

Technical Specification for Stationary VLA - Cells

1. Application

The BAE OPzS-V0 Series flooded tubular plate cells are one of the most enduring lead acid batteries on the market today. They are ideally suited for standby operations as well as for capacitive loads. They perfectly meet requirements for bridging times between 1h to more than 10h.

Application Uses:

Telecommunications
Microwave radio systems
Outdoor enclosures
Photovoltaic applications

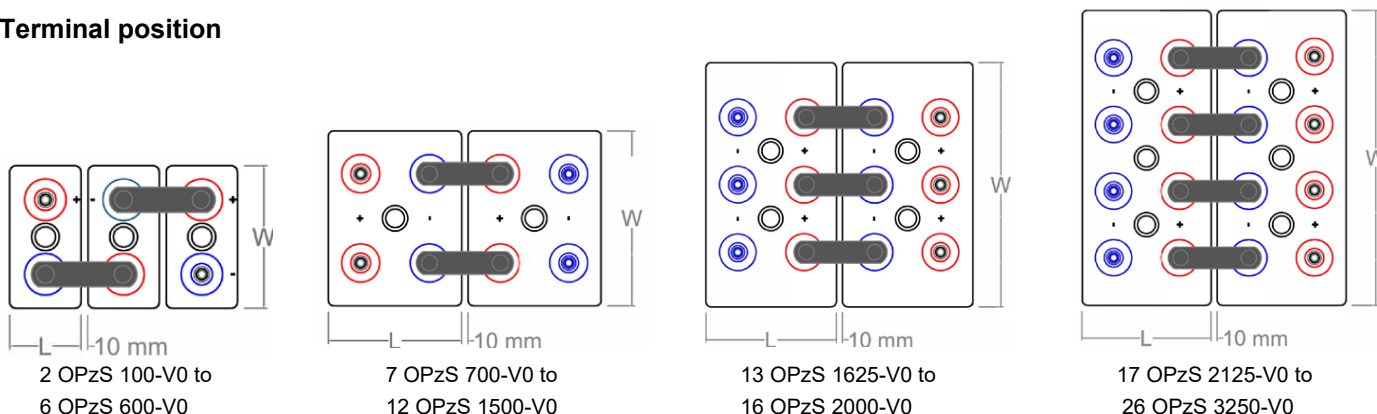


2. Types, capacities, dimensions, weights

Type	C ₈ 25°C	C ₄ 25°C	C ₈ 25°C	C ₁₂ 25°C	R _i 1)	I _k 2)	Length (L)	Width (W)	Height (H)	Weight dry	Weight filled	Lead mass	Electrolyte Volume
U _e V/cell	Ah 1.75	Ah 1.86	Ah 1.86	Ah 1.86	mΩ	kA	inch	inch	inch	lbs	lbs	lbs	Gal
2 OPzS 100-V0	104	80	96	108	1.52	1.37	4.06	8.11	15.95	20.1	31.9	15.5	1.13
3 OPzS 150-V0	160	120	144	168	1.06	1.96	4.06	8.11	15.95	24.8	36.2	20.4	1.11
4 OPzS 200-V0	208	160	192	228	0.84	2.46	4.06	8.11	15.95	28.2	39.6	24.2	1.10
5 OPzS 250-V0	264	196	240	288	0.70	2.98	4.88	8.11	15.95	33.7	47.8	29.3	1.36
6 OPzS 300-V0	312	236	288	336	0.60	3.47	5.71	8.11	15.95	39.9	56.6	34.4	1.62
5 OPzS 350-V0	384	296	360	384	0.57	3.61	4.88	8.11	20.47	44.0	63.5	38.2	1.89
6 OPzS 420-V0	456	352	432	468	0.49	4.18	5.71	8.11	20.47	51.7	75.0	45.0	2.25
7 OPzS 490-V0	536	412	512	540	0.44	4.69	6.54	8.11	20.47	59.1	86.1	51.7	2.61
6 OPzS 600-V0	672	480	624	660	0.47	4.41	5.71	8.11	27.44	72.8	104.4	63.2	3.06
7 OPzS 700-V0	784	560	728	780	0.36	5.66	8.27	7.52	27.44	92.8	135.6	77.6	4.13
8 OPzS 800-V0	896	640	832	888	0.32	6.36	8.27	7.52	27.44	102.8	144.2	87.2	4.00
9 OPzS 900-V0	1008	720	928	996	0.33	6.20	8.27	9.17	27.44	113.3	166.2	96.8	5.11
10 OPzS 1000-V0	1120	800	1032	1104	0.28	7.25	8.27	9.17	27.44	123.5	175.0	106.5	4.98
11 OPzS 1100-V0	1232	880	1136	1212	0.28	7.36	8.27	10.83	27.44	134.5	197.5	116.1	6.09
12 OPzS 1200-V0	1344	960	1240	1320	0.24	8.41	8.27	10.83	27.44	144.1	205.9	125.8	5.97
11 OPzS 1375-V0	1520	1044	1360	1488	0.24	8.38	8.27	10.83	33.27	160.3	233.5	136.4	7.07
12 OPzS 1500-V0	1656	1140	1480	1620	0.22	9.48	8.27	10.83	33.27	170.7	243.3	148.0	7.02
13 OPzS 1625-V0	1792	1232	1624	1776	0.16	13.03	8.43	15.71	32.36	200.2	303.8	163.1	10.01
14 OPzS 1750-V0	1936	1328	1744	1908	0.15	13.82	8.43	15.71	32.36	210.1	313.9	174.1	10.03
15 OPzS 1875-V0	2072	1420	1864	2040	0.14	14.43	8.43	15.71	32.36	220.9	323.9	185.3	9.95
16 OPzS 2000-V0	2208	1516	1984	2172	0.13	15.20	8.43	15.71	32.36	232.3	334.2	197.0	9.85
17 OPzS 2125-V0	2360	1616	2128	2328	0.12	16.91	8.35	19.17	32.36	259.5	386.0	214.8	12.23
18 OPzS 2250-V0	2496	1712	2256	2472	0.11	17.55	8.35	19.17	32.36	268.7	394.8	225.8	12.19
19 OPzS 2375-V0	2632	1804	2368	2592	0.11	18.36	8.35	19.17	32.36	279.5	404.8	237.0	12.10
20 OPzS 2500-V0	2768	1900	2504	2736	0.11	18.92	8.35	19.17	32.36	290.8	415.0	248.7	12.00
22 OPzS 2750-V0	3048	2088	2744	3000	0.10	19.92	8.35	22.68	32.36	320.5	471.7	271.4	14.60
24 OPzS 3000-V0	3328	2276	2984	3264	0.09	21.26	8.35	22.68	32.36	342.2	491.7	293.8	14.45
26 OPzS 3250-V0	3600	2464	3216	3528	0.09	22.49	8.35	22.68	32.36	363.8	511.4	316.3	14.26

1) Internal resistance from IEC 60896-11; 2) Short circuit current from IEC 60896-11; All data is subject to change.
Height (H) is the maximum distance between container bottom and top of the bolts in assembled condition.

3. Terminal position



Technical Specification for BAE *NEBS OPzS-V0*

4. Design

Positive electrode	Tubular plate with a polyester gauntlet and solid grids in a corrosion-resistant PbSb1.6SnSe alloy
Negative electrode	Round-grid flat plate in low antimony alloy with long-life expander material
Separation	Microporous separator
Electrolyte	Sulphuric acid with a density of 1.24 kg/l
Container	High impact, transparent Polycarbonate, UL 94 V-0 rating
Lid	High impact ABS in dark grey color, UL 94 V-0 rating
Flame arrestors	Includes standard ceramic arrestors with optional ceramic flip-top funnel arrestors available according to DIN 40740
Pole - bushing	100% gas and electrolyte tight, sliding, injection moulded "Panzerpol"
Kind of pole	M10 brass insertion
Intercell connectors	Insulated flexible or solid copper connectors
Inter-tier connectors	Flexible insulated copper cables
Connector screw	M10 stainless steel with insulated cap
Kind of protection	IP 25 regarding DIN 40050, touch protected according VBG 4

5. Charging

Commission Charging	No on-site commission charging required
IU - characteristic	Recommended: $I_{\max} = 2 \times I_{10}$ $U = 2.23 \text{ V/cell} \pm 1\%$, between 10°C and 30°C (50°F and 86°F) $\Delta U/\Delta T = \pm 0.003 \text{ V/K}$ below 10°C in the monthly average
Float current	15 mA/100 Ah, increasing to 30 mA/100 Ah at the end of life
Equalize charge	$U = 2.33$ to 2.40 V/cell , time limited
Charging time up to 90%	6h with $1.5 \times I_{10}$ initial current, 2.23 V/cell, 80% C3 discharged

6. Discharge characteristics

Reference temperature	25°C (77°F)
Initial capacity	95% or better at time of delivery
Depth of discharge (DOD)	Normally up to 80%
Deep discharges	More than 80% DOD or discharges beyond final discharge voltages (dependent on discharge current) have to be avoided

7. Maintenance

Every 6 months	Check and record battery voltage, pilot cell voltages and temperatures
Every 12 months	Check and record battery voltage, cell voltages and temperatures

Note: Please reference NEBS Installation and Operating Instructions for additional maintenance information.

8. Operational data

Operational life	20+ years in standby operation, float at 20°C to 25°C (68°F to 77°F)
Water - refilling - interval	Up to 3 years, float at 20°C to 25°C (68°F to 77°F)
IEC 60 896-1 cycles	> 1500
Self-discharge	App. 3% per month at 20°C (68°C)
Operational temperature	-20°C to 55°C (-4°F to 131°F); recommended 10°C to 30°C (50°F to 86°F)
Standard	DIN 40736 part 1
Tests according to	IEC 60896 - 11, NEBS GR-63-CORE
Safety standard, ventilation	DIN EN 50272-2, NEBS GR-63-CORE
Transport	Subject to DOT Regulations – See SDS for details

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