



PowerSafe[®]
SBS 2 Volt



Telecommunications

NEBS™ Certified*

Battery Performance Specifications



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RESERVE
POWER

*Pending
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Construction

- Concast positive grids
- Negative plates - provide perfect balance with the positive plates to ensure optimum recombination efficiency
- Separators - superior quality microporous glass mat separator with high absorption and stability
- Containers and lids - UL94 V-0 rated flame retardant ABS material, highly resistant to shock and vibration
- Electrolyte - high grade dilute sulphuric acid absorbed into separator material
- Terminal design - proven, high integrity leak resistant terminal seal design
- Self-regulating pressure relief valves - prevent ingress of atmospheric oxygen
- Flame arrestors - built into each cell for increased operational safety

Installation and Operation

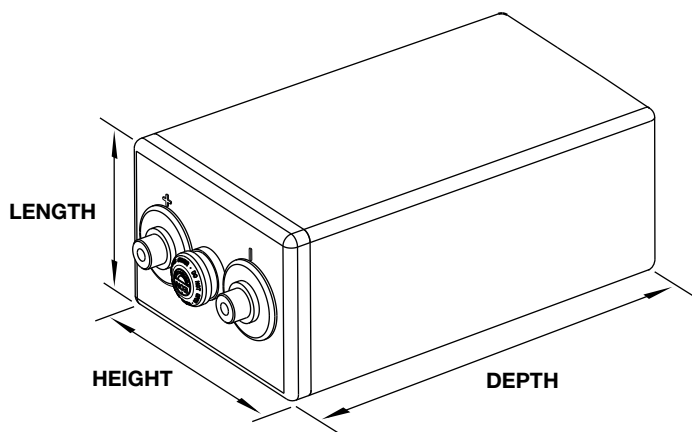
- Designed for operation in traditional float applications and cyclic/hybrid applications
- PowerSafe® SBS® batteries are designed for use in cabinets or on racks, close to the point of use. A separate battery room is not required
- SBS EON Technology® models can be mounted in any orientation except inverted. In cyclic/hybrid applications, EnerSys® recommends to install SBS 320 - 900 cells in horizontal orientation
- Up to two year shelf life
- Low maintenance: no water addition required
- Wide operating temperature range: -40°F to 122°F (-40°C to +50°C)

Standards

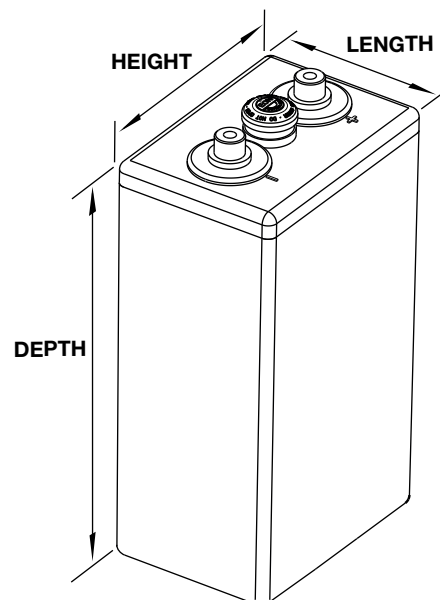
- Designed to be compliant with international standard IEC 60896/21 & 22
- UL recognized component
- Approved as non-hazardous cargo for ground, sea and air transportation in accordance with US DOT Regulation 49 and ICAO & IATA Packing Instruction 872
- The management systems governing the manufacture of PowerSafe SBS products are ISO 9001:2008 and ISO 14001:2004 certified

General Specifications

Battery Type	Nominal Capacity (Ah)			Nominal Dimensions								Electrolyte (1.300 S.G.)				Pure Acid (H ₂ SO ₄) Acid						
	Nominal Voltage (V)	10hr. Rate 1.80Vpc @ 20°C	8hr. Rate 1.75Vpc @ 77°F	Length		Height		Depth		Typical Weight Unpacked		Terminal Type	Volume (per cell)		Weight (per cell)		Volume (per cell)		Weight (per cell)		Lead Weight (per cell)	
			in	mm	in	mm	in	mm	in	mm	lbs		kg	gal	L	lbs	kg	gal	L	lbs	kg	lbs
SBS 320	2	320	320	4.10	104	8.10	206	15.9	404	44.1	20.0	M10 F	0.79	2.99	8.56	3.88	0.22	0.84	3.39	1.54	29.1	13.2
SBS 400	2	400	400	4.90	124	8.10	206	15.9	404	52.9	24.0	M10 F	0.98	3.71	10.6	4.81	0.28	1.04	4.21	1.91	35.3	16.0
SBS 480	2	480	480	5.70	145	8.10	206	15.9	404	61.7	28.0	M10 F	1.16	4.39	12.6	5.70	0.33	1.24	4.98	2.26	41.1	18.6
SBS 580	2	580	580	4.90	124	8.10	206	20.5	521	72.8	33.0	M10 F	1.40	5.30	15.2	6.88	0.39	1.49	6.01	2.73	48.9	22.2
SBS 680	2	680	680	5.70	145	8.10	206	20.5	521	84.9	38.5	M10 F	1.66	6.28	18.0	8.16	0.47	1.77	7.13	3.23	57.0	25.9
SBS 780	2	780	780	6.50	165	8.10	206	20.5	521	97.0	44.0	M10 F	1.93	7.31	20.9	9.48	0.54	2.06	8.29	3.76	65.4	29.7
SBS 900	2	900	900	5.70	145	8.10	206	27.4	696	110	50.0	M10 F	2.19	8.29	23.7	10.8	0.62	2.33	9.41	4.27	73.9	33.5



SBS 320 - 900



Constant Current

End Voltage 1.75 Vpc (Ampere Rating for Minutes to Specified End Voltage at 77.0°F)

	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
SBS320	318.2	289.2	246.5	214.3	188.5	125.5	93.5	73.8	60.8	51.8	45.2	40.1	32.9	17.4
SBS400	397.7	361.5	308.1	267.9	235.6	156.8	116.8	92.3	76.0	64.8	56.5	50.2	41.1	21.8
SBS480	477.3	433.8	369.7	321.5	282.8	188.2	140.2	110.7	91.2	77.7	67.8	60.2	49.3	26.1
SBS580	576.2	524.2	446.7	388.5	341.7	227.4	169.4	133.8	110.2	93.9	81.9	72.7	59.6	31.6
SBS680	676.2	614.6	523.7	455.5	400.6	266.6	198.6	156.9	129.3	110.1	96.0	85.3	69.8	37.0
SBS780	720.0	705.0	600.8	522.5	459.5	305.8	227.8	179.9	148.3	126.3	110.2	97.8	80.1	42.5
SBS900	720.0	719.9	693.2	602.8	530.2	352.9	262.9	207.6	171.1	145.7	127.1	112.9	92.4	49.0

End Voltage 1.80 Vpc (Ampere Rating for Minutes to Specified End Voltage at 77.0°F)

	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
SBS320	264.4	252.7	218.5	191.6	170.5	116.9	88.7	71.5	60.1	51.8	45.2	40.1	32.9	17.4
SBS400	330.5	315.9	273.1	239.5	213.1	146.1	110.9	89.4	75.1	64.7	56.5	50.2	41.1	21.8
SBS480	396.6	379.0	327.8	287.4	255.7	175.3	133.1	107.2	90.1	77.7	67.8	60.2	49.3	26.1
SBS580	479.2	458.0	396.0	347.3	309.0	211.8	160.8	129.6	108.9	93.9	81.9	72.7	59.6	31.6
SBS680	561.8	537.0	464.3	407.2	362.3	248.3	188.6	151.9	127.7	110.1	96.0	85.3	69.8	37.0
SBS780	644.4	615.9	532.6	467.1	415.6	284.9	216.3	174.3	146.4	126.3	110.2	97.8	80.1	42.5
SBS900	720.0	710.7	614.5	538.9	479.5	328.7	249.6	201.1	169.0	145.7	127.1	112.9	92.4	49.0

End Voltage 1.85 Vpc (Ampere Rating for Minutes to Specified End Voltage at 77.0°F)

	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
SBS320	210.9	210.9	187.0	166.2	149.4	105.4	81.2	66.2	56.0	48.6	42.9	38.5	32.1	17.4
SBS400	263.7	263.6	233.8	207.7	186.8	131.8	101.5	82.8	70.0	60.7	53.7	48.2	40.1	21.8
SBS480	316.4	316.4	280.5	249.3	224.1	158.2	121.7	99.3	84.0	72.8	64.4	57.8	48.1	26.1
SBS580	382.3	382.3	339.0	301.2	270.8	191.1	147.1	120.0	101.5	88.0	77.8	69.9	58.1	31.6
SBS680	448.3	448.2	397.4	353.1	317.5	224.0	172.5	140.7	119.0	103.2	91.3	81.9	68.1	37.0
SBS780	514.2	514.1	455.8	405.0	364.2	257.0	197.8	161.4	136.5	118.4	104.7	94.0	78.2	42.5
SBS900	593.3	593.2	526.0	467.4	420.2	296.5	228.3	186.2	157.5	136.6	120.8	108.4	90.2	49.0

Constant Power Discharge Performance Data

End Voltage 1.75 Vpc (Rating for Minutes to Specified End Voltage at 77.0°F)

	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
SBS320	551	504	433	382	338	231	175	141	117	101	88	79	65	35
SBS400	689	629	542	477	423	289	219	176	147	126	110	98	81	43
SBS480	827	755	650	573	507	347	263	212	176	151	132	118	97	52
SBS580	999	913	785	692	613	419	318	256	213	182	160	143	117	63
SBS680	1172	1070	921	811	719	492	373	300	249	214	188	167	137	74
SBS780	1273	1227	1056	930	825	564	427	344	286	245	215	192	158	85
SBS900	1300	1293	1219	1074	951	651	493	397	330	283	248	221	182	98

End Voltage 1.80 Vpc (Rating for Minutes to Specified End Voltage at 77.0°F)

	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
SBS320	472	452	396	349	312	219	168	137	115	100	88	79	65	35
SBS400	590	566	495	436	390	273	210	171	144	125	110	98	81	43
SBS480	708	679	594	523	468	328	252	205	173	150	132	118	97	52
SBS580	855	820	717	632	566	396	304	248	209	181	160	143	117	63
SBS680	1002	962	841	741	663	464	357	290	245	213	188	167	137	74
SBS780	1149	1103	964	850	761	533	409	333	281	244	215	192	158	85
SBS900	1300	1273	1112	980	878	615	472	384	324	282	248	221	182	98

End Voltage 1.85 Vpc (Rating for Minutes to Specified End Voltage at 77.0°F)

	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
SBS320	389	389	346	309	279	200	156	128	109	95	84	76	63	35
SBS400	486	486	433	386	349	250	195	160	136	118	105	95	79	43
SBS480	583	583	519	464	418	300	234	192	163	142	126	113	94	52
SBS580	705	705	627	560	506	363	282	232	197	172	152	137	114	63
SBS680	826	826	736	657	593	426	331	272	231	201	179	161	134	74
SBS780	948	948	844	753	680	488	379	312	265	231	205	184	154	85
SBS900	1094	1094	974	869	784	563	438	360	305	266	237	213	177	98



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