



Submittal Sheet for Heavy Duty Commercial Electric Water Heaters

JOB NAME:

LOCATION:

ARCH./ENGR.:

WHOLESALE:

MECH. CONTRACTOR:

MODEL NUMBER:

ELECTRICAL SPECIFICATIONS:

NOTES:

Heavy Duty Models

- Available in 48, 73, and 119 gallon capacities
- Standard Voltages: 208V, 240V, 277V, 480V, and 600V
- Available in single or three phase operation for installation flexibility
- Blue Cobalt Glass-Lined Steel Tank provides the best coating available against corrosion – Certified to a test pressure of 300 PSI and working pressure of 150 PSI
- 2” of urethane insulation offers superior insulation, minimal heat loss, and energy efficiency
- 1 ½” NPT dielectric inlet and outlet connections for all models – prevents excessive mixing of heated water, resulting in improved tank draw
- Dual High Quality 1” diameter Magnesium Anodes positioned parallel provide superior coverage and protection against the corrosive effects of water and extend tank life

Ease of Installation

- Factory Installed Wiring eliminates the need for splicing and taping wires
- Factory Installed Terminal Block simplifies installation. Just bring the service to the junction box and connect to the block.
- Heavy-Duty Contactors installed to meet all anticipated loads and provide years of trouble-free service
- Single Panel Junction Box is equipped with a hinged door to allow easy access to all electrical components. The panel comes with a variety of knockout sizes for conduit ranging from ½” to 2” to ease connections of all wiring sizes
- Heaters can be wired in either single or three phase

Electric Elements

- All models equipped with CSA approved bolt-on resistor type immersion elements. Elements can be easily replaced without special tools, resulting in low maintenance costs
- Direct Immersion allows maximum recovery efficiency (up to 98%)
- Twist-Lock Flanges ease element replacement
- Element Panel allows direct access to the elements without opening the junction box
- Adjustable surface mounted thermostat(s) provide years of reliable, trouble-free service at the desired water temperature

Certifications and Ratings

Efficiency

- Tested below the maximum allowable standby loss levels of current ASHRAE standards in accordance to ANSI test procedures
- Exceeds energy efficiency codes of all states, including California Energy Commission (CEC)

Safety and Construction

- Design certified to meet UL Standard 1453 as electric booster and commercial storage tank water heaters
- Lead Free Compliant, as required by the Safe Drinking Water Act, Section 1417

Additional Features

- Extended Limited Warranty if registered online – 5 years coverage against inner tank leakage from the date of installation – 1 year coverage on component parts
- Standard Limited Warranty – 3 years coverage against inner tank leakage from the date of installation – 1 year coverage on component parts
- ASME rated Temperature and Pressure Relief Valve
- Installed Full Port Brass Drain Valve

Model	# Elements	Available Wattage	Voltage					Phase
			208	240	277 ^A	480	600 ^B	
CGE050	3	13,500	W / Z	W / Z	W ^A	W / Z	Z ^B	1 / 3
		15,000						
		18,000						
CGE080	6	18,000	W / Z	W / Z	W ^A	W / Z	Z ^B	1 / 3
		24,000						
		27,000						
		30,000						
		36,000						
9	9	40,500	W / Z	W / Z	W ^A	W / Z	Z ^B	1 / 3
		45,000						
		54,000						

Model	# Elements	Available Wattage	Voltage					Phase
			208	240	277 ^A	480	600 ^B	
CGE119	3	13,500	W / Z	W / Z	W ^A	W / Z	Z ^B	1 / 3
		15,000						
		18,000						
6	6	18,000	X / T	X / T	W ^A	X / T	T ^B	1 / 3
		24,000						
		27,000						
		30,000						
		36,000						
9	9	40,500	X / T	X / T	W ^A	X / T	T ^B	1 / 3
		45,000						
		54,000						

NOTES:
^A - 277 V is available ONLY in Single Phase
^B - 600 V is available ONLY in Three Phase

W – Single Phase – Simultaneous
X – Single Phase – Staged
Z – 3 Phase – Simultaneous
T – 3 Phase – Staged

Stock Code Guide - Sample Ordering Information

Tank Ordering Information

Product Type
CGE – Commercial Electric Glass Lined

Model

CGE 050

Element Ordering Information

Rated Voltage
B = 208 D = 277
C = 240 E = 480
 F = 600

Input Rating (100's of Watts)
3 Digits

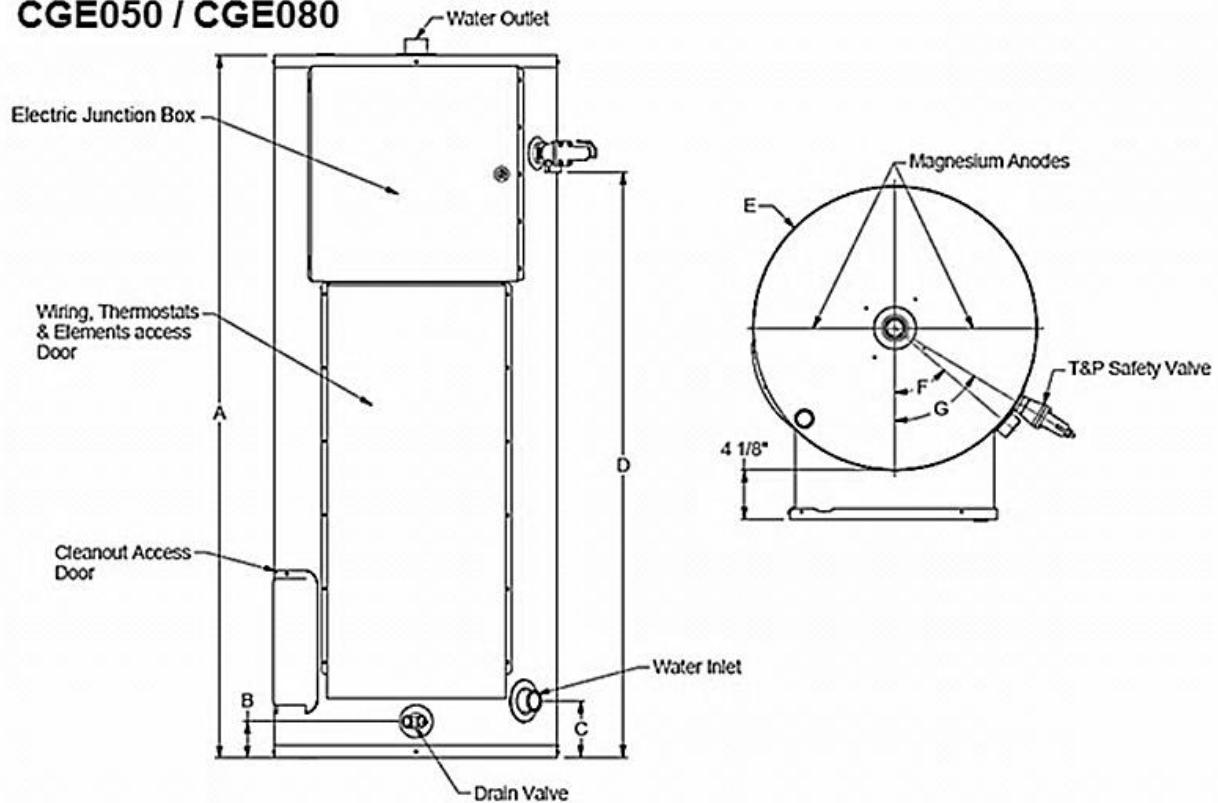
Element Construction
M = Copper Bolt-On

Phase / Operation
W = Single Phase - Simultaneous
X = Single Phase – Staged
Z = 3 Phase – Simultaneous
T = 3 Phase - Staged

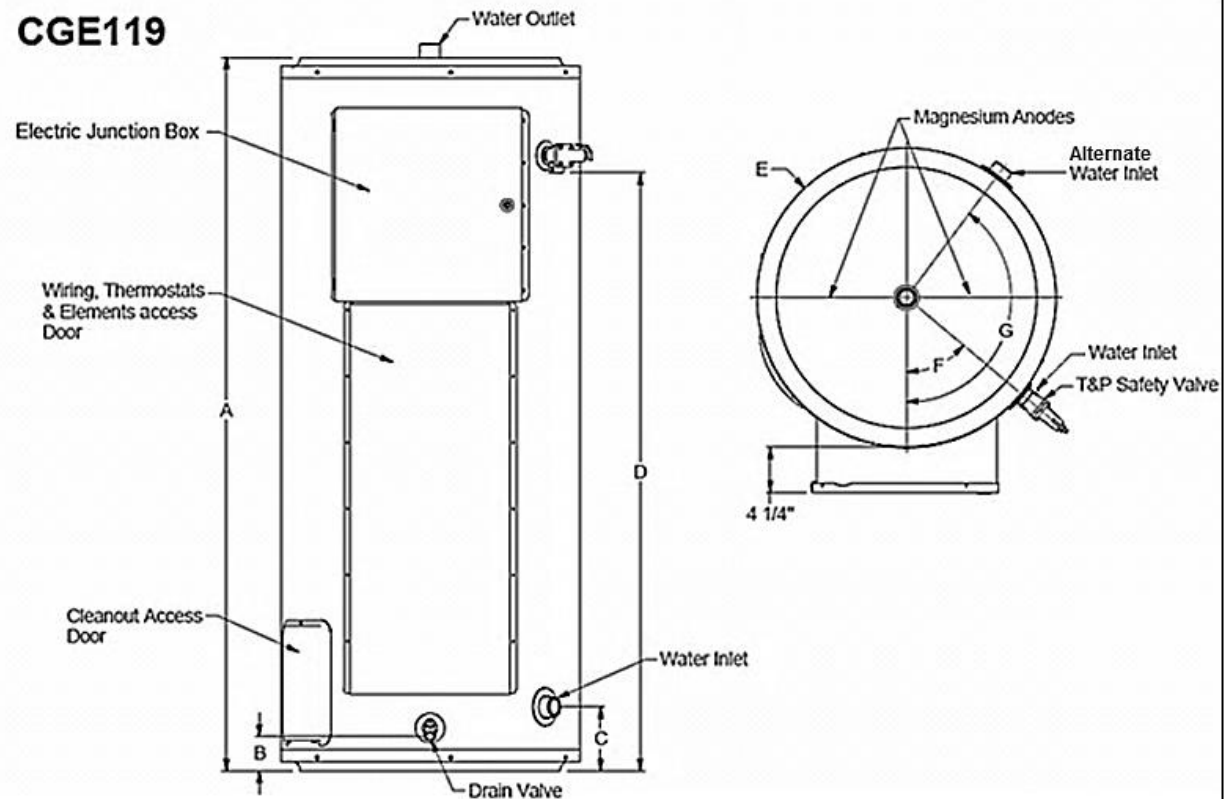
Number of Elements

C 3 W 135 M

CGE050 / CGE080



CGE119



SPECIFICATIONS AND DIMENSIONS (INCHES)							SHIPPING WEIGHT (EST)		WATER TEMPERATURE RATINGS						
									MIN. DELIVERED TEMP		MAX. DELIVERED TEMP		HIGH TEMP LIMIT		
MODEL	A (Height)	B	C	D	E (Diameter)	F	G	LBS	KG	°F	°C	°F	°C	°F	°C
CGE050	49 1/8	3 1/8	4 7/8	40 1/4	22	55°	65.4°	230	104	120	48.8	160	71.1	180	82.2
CGE080	59 5/8	3 1/8	4 7/8	49 3/4	24	50°	59°	380	172						
CGE119	67 1/4	3 3/8	6	56 3/8	28 3/16	143°	50°	423	192						

			FULL LOAD CURRENT IN AMPS								
INPUT	ELEMENTS		208 volts		240 volts		277 volts		480 volts		600 volts
			Phase		Phase		Phase		Phase		Phase
kW	# ELEMENTS	WATTAGE	1	3	1	3	1	1	3	3	
13.5	3	4500	65	38	57	33	49	29	17	13	
15		5000	73	42	63	37	55	32	18	15	
18		6000	-	-	75	44	65	38	22	18	
18	6	3000	87	50	75	44	65	38	22	18	
24		4000	116	67	100	58	87	50	29	24	
27		4500	130	75	113	65	98	57	33	26	
30		5000	145	84	125	73	109	63	37	29	
36		6000	-	-	150	87	130	75	44	35	
40.5		9	4500	195	113	169	98	147	85	49	39
45	5000		217	125	188	109	163	94	54	44	
54	6000		-	-	225	130	195	113	65	52	

050 & 080 MODELS			Surface Mounted (Models Less Than 600V)				Surface Mounted (600V Models)					
Input kW	No. Elements	Element Wattage	No. T'Stats	No. Fuses			No. Contactors	No. T'Stats	No. Fuses			No. Contactors
				30A	3A	High Limit			30A	3A	High Limit	
13.5	3	4500	1	6	2	1	2	1	-	2	1	1
15		5000										
18		6000										
18	6	3000	1	12	2	1	4	1	-	2	1	2
24		4000										
27		4500										
30		5000										
36		6000										
40.5	9	4500	1	18	2	1	6	1	-	2	1	3
45		5000										
54		6000										

119 MODELS			Surface Mounted (Models Less Than 600V)				Surface Mounted (600V Models)					
Input kW	No. Elements	Element Wattage	No. T'Stats	No. Fuses			No. Contactors	No. T'Stats	No. Fuses			No. Contactors
				30A	3A	High Limit			30A	3A	High Limit	
13.5	3	4500	1	6	2	1	2	-	-	-	-	-
15		5000										
18		6000										
18	6	3000	2	12	2	1	4	2	-	2	1	2
24		4000										
27		4500										
30		5000										
36		6000										
40.5	9	4500	3	18	2	1	6	3	-	2	1	3
45		5000										
54		6000										

Recovery Table for Commercial Electric Water Heater (US Gallons per Hour)												
INPUT		Temperature Rises (°F)										
kW	BTU	40	50	60	70	80	90	100	110	120	130	140
13.5	46,064	137	109	91	78	68	61	55	50	46	42	39
15	51,183	155	124	103	89	78	69	62	56	52	48	44
18	61,420	186	149	124	106	93	83	74	68	62	57	53
24	81,893	248	199	165	142	124	110	99	90	83	76	71
27	92,129	279	223	186	160	140	124	112	102	93	86	80
30	102,366	310	248	207	177	155	138	124	113	103	95	89
36	122,839	372	298	248	213	186	165	149	135	124	115	106
40.5	138,192	410	328	274	235	205	182	164	149	137	126	117
45	153,549	465	372	310	266	233	207	186	169	155	143	133
54	184,259	558	447	372	319	279	248	223	203	186	172	160

Element Kit Part Numbers								
Total Input (kW)	# Elements	Element Input (kW)	Voltage					
			208	240	277	480	600	
13.5	3	4.5	B3W135M B3Z135M	C3W135M C3Z135M	D3W135M	E3W135M E3Z135M	F3Z135M	
15		5	B3W150M B3Z150M	C3W150M C3Z150M	D3W150M	E3W150M E3Z150M	F3Z150M	
18		6	-		C3W180M C3Z180M	D3W180M	E3W180M E3Z180M	F3Z180M
18	6	3	B6W180M B6Z180M	C6W180M C6Z180M	D6W180M	E6W180M E6Z180M	F6Z180M F6T180M	
24		4	B6W240M B6Z240M	C6W240M C6Z240M	D6W240M	E6W240M E6Z240M	F6Z240M F6T240M	
27		4.5	B6W270M B6Z270M	C6W270M C6Z270M	D6W270M	E6W270M E6Z270M	F6Z270M F6T270M	
30		5	B6W300M B6Z300M	C6W300M C6Z300M	D6W300M	E6W300M E6Z300M	F6Z300M F6T300M	
36		6	-		C6W360M C6Z360M	D6W360M	E6W360M E6Z360M	F6Z360M F6T360M
40.5		9	4.5	B9W405M B9Z405M B9X405M B9T405M	C9W405M C9Z405M C9X405M C9T405M	D9W405M	E9W405M E9Z405M E9X405M E9T405M	F9Z405M F9T405M
45	5		B9W450M B9Z450M B9X450M B9T450M	C9W450M C9Z450M C9X450M C9T450M	D9W450M	E9W450M E9Z450M E9X450M E9T450M	F9Z450M F9T450M	
54	6		-		C9W540M C9Z540M C9X540M C9T540M	D9W540M	E9W540M E9Z540M E9X540M E9T540M	F9Z540M F9T540M