVES Available for multiple installations.
  Two heaters 9003429205. Three heaters 9003430205. Four heaters 9003431205.

OPTIONAL INTERNATIONAL VOLTAGES - 220, 380, 400, 415, 480, 575 and 600 volts threephase available with Y connected elements.



ITCE31-50, 80, 119





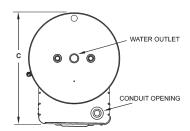


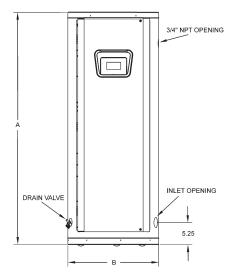


<sup>\*</sup>For complete warranty information consult the written warranty of American Water Heaters found at www.americanwaterheater.com, or call (800) 456-9805.



# **Commercial Electric Water Heater**





Dimensions on all charts shown in inches.

GPH RECOVERY CAPACITIES												
	TEMPERATURE RISE											
KW INPUT	30° F	40° F	50° F	60° F	70° F	80° F	90° F	100° F	110° F	120° F	130° F	140° F
6	82	62	49	41	35	31	27	25	22	21	19	18
9	123	92	74	62	53	46	41	37	34	31	28	26
12	164	123	98	82	70	61	55	49	45	41	38	35
13.5	184	138	111	92	79	69	62	55	50	46	43	40
15	205	154	123	102	88	77	68	61	56	51	47	44
18	246	184	148	123	105	92	82	74	67	62	57	53
24	328	246	197	164	140	123	109	98	90	82	76	70
27	369	276	221	185	158	138	123	111	101	92	85	79
30	410	307	246	205	176	154	137	123	112	102	95	88
36	492	369	295	246	211	184	164	148	134	123	113	105
40.5	554	418	332	277	237	208	185	166	151	138	128	119
45	615	461	369	307	263	230	205	184	168	154	142	132
54	738	554	443	359	316	277	246	221	201	185	170	158

Figured at 1 KW (3413 BTU) = 4.1 Gallons at 100°F temperature rise.

MODEL NUMBERS			RS	NUMBER		FULL LOAD CURRENT IN AMPERES						
KW	TANK	CAPACITY IN G	0F	ELEMENT	SINGLE PHASE				THREE PHASE			
INPUT	50	80	119	ELEMENTS	WATTAGE	208V	240V	277V	480V	208V	240V	480V
6	ITCE31-50-060	ITCE31-80-060	ITCE31-119-060	3	2,000	28.8	25.0	21.7	12.5	16.7	14.4	7.2
9	ITCE31-50-090	ITCE31-80-090	ITCE31-119-090	3	3,000	43.3	37.5	**32.5	18.8	25.0	21.7	10.8
12	ITCE31-50-120	ITCE31-80-120	ITCE31-119-120	3	4,000	57.7	50.0	43.3	25.0	33.3	28.9	14.4
13.5	ITCE31-50-135	ITCE31-80-135	ITCE31-119-135	3	4,500	64.9	56.3	**48.7	28.1	37.5	32.5	16.2
15	ITCE31-50-150	ITCE31-80-150	ITCE31-119-150	3	5,000	72.1	62.5	**54.2	31.3	41.6	36.1	18.0
18	ITCE31-50-180	ITCE31-80-180	ITCE31-119-180	3*	6,000	86.5	75.0	65.0	37.5	50.0	43.3	21.7
24	ITCE31-50-240	ITCE31-80-240	ITCE31-119-240	6	4,000	115.4	100.0	86.6	50.0	66.6	57.7	28.9
27	ITCE31-50-270	ITCE31-80-270	ITCE31-119-270	6	4,500	129.8	112.5	**97.5	56.3	74.9	65.0	32.5
30	ITCE31-50-300	ITCE31-80-300	ITCE31-119-300	6	5,000	144.2	125.0	**108.3	62.5	83.3	72.2	36.1
36	ITCE31-50-360	ITCE31-80-360	ITCE31-119-360	6	6,000	173.1	150.0	130.0	75.0	99.9	86.6	43.3
40.5	ITCE31-50-405	ITCE31-80-405	ITCE31-119-405	9	4,500	194.7	168.8	**146.2	84.4	112.4	97.4	48.7
45	ITCE31-50-450	ITCE31-80-450	ITCE31-119-450	9	5,000	216.3	187.5	**162.5	93.8	124.9	108.3	54.1
54	ITCE31-50-540	ITCE31-80-540	ITCE31-119-540	9	6,000	N/A	225.0	194.9	112.5	149.9	129.9	65.0

<sup>\*208</sup> volt models may contain three (3) additional elements. \*\* Elements available in incoloy only.

MODEL NUMBER	GALLON CAPACITY	HEIGHT TOP OF HEATER A	WIDTH B	DEPTH C	WATER CONN.	APPROX. SHIPPING WEIGHT
ITCE31-50	50	55-3/4	21-3/4	27	1-1/4	265
ITCE31-80	80	60-1/4	25-1/2	31	1-1/4	280
ITCE31-120	119	62-1/4	29-1/2	35	1-1/4	390

Optional ASME construction available. Add "A" before model number to indicate ASME.

Limited warranty on tank and parts. Complete details in manual.

Listed with the California Energy Commission. Specify wattage, voltage and phase when ordering.

#### **Specification**

Furnish and install, where indicated, in accordance with manufacturer's instructions and in compliance with all rules and regulations of authorities having jurisdiction.

The heater(s) shall be ITCE Series Commercial Electric Model Number\_ as manufactured by American Water Heaters or equivalent. Heater(s) shall be rated at \_phase, 60 cycle AC listed by Underwriters' Laboratories and approved to the NSF Standard 5 by UL. Water heater shall have LCD display with built-in diagnostic and troubleshooting information. Tank(s) shall be (50, 80 or 119) gallon capacity with 150 psi working pressure and equipped with dual extruded high density anodes. 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 range of 1400°F. to 1600°F. Electric heating elements shall be gold plated medium watt density screw-in type with Incoloy sheath and ceramic terminal block. Internal power circuit fusing shall be provided. Element operation shall be linear sequencing through individual magnetic contactors. Control circuit shall be factory fused and include an immersion thermistor temperature probe with built in ECO control. Control cabinet and jacket shall be of baked enamel finish and shall provide full size control and element compartment for complete service and maintenance performance through front hinged compartment door, and enclose tank with foam insulation. 1-1/4" inlet and outlet connection shall be provided. The heater tank shall have a three-year limited warranty and controls and accessories shall have a one-year limited warranty as outlined in the written warranty. Fully illustrated instruction manual to be included. For multiple installation, factory built manifold kits for\_ installation (maximum of 4 heaters) shall be provided. Meets ASHRAE 90.1b-1992 and ASHRAE/IESNA 90.1-2004.

### **Distributed By:**

#### **Order Entry and Sales**

500 Princeton Road (FEDEX, UPS) Johnson City, TN 37601-2030 P.O. Box 4808 (Mailing) Johnson City, TN 37602-4808 (800) 937-1037 FAX (800) 581-7224

#### **Warranty and Service**

500 Princeton Road (FEDEX, UPS) Johnson City, TN 37601-2030 P.O. Box 1597 (Mailing) Johnson City, TN 37605-1597 (800) 456-9805 FAX (800) 999-5210