MODELS
CSB 52, 82, 120
IMMERSION MOUNT THERMOSTATS

SANDBLASTER
COMMERCIAL ELECTRIC WATER HEATERS

Designed for use as a recovery heater having its own storage tank or booster for supplying sanitizing rinse water for dishwashing.

FEATURES

Meets the standby loss requirements of the U.S. Department of Energy and current edition ASHRAE/IESNA 90.1.

ADVANCED ELECTRONIC CONTROL - Plain English text and animated icons display detailed operational and diagnostic information. Fault or Alert messages appear if an operational issue occurs. Immersion temperature control adjustable through a range of 90°F to 190°F.

- iCOMM™ compatible and can be monitored from remote locations. Call 1.888.WATER02 for more information.

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 ELEMENTS - CSB models ship with the gold plated elements (see element availability chart on back). Patented 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 buildup.

GLASSLINED 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.

MAGNETIC CONTACTORS - Heavy duty, UL rated 100,000 cycles.

OTHER STANDARD FEATURES -

■ Immersion style 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 certified and ASME rated T&P 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 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)

Low Lead Content

For more information on this product 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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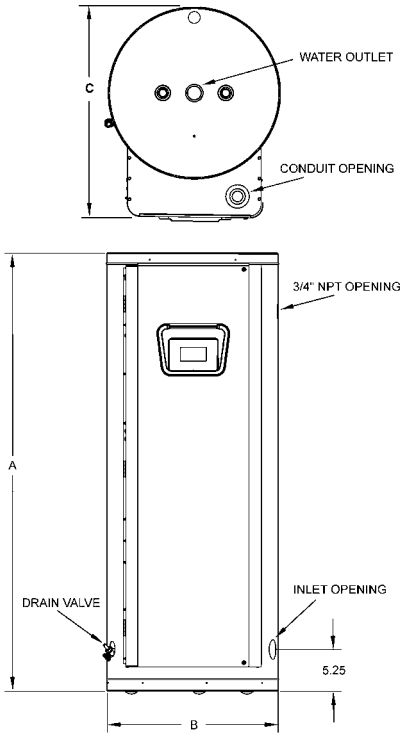

RECOVERY RATE IN GALLONS PER HOUR AT TEMPERATURE RISE OF

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	82 310	62 233	49 166	41 155	35 133	31 116	27 103	25 93	22 85	21 78	19 72	18 66
9	30,717	123 465	92 349	74 279	62 233	53 199	46 174	41 155	37 140	34 127	31 116	28 107	26 100
12	40,956	164 620	123 465	98 372	82 310	70 266	61 233	55 207	49 186	45 169	41 155	38 143	35 133
13.5	46,075	184 698	138 523	111 419	92 349	79 299	69 262	62 233	55 209	50 190	46 174	43 161	40 150
15	51,195	205 775	154 582	123 465	102 388	88 332	77 291	68 258	61 233	56 211	51 194	47 149	44 166
18	61,434	246 930	184 698	148 558	123 465	105 399	92 349	82 310	74 279	67 254	62 233	57 215	53 199
24	81,912	328 1241	246 930	197 744	164 620	140 532	123 465	109 414	98 372	90 338	82 310	76 286	70 266
27	92,151	369 1396	276 1047	221 938	185 609	158 509	138 523	123 465	111 410	101 391	92 340	85 322	79 299
30	102,390	410 1551	307 1163	246 930	205 775	176 665	154 582	137 517	123 465	112 423	102 388	95 358	88 332
36	122,868	492 1861	369 1396	295 1117	246 930	211 798	184 698	164 620	148 556	134 508	123 465	113 429	105 399
40.5	138,226	554 2094	418 1570	332 1256	277 1047	237 897	208 785	185 698	166 628	151 634	138 582	128 537	119 498
45	153,585	615 2326	461 1745	369 1398	307 1163	263 997	230 872	205 755	184 698	168 634	154 582	142 537	132 498
54	184,302	738 2791	554 2094	443 1675	359 1396	316 1196	277 1047	246 930	221 837	201 761	185 696	170 644	158 598

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**IFE	50	189	55 3/4	142	21 3/4	55.2	27	68.6	1 1/4	3.2	265	120
CSB 82**IFE	80	300	60 1/4	153	25 1/2	64.8	31	78.7	1 1/4	3.2	280	127
CSB 120**IFE	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						
						Single Phase				Three Phase		
	50	80	119			208V	240V	277V	480V	208V	240V	480V
6	CSB 52 6 IFE	CSB 82 6 IFE	CSB 120 6 IFE	3	2,000	28.8	25.0	21.7	12.5	16.7	14.4	7.2
9	CSB 52 9 IFE	CSB 82 9 IFE	CSB 120 9 IFE	3	3,000	43.3	37.5	**32.5	18.8	25.0	21.7	10.8
12	CSB 52 12 IFE	CSB 82 12 IFE	CSB 120 12 IFE	3	4,000	57.7	50.0	43.3	25.0	33.3	28.9	14.4
13.5	CSB 52 135 IFE	CSB 82 135 IFE	CSB 120 135 IFE	3	4,500	64.9	56.3	**48.7	28.1	37.5	32.5	16.2
15	CSB 52 15 IFE	CSB 82 15 IFE	CSB 120 15 IFE	3	5,000	72.1	62.5	**54.2	31.3	41.6	36.1	18.0
18	CSB 52 18 IFE	CSB 82 18 IFE	CSB 120 18 IFE	3*	6,000	86.5	75.0	65.0	37.5	50.0	43.3	21.7
24	CSB 52 24 IFE	CSB 82 24 IFE	CSB 120 24 IFE	6	4,000	115.4	100.0	86.6	50.0	66.6	57.7	28.9
27	CSB 52 27 IFE	CSB 82 27 IFE	CSB 120 27 IFE	6	4,500	129.8	112.5	**97.5	56.3	74.9	65.0	32.5
30	CSB 52 30 IFE	CSB 82 30 IFE	CSB 120 30 IFE	6	5,000	144.2	125.0	**108.3	62.5	83.3	72.2	36.1
36	CSB 52 36 IFE	CSB 82 36 IFE	CSB 120 36 IFE	6*	6,000	173.1	150.0	130.0	75.0	99.9	86.6	43.3
40.5	CSB 52 405 IFE	CSB 82 405 IFE	CSB 120 405 IFE	9	4,500	194.7	168.8	**146.2	84.4	112.4	97.4	48.7
45	CSB 52 45 IFE	CSB 82 45 IFE	CSB 120 45 IFE	9	5,000	216.3	187.5	**162.5	93.8	124.9	108.3	54.1
54	CSB 52 54 IFE	CSB 82 54 IFE	CSB 120 54 IFE	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. Water heater shall have LCD display with built-in diagnostic and troubleshooting information. All internal surfaces of the heater(s) exposed to water shall be glasslined 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. Control circuit shall be factory fused and include an immersion thermistor temperature probe with built-in ECO control. 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. Fully illustrated instruction manual to be included. Meets standby loss requirements of the U.S. Department of Energy and current edition ASHRAE/IESNA 90.1.

For more information on this product 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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