



MODELS
CSB 52, 82, 120
SURFACE MOUNT THERMOSTATS



SANDBLASTER
COMMERCIAL ELECTRIC WATER HEATERS

Designed for use as a recovery heater having its own storage tank. Note: Not recommended for sanitizing water application.

FEATURES

Meets or exceeds the requirements of ASHRAE 90.1b-1992 and ASHRAE/IESNA 90.1-2004.

GOLD ELEMENTS - CSB models ship with the gold plated elements (see element availability chart on back). Patented gold elements provide long life and superior scaling resistance. Low watt density means lower surface temperature to minimize scale buildup and more surface to heat water. Gold elements carry a one-year warranty against failure due to lime scale build-up.

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 (ASME 150 psi). Foam insulation reduces costly heat loss, and is vermin proof.

FUSING - Protects all elements, thermostats, and internal wiring circuits against excess current flow. Meets National Electrical 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 - One temperature control (adjustable through a range of 120° to 180°F) and manual reset high temperature cut-off per element. Thermostat step control may be achieved by varying settings on individual temperature controls. Located behind hinged control compartment door for quick, easy access.

OTHER STANDARD FEATURES -

- Surface mounted thermostats
- Simplified circuitry, color coded for ease of service
- Two anode rods for maximum corrosion protection
- Cabinet has bonderized undercoat with baked enamel finish
- Bottom inlet and top outlet openings
- Brass drain valve
- CSA / ASME temperature and pressure relief valve
- Single panel control box.
- **THREE YEAR LIMITED TANK WARRANTY** - For complete warranty information, consult written warranty or contact State Water Heaters.

OPTIONS -

- UL and cUL listed conversion kits to adjust voltage and kW requirements in the field before and after installation
- ASME 150 psi tank construction
- International voltages - 220, 380, 400, 415, 575, and 600 volts, three phase available with Y connected elements
- **MANIFOLD KITS** - for multiple tank installations. Two heaters - part # 9003429205, three heaters- part # 9003430205 and four heaters- part # 9003431205

ASME
(OPTIONAL)



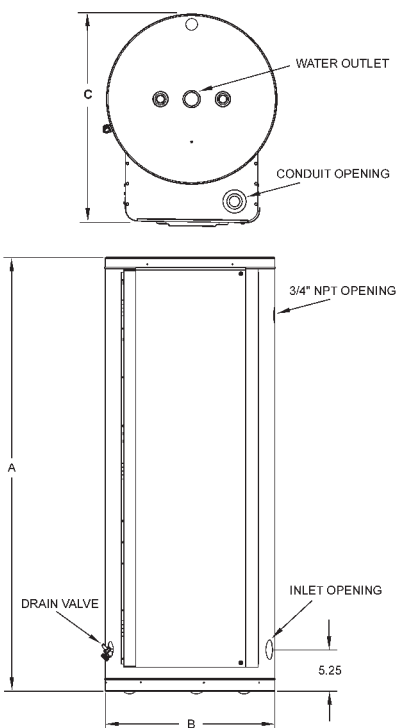


RECOVERY RATE IN GALLONS PER HOUR AT TEMPERATURE RISE OF

Standard kW Input	BTU/ Hour	30°F 17°C	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
6	20,478	82	62	49	41	35	31	27	25	22	21	19	18
9	30,717	123	92	74	62	53	46	41	37	34	31	28	26
12	40,956	164	123	98	82	70	61	55	49	45	41	38	35
13.5	46,075	184	138	111	92	79	69	62	55	50	46	43	40
15	51,195	205	154	123	102	88	77	68	61	56	51	47	44
18	61,434	246	184	148	123	105	92	82	74	67	62	57	53
24	81,912	328	246	197	164	140	123	109	98	90	82	76	70
27	92,151	369	276	221	185	158	138	123	111	101	92	85	79
30	102,390	410	307	246	205	176	154	137	123	112	102	95	88
36	122,868	492	369	295	246	211	184	164	148	134	123	113	105
40.5	138,226	554	418	332	277	237	208	185	166	151	138	128	119
45	153,585	615	461	369	307	263	230	205	184	168	154	142	132
54	184,302	738	554	443	359	316	277	246	221	201	185	170	158
		2791	2094	1675	1396	1196	1047	930	837	761	696	644	598

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

Model Number	Tank Capacity		Dimensions						Inlet/Outlet (NPT)		Approx. Ship. Wt. (Lbs.)	
			A		B		C					
	gal.	litre	in.	cm	in.	cm	in.	cm	in.	cm	lb	kg
CSB 52**SFE	50	189	55 3/4	142	21 3/4	55.2	27	68.6	1 1/4	3.2	265	120
CSB 82**SFE	80	300	60 1/4	153	25 1/2	64.8	31	78.7	1 1/4	3.2	280	127
CSB 120**SFE	119	450	62 1/4	158.1	29 1/2	75.0	35	88.9	1 1/4	3.2	390	177



kW Input	Model Numbers Tank Capacity in Gallons			Number Of Elements	Element Wattage	Full Load Current In Amperes						
	50	80	119			Single Phase			Three Phase			
						208V	240V	277V	480V	208V	240V	480V
6	CSB 52 6 SFE	CSB 82 6 SFE	CSB 120 6 SFE	3	2,000	28.8	25.0	21.7	12.5	16.7	14.4	7.2
9	CSB 52 9 SFE	CSB 82 9 SFE	CSB 120 9 SFE	3	3,000	43.3	37.5	**32.5	18.8	25.0	21.7	10.8
12	CSB 52 12 SFE	CSB 82 12 SFE	CSB 120 12 SFE	3	4,000	57.7	50.0	43.3	25.0	33.3	28.9	14.4
13.5	CSB 52 135 SFE	CSB 82 135 SFE	CSB 120 135 SFE	3	4,500	64.9	56.3	**48.7	28.1	37.5	32.5	16.2
15	CSB 52 15 SFE	CSB 82 15 SFE	CSB 120 15 SFE	3	5,000	72.1	62.5	**54.2	31.3	41.6	36.1	18.0
18	CSB 52 18 SFE	CSB 82 18 SFE	CSB 120 18 SFE	3*	6,000	86.5	75.0	65.0	37.5	50.0	43.3	21.7
24	CSB 52 24 SFE	CSB 82 24 SFE	CSB 120 24 SFE	6	4,000	115.4	100.0	86.6	50.0	66.6	57.7	28.9
27	CSB 52 27 SFE	CSB 82 27 SFE	CSB 120 27 SFE	6	4,500	129.8	112.5	**97.5	56.3	74.9	65.0	32.5
30	CSB 52 30 SFE	CSB 82 30 SFE	CSB 120 30 SFE	6	5,000	144.2	125.0	**108.3	62.5	83.3	72.2	36.1
36	CSB 52 36 SFE	CSB 82 36 SFE	CSB 120 36 SFE	6*	6,000	173.1	150.0	130.0	75.0	99.9	86.6	43.3
40.5	N/A	CSB 82 405 SFE	CSB 120 405 SFE	9	4,500	194.7	168.8	**146.2	84.4	112.4	97.4	48.7
45	N/A	CSB 82 45 SFE	CSB 120 45 SFE	9	5,000	216.3	187.5	**162.5	93.8	124.9	108.3	54.1
54	N/A	CSB 82 54 SFE	CSB 120 54 SFE	9	6,000	N/A	225.0	194.9	112.5	149.9	129.9	65.0

*208 volt models may contain three (3) additional elements. ** Elements available in incoloy only.

SUGGESTED SPECIFICATION

The heater(s) shall be SandBlaster CSB Series Commercial Electric Model Number _____ as manufactured by State Industries shall be rated at _____ kW, _____ volts, _____ phase, 60 cycle AC, and listed by Underwriters' Laboratories and approved to the NSF Standard 5 by UL. Tank(s) shall be _____ gallon capacity. Tanks shall be 50, 80 and 119 gallon capacity and 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 gold plated low watt density 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 ASME rated temperature and pressure relief valve. Fully illustrated instruction manual to be included. Meets ASHRAE 90.1b -1992 and ASHRAE/IESNA 90.1-2004.