

# SANDBLASTER®

## Commercial Electric Water Heaters With Automatic Self-Cleaning

State's Sandblaster® is the original Self-Cleaning commercial electric water heater, with a proven design that automatically reduces sediment build-up, the number one threat to any water heater's life expectancy and energy efficiency.



Sandblaster electric water heaters are equipped with a cold water inlet tube that directs incoming cold water to create Self-Cleaning turbulence in the tank. Self-Cleaning action keeps sediment in suspension, so it does not get a chance to settle down, and is harmlessly carried out when hot water is drawn. With reduced sediment build-up, Sandblaster retains its rated efficiency longer, lasts longer, and helps keep water heating costs down!

### Other Sandblaster commercial electric water heater features include:

- **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 (1034 kPa) working pressure. Foam insulation reduces costly heat loss and is vermin proof.
- **Elements** – Incoloy sheathing for longer life. Low watt density means lower surface temperature to minimize scale build-up and more surface to heat water. Element sizes from 3 to 6 kW. Use 3, 6 or 9 elements standard; total of 9 to 54 kW input (see chart on page 3).
- **Fusing** – Protects all elements, thermostats, and internal wiring circuits against excess current flow. Meets National Electric Code requirements that non-ASME tanks must have internal fusing 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. 277V single-phase also available.
- **Terminal Block** – Factory installed. Just bring the service to the heater and connect to block.
- **Controls** – Available with either immersion (IFE models) or surface thermostat (SFE models). Immersion temperature control adjustable through a range of 60°F to 180°F. Manual reset high temperature cutoff. Surface mount models have one temperature control (adjustable through a range of 120°F to 180°F) and manual reset high temperature cutoff per element. Thermostat step control may be achieved by varying settings on individual temperature controls. All controls located behind hinged control compartment door for quick, easy access.

### The Superior Sandblaster Warranty

Every Sandblaster is covered by a 3-year standard warranty against tank leaks. An optional 5-year extended tank warranty is also available on 50, 80 and 119-gallon models. Unlike other manufacturers, State has so much confidence in Sandblaster's superior construction and Self-Cleaning design, there is no "fine print" excluding failure caused by sediment build-up in either the standard 3-year or optional 5-year extended warranty.

For more information on the Sandblaster® contact:  
State Water Heaters  
500 Tennessee Waltz Parkway, Ashland City, TN 37015  
800-365-0024 Toll-free USA  
www.statewaterheaters.com

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All Sandblaster electric commercial water heaters are certified by Underwriters Laboratories (UL) or Canadian Standards Association (CSA).

All models 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.

All models available with 208V, 240V, 277V or 480V elements.

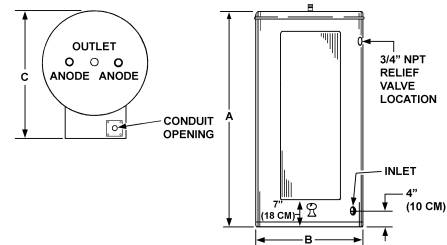
Model Number	Tank Capacity	Total Wattage	kW Input	Number of Elements	First Hour Delivery Gallons 100° Rise	Recovery (GPH) At Degree F Rise			Dimensions In Inches			Approximate Shipping Weight (lbs.)	
						80°	100°	140°	A	B	C	Standard	ASME
<b>50-GALLON</b>													
CSB 52 6 IFE	50	6,000	6	3	61	31	25	18	55 1/4	21 3/4	27 1/4	260	316
CSB 52 9 IFE	50	9,000	9	3	73	46	37	26	55 1/4	21 3/4	27 1/4	260	316
CSB 52 12 IFE	50	12,000	12	3	85	61	49	35	55 1/4	21 3/4	27 1/4	260	316
CSB 52 13.5 IFE	50	13,500	13.5	3	91	69	55	40	55 1/4	21 3/4	27 1/4	260	316
CSB 52 15 IFE	50	15,000	15	3	97	77	61	44	55 1/4	21 3/4	27 1/4	260	316
CSB 52 18 IFE	50	18,000	18	3*	109	92	74	53	55 1/4	21 3/4	27 1/4	260	316
CSB 52 24 IFE	50	24,000	24	6	122	123	98	70	55 1/4	21 3/4	27 1/4	265	316
CSB 52 27 IFE	50	27,000	27	6	146	138	111	79	55 1/4	21 3/4	27 1/4	265	316
CSB 52 30 IFE	50	30,000	30	6	159	154	123	88	55 1/4	21 3/4	27 1/4	265	316
CSB 52 40.5 IFE	50	40,500	41	9	222	208	166	119	55 1/4	21 3/4	27 1/4	265	316
CSB 52 45 IFE	50	45,000	45	6	219	230	184	132	55 1/4	21 3/4	27 1/4	265	316
CSB 52 54 IFE	50	54,000	54	6	256	277	221	158	55 1/4	21 3/4	27 1/4	265	316
<b>80-GALLON</b>													
CSB 82 6 IFE	80	6,000	6	3	82	31	25	18	59 1/2	25 1/4	31 1/4	280	325
CSB 82 9 IFE	80	9,000	9	3	94	46	37	26	59 1/2	25 1/4	31 1/4	280	325
CSB 82 12 IFE	80	12,000	12	3	106	61	49	35	59 1/2	25 1/4	31 1/4	280	325
CSB 82 13.5 IFE	80	13,500	13.5	3	112	69	55	40	59 1/2	25 1/4	31 1/4	280	325
CSB 82 15 IFE	80	15,000	15	3	118	77	61	44	59 1/2	25 1/4	31 1/4	280	325
CSB 82 18 IFE	80	18,000	18	3*	130	92	74	53	59 1/2	25 1/4	31 1/4	280	325
CSB 82 24 IFE	80	24,000	24	6	122	123	98	70	59 1/2	25 1/4	31 1/4	280	325
CSB 82 27 IFE	80	27,000	27	6	167	138	111	79	59 1/2	25 1/4	31 1/4	280	325
CSB 82 30 IFE	80	30,000	30	6	180	154	123	88	59 1/2	25 1/4	31 1/4	280	325
CSB 82 36 IFE	80	36,000	36	6*	204	184	148	105	59 1/2	25 1/4	31 1/4	280	325
CSB 82 40.5 IFE	80	40,500	41	9	222	208	166	119	59 1/2	25 1/4	31 1/4	280	325
CSB 82 45 IFE	80	45,000	45	6	240	230	184	132	59 1/2	25 1/4	31 1/4	280	325
CSB 82 54 IFE	80	54,000	54	6	277	277	221	158	59 1/2	25 1/4	31 1/4	280	325
<b>119-GALLON</b>													
CSB 120 6 IFE	119	6,000	6	3	109	31	25	18	62 1/4	29 1/2	35 3/4	390	415
CSB 120 9 IFE	119	9,000	9	3	121	46	37	26	62 1/4	29 1/2	35 3/4	390	415
CSB 120 12 IFE	119	12,000	12	3	133	61	49	35	62 1/4	29 1/2	35 3/4	390	415
CSB 120 13.5 IFE	119	13,500	13.5	3	129	69	55	40	62 1/4	29 1/2	35 3/4	390	415
CSB 120 15 IFE	119	15,000	15	3	145	77	61	44	62 1/4	29 1/2	35 3/4	390	415
CSB 120 18 IFE	119	18,000	18	3*	157	92	74	53	62 1/4	29 1/2	35 3/4	390	415
CSB 120 24 IFE	119	24,000	24	6	122	123	98	70	62 1/4	29 1/2	35 3/4	390	415
CSB 120 27 IFE	119	27,000	27	6	194	138	111	79	62 1/4	29 1/2	35 3/4	390	415
CSB 120 30 IFE	119	30,000	30	6	207	154	123	88	62 1/4	29 1/2	35 3/4	390	415
CSB 120 36 IFE	119	36,000	36	6*	231	184	148	105	62 1/4	29 1/2	35 3/4	390	415
CSB 120 40.5 IFE	119	40,500	41	9	222	208	166	119	62 1/4	29 1/2	35 3/4	390	415
CSB 120 45 IFE	119	45,000	45	6	267	230	184	132	62 1/4	29 1/2	35 3/4	390	415
CSB 120 54 IFE	119	54,000	54	6	304	277	221	158	62 1/4	29 1/2	35 3/4	390	415

\* 208 volt models may contain 3 additional elements.

To order surface-mounted thermostats, change "IFE" to "SFE" in model number (CSB 120 54 SFE).

To order ASME Construction models, add "A" to model number (CSB 120 54 IFE A).

All models have 1 1/4" NPT inlet and outlet connections.



For more information on the Sandblaster® contact:  
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**Maximum Delivery-Constant Use**  
 MAXIMUM DELIVERY IN GALLONS, NOT INCLUDING USEABLE STORAGE

Model Size	kW Input	Maximum Delivery (GPH / GPM) at Specified Temperature Rise										
		40°	50°	60°	70°	80°	90°	100°	110°	120°	130°	140°
52, 82 or 120-6	6	62 / 1.0	49 / 0.82	41 / 0.68	35 / 0.59	31 / 0.51	27 / 0.46	25 / 0.41	22 / 0.4	21 / 0.34	19 / 0.32	18 / 0.29
52, 82 or 120-9	9	92 / 1.5	74 / 1.23	61 / 1.03	53 / 0.88	46 / 0.77	41 / 0.68	37 / 0.62	34 / 0.6	31 / 0.51	28 / 0.47	26 / 0.44
52, 82 or 120-12	12	123 / 2.1	98 / 1.64	82 / 1.37	70 / 1.17	61 / 1.03	55 / 0.91	49 / 0.82	45 / 0.7	41 / 0.68	38 / 0.63	35 / 0.59
52, 82 or 120-13.5	13.5	138 / 2.3	111 / 1.85	92 / 1.54	79 / 1.32	69 / 1.15	62 / 1.03	55 / 0.92	50 / 0.8	46 / 0.77	43 / 0.71	40 / 0.66
52, 82 or 120-15	15	154 / 2.6	123 / 2.05	103 / 1.71	88 / 1.46	77 / 1.28	68 / 1.14	62 / 1.03	56 / 0.9	51 / 0.85	47 / 0.79	44 / 0.73
52, 82 or 120-18	18	185 / 3.1	148 / 2.46	123 / 2.05	105 / 1.76	92 / 1.54	82 / 1.37	74 / 1.23	67 / 1.1	62 / 1.03	57 / 0.95	53 / 0.88
52, 82 or 120-24	24	246 / 4.1	197 / 3.28	164 / 2.73	140 / 2.33	123 / 2.05	109 / 1.82	98 / 1.63	90 / 1.5	82 / 1.37	76 / 1.27	70 / 1.17
52, 82 or 120-27	27	277 / 4.6	221 / 3.69	185 / 3.08	158 / 2.64	138 / 2.31	123 / 2.05	111 / 1.85	101 / 1.7	93 / 1.54	85 / 1.42	79 / 1.32
52, 82 or 120-30	30	308 / 5.1	246 / 4.10	205 / 3.42	176 / 2.93	154 / 2.56	137 / 2.28	123 / 2.05	112 / 1.9	103 / 1.71	95 / 1.58	88 / 1.46
52, 82 or 120-36	36	369 / 6.2	295 / 4.92	246 / 4.10	211 / 3.51	185 / 3.08	164 / 2.73	148 / 2.46	134 / 2.2	123 / 2.05	114 / 1.89	105 / 1.76
52, 82 or 120-40.5	40.5	418 / 6.97	332 / 5.53	277 / 4.62	237 / 3.95	208 / 3.47	185 / 3.08	166 / 2.77	151 / 2.52	138 / 2.3	128 / 2.13	119 / 1.98
52, 82 or 120-45	45	461 / 7.7	369 / 6.15	308 / 5.13	264 / 4.39	231 / 3.84	205 / 3.42	185 / 3.08	168 / 2.8	154 / 2.56	142 / 2.37	132 / 2.20
52, 82 or 120-54	54	554 / 9.2	443 / 7.38	369 / 6.15	316 / 5.27	277 / 4.61	246 / 4.10	221 / 3.69	201 / 3.4	185 / 3.08	170 / 2.84	158 / 2.64

### Electrical Usage Information

Model Numbers			kW Input	Number of Elements	Wattage	Full Load Current in Amperes						
52	82	120				Single Phase				Three Phase		
						208V	240V	277V	480V	208V	240V	480V
CSB 52 6	CSB 82 6	CSB 120 6	6	3	2000	28.8	25.0	21.7	12.5	16.7	14.4	7.2
CSB 52 9	CSB 82 9	CSB 120 9	9	3	3000	43.3	37.5	32.5	18.8	25.0	21.7	10.8
CSB 52 12	CSB 82 12	CSB 120 12	12	3	4000	57.7	50.0	43.3	25.0	33.3	28.9	14.4
CSB 52 135	CSB 82 135	CSB 120 135	13.5	3	4500	64.9	56.3	48.7	28.1	37.5	32.5	16.2
CSB 52 15	CSB 82 15	CSB 120 15	15	3	5000	72.1	62.5	54.2	31.3	41.6	36.1	18.0
CSB 52 18	CSB 82 18	CSB 120 18	18	3*	6000	86.5	75.0	65.0	37.5	50.0	43.3	21.7
CSB 52 24	CSB 82 24	CSB 120 24	24	6	4000	115.4	100.0	86.6	50.0	66.6	57.7	28.9
CSB 52 27	CSB 82 27	CSB 120 27	27	6	4500	129.8	112.5	97.5	56.3	74.9	65.0	32.5
CSB 52 30	CSB 82 30	CSB 120 30	30	6	5000	144.2	125.0	108.3	62.5	83.3	72.2	36.1
CSB 52 36	CSB 82 36	CSB 120 36	36	6*	6000	173.1	150.0	130.0	75.0	99.9	86.6	43.3
CSB 52 405	CSB 82 405	CSB 120 405	40.5	9	4500	194.7	168.8	146.2	84.4	112.4	97.4	48.7
CSB 52 45	CSB 82 45	CSB 120 45	45	9	5000	216.3	187.5	162.5	93.8	124.9	108.3	54.1
CSB 52 54	CSB 82 54	CSB 120 54	54	9	6000	N/A	225.0	194.9	112.5	149.9	129.9	65.0

\*208 volt model may contain three (3) additional elements.

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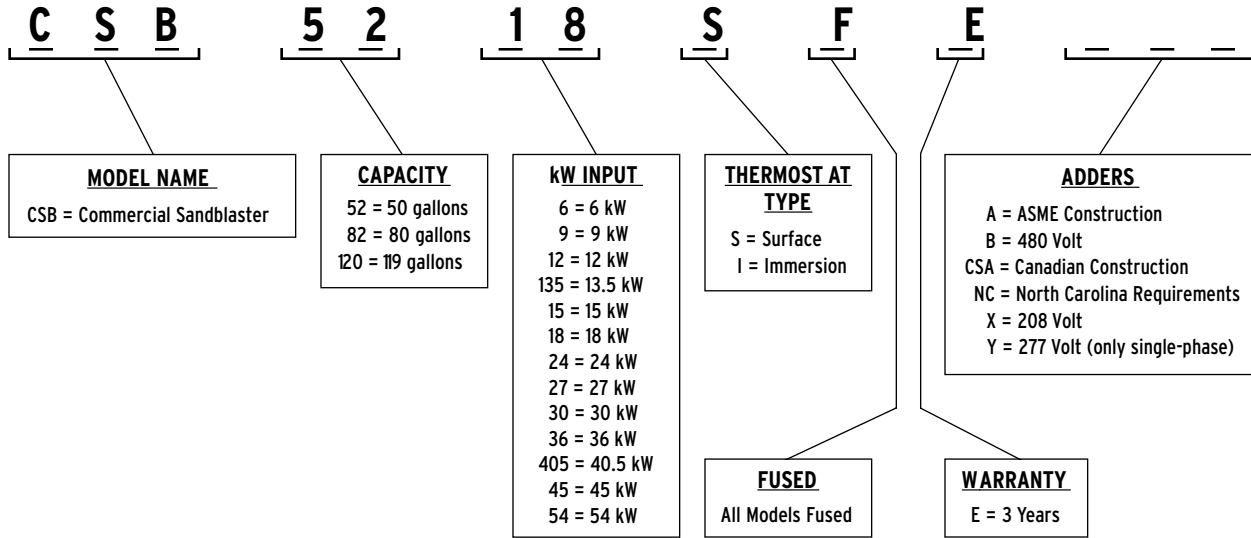
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## Commercial Electric Water Heaters

### Reading Sandblaster Electric Water Heater Model Numbers



**SPECIAL NOTE:** All model numbers appearing on rating plate and carton labels will be compressed.  
**EXAMPLES:** CSB5254IFE; CSB8254IFE; CSB12054IFE.

### Sandblaster Electric Sample Specifications

The heater(s) shall be Sandblaster Commercial Electric Model Number \_\_\_\_\_ as manufactured by State Water Heaters or an approved equal. Heater(s) shall be rated at \_\_\_\_\_ kW, \_\_\_\_\_ volts, \_\_\_\_\_ phase, 60 cycle AC, and listed by Underwriter's Laboratories. Tank(s) shall be \_\_\_\_\_ gallon capacity. Heater(s) shall have 150 psi working pressure and be equipped with extruded high density anode. 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 low watt density with incoloy sheath and 1" screw-in type. Each element shall be controlled by an individually mounted thermostat and high temperature cut-off switch. All internal circuits shall be fused. The outer jacket shall be of baked enamel finish and shall be provided with full size control compartment for performance of service and maintenance through hinged front panel and shall enclose the tank with foam insulation. Electrical junction box with heavy duty terminal block shall be provided. The drain valve shall be located in the front for ease of servicing. Heater tank shall have a three-year limited warranty as outlined in the written warranty. Manufacturer shall supply CSA Certified and ASME Rated T&P Relief Valve.

In keeping with our policy of continuous product improvement, specifications are subject to change without prior notice. For complete details on Commercial Water Heater Warranties, contact State Water Heaters or your State Sales Representative.

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