

Advantages

- ✓ Long life with maximum reliability even under cycling use
- ✓ More than 1500 deep discharge cycles
- ✓ Extended topping-up intervals
- ✓ Maximum charging efficiency
- ✓ Minimal positive growth
- ✓ Improved safety against accidental contacts

Main Applications

- ✓ Telecommunications
- ✓ Power plants
- ✓ Substations
- ✓ Emergency power
- ✓ Wind and Solar power generation
- ✓ Railways
- ✓ UPS units

Cell Specifications

- | | |
|-------------------------|---|
| ✓ Positive plates | Tubular plate with lead selenium grid alloy |
| ✓ Negative plates | Fully enveloped flat pasted plate with lead selenium grid alloy |
| ✓ Separators | Microporous plastic separators |
| ✓ Cell container | High-strength transparent SAN |
| ✓ Cell lid | Opaque gray ABS (option: available in Flame Retardant UL94 V0 version) |
| ✓ Electrolyte | Dilute solution of sulfuric acid SG1240 $\pm 0,01$ at 20°C (option: different SG available on demand) |
| ✓ Electrolyte reserve | Maximum availability over the plates |
| ✓ Terminal posts | Robust design with M10 threaded insert |
| ✓ Posts sealing | Double sealing on HQ post finishing |
| ✓ Vent caps | Flame arrestor ceramic vents fully tested in compliance with UL standard (option: Flip-top version) |
| ✓ Plate suspension | Bottom supported with sediment space |
| ✓ Inter-cell connectors | Fully insulated copper |
| ✓ Terminal hardware | Fully insulated stainless steel |
| ✓ Terminal adaptor | Solid lead plated copper plates |

Type	Nominal Voltage V	Nominal Capacity (Ah/10Hrs)	Ri mOhm	Isc kA	Dimensions			Weight		Electrolyte		Terminals
					Length mm	Width mm	Overall Height - mm	With Acid Kg	Empty Kg	Weight Kg	Volume Litres	Threaded M10 - no
2 OPzS 100	2	100	1,55	1,29	206	103	430	16,2	9,7	6,5	5,2	2
3 OPzS 150	2	150	1,03	1,94	206	103	430	17,4	12,1	5,3	4,3	2
4 OPzS 200	2	200	0,78	2,58	206	103	430	18,6	14,5	4,1	3,3	2
5 OPzS 250	2	250	0,62	3,23	206	124	430	22,3	17,1	5,2	4,2	2
6 OPzS 300	2	300	0,52	3,87	206	145	430	25,9	19,7	6,2	5,0	2
5 OPzS 350	2	350	0,57	3,48	206	124	546	29,3	21,8	7,5	6,0	2
6 OPzS 420	2	420	0,48	4,17	206	145	546	34,5	25,5	9,0	7,3	2
7 OPzS 490	2	490	0,41	4,87	206	166	546	39,4	29,4	10,0	8,1	2
6 OPzS 600	2	600	0,44	4,53	210	145	721	47,6	35,2	12,4	10,0	2
7 OPzS 700	2	700	0,38	5,29	210	191	721	56,1	41,3	14,8	11,9	4
8 OPzS 800	2	800	0,33	6,04	210	191	721	63,9	47,4	16,5	13,3	4
9 OPzS 900	2	900	0,29	6,80	210	233	721	71,2	52,2	19,1	15,4	4
10 OPzS 1000	2	1.000	0,26	7,55	210	233	721	79,5	58,5	20,5	16,5	4
11 OPzS 1100	2	1.100	0,24	8,31	210	275	721	84,1	61,3	22,8	18,4	4
12 OPzS 1200	2	1.200	0,22	9,06	210	275	721	90,3	65,7	24,6	19,8	4
12 OPzS 1500	2	1.500	0,27	7,93	210	275	871	113,2	85,6	27,6	22,3	4
13 OPzS 1625	2	1.625	0,25	8,59	214	399	847	125,2	95,3	29,9	24,1	6
14 OPzS 1750	2	1.750	0,23	9,25	214	399	847	137,3	103,8	33,5	27,0	6
15 OPzS 1875	2	1.875	0,22	9,91	214	399	847	147,4	109,6	37,8	30,5	6
16 OPzS 2000	2	2.000	0,20	10,57	214	399	847	156,6	117,0	39,6	31,9	6
20 OPzS 2500	2	2.500	0,16	13,21	212	487	847	196,4	146,7	49,7	40,1	8
24 OPzS 3000	2	3.000	0,14	15,86	212	576	847	229,7	167,2	62,5	50,4	8

DISCHARGE CURRENT (A) to 1,80 Vpc SG1240 at 20°C

Type	Actual Capacity (Ah/10Hrs)	Minutes					Hours								
		1	5	10	15	30	1	2	3	5	8	10	20	24	100
2 OPzS 100	108	104,2	97,4	89,8	82,7	66,8	49,2	33,2	25,6	18,0	12,7	10,8	6,2	5,38	1,50
3 OPzS 150	162	156,3	146,1	134,7	124,0	100,2	73,8	49,8	38,4	26,9	19,1	16,2	9,3	8,07	2,25
4 OPzS 200	216	208,4	194,8	179,6	165,3	133,6	98,4	66,3	51,1	35,9	25,4	21,6	12,5	10,76	3,00
5 OPzS 250	270	260,5	243,5	224,5	206,7	167,0	123,0	82,9	63,9	44,9	31,8	27,0	15,6	13,45	3,74
6 OPzS 300	324	312,6	292,2	269,4	248,0	200,4	147,6	99,5	76,7	53,9	38,1	32,4	18,7	16,14	4,49
5 OPzS 350	377	295,0	276,5	254,0	235,5	196,7	153,3	109,7	86,5	62,2	44,3	37,7	22,2	19,35	5,77
6 OPzS 420	452	354,0	331,8	304,8	282,6	236,0	183,9	131,7	103,7	74,7	53,1	45,2	26,6	23,22	6,92
7 OPzS 490	528	413,0	387,1	355,6	329,7	275,3	214,6	153,6	121,0	87,1	62,0	52,8	31,1	27,09	8,08
6 OPzS 600	638	414,0	396,0	376,8	358,1	313,8	251,8	183,3	145,6	103,9	74,8	63,8	36,6	31,86	9,53
7 OPzS 700	745	483,0	462,0	439,6	417,8	366,1	293,8	213,9	169,9	121,2	87,3	74,5	42,7	37,17	11,12
8 OPzS 800	851	552,0	528,0	502,4	477,5	418,4	335,8	244,4	194,1	138,5	99,8	85,1	48,8	42,47	12,71
9 OPzS 900	958	621,0	594,0	565,2	537,2	470,7	377,7	275,0	218,4	155,8	112,2	95,8	54,9	47,78	14,30
10 OPzS 1000	1064	690,0	660,0	628,0	596,9	523,0	419,7	305,5	242,7	173,2	124,7	106,4	61,0	53,09	15,89
11 OPzS 1100	1170	759,0	726,0	690,8	656,5	575,3	461,7	336,1	266,9	190,5	137,2	117,0	67,1	58,40	17,48
12 OPzS 1200	1277	828,0	792,0	753,6	716,2	627,6	503,7	366,6	291,2	207,8	149,6	127,7	73,2	63,71	19,07
12 OPzS 1500	1622	958,8	925,2	884,6	847,8	755,6	617,4	456,1	368,6	265,4	189,9	162,2	93,1	80,93	23,52
13 OPzS 1625	1757	1038,7	1002,3	958,4	918,4	818,6	668,9	494,2	399,3	287,5	205,8	175,7	100,9	87,67	25,48
14 OPzS 1750	1892	1118,6	1079,4	1032,1	989,1	881,6	720,3	532,2	430,0	309,6	221,6	189,2	108,6	94,42	27,44
15 OPzS 1875	2027	1198,5	1156,5	1105,8	1059,7	944,5	771,8	570,2	460,8	331,7	237,4	202,7	116,4	101,16	29,40
16 OPzS 2000	2162	1278,4	1233,6	1179,5	1130,4	1007,5	823,2	608,2	491,5	353,9	253,2	216,2	124,1	107,91	31,36
20 OPzS 2500	2703	1598,0	1542,0	1474,4	1413,0	1259,4	1029,0	760,2	614,3	442,3	316,5	270,3	155,2	134,88	39,19
24 OPzS 3000	3244	1917,6	1850,4	1769,3	1695,6	1511,3	1234,8	912,3	737,2	530,8	379,8	324,4	186,2	161,86	47,03

All the above data are actual values after the 5th cycle with a general tolerance of $\pm 2\%$

8 hours capacity to 1,75 Vpc at 25°C (77°F) = 10 hours Actual Capacity to 1,80 Vpc at 20°C x corrective factor 1,01



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| ✓ Cell lid | Opaque gray SAN (option: available in Flame Retardant ABS UL94 V0) |
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| ✓ Terminal posts | Robust design with M10 threaded insert |
| ✓ Posts sealing | Sealing bush on HQ post finishing |
| ✓ Vent caps | Flame arrestor ceramic vents fully tested in compliance with UL standard (option: Flip-top version) |
| ✓ Plate suspension | Bottom supported with sediment space |
| ✓ Inter-cell connectors | Welded lead bars with protection covers |
| ✓ Inter-block connectors | Fully insulated flexible connector |
| ✓ Terminal hardware | Stainless steel with insulating caps |

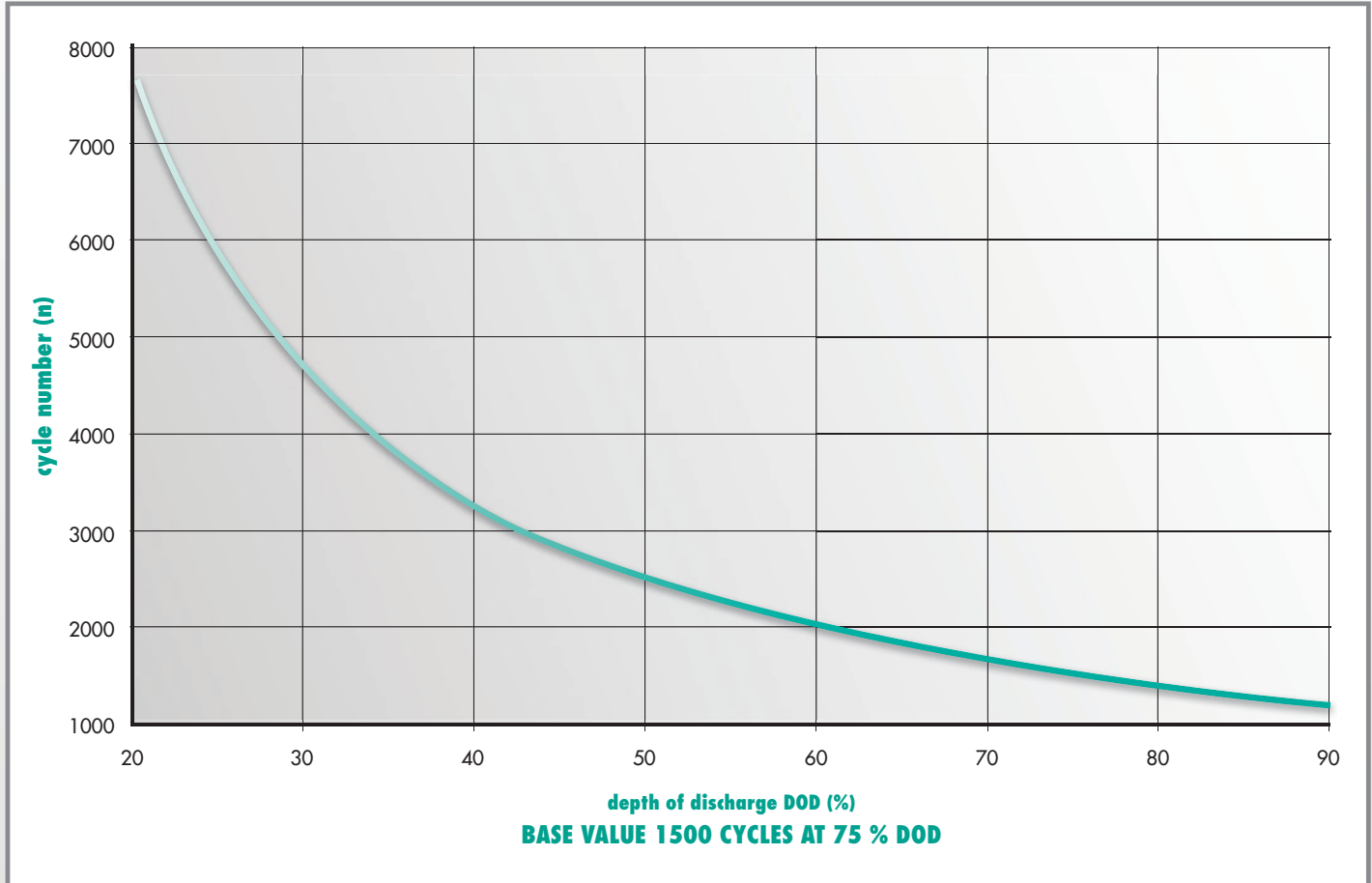
Type	Nominal Voltage V	Nominal Capacity (Ah/10Hrs)	Ri mOhm	Isc kA	Dimensions			Weight		Electrolyte		Terminals
					Lenght mm	Width mm	Overall Height mm	With Acid Kg	Empty Kg	Weight Kg	Volume Litres	Screwed M10 no
OPzS block 12/50	12	50	16,64	0,72	272	205	373	42,9	31,1	11,8	9,5	2
OPzS block 12/100	12	100	9,44	1,27	272	205	373	52,8	41,4	11,4	9,2	2
OPzS block 12/150	12	150	6,57	1,83	380	205	373	72,3	57,2	15,1	12,2	2
OPzS block 6/200	6	200	2,78	2,20	272	205	373	50,7	38,5	12,2	9,8	2
OPzS block 6/250	6	250	2,22	2,75	380	205	373	69,5	54,0	15,5	12,5	2
OPzS block 6/300	6	300	1,85	3,30	380	205	373	74,3	59,5	14,8	11,9	2

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		1	5	10	15	30	1	2	3	5	8	10	20	24	100
OPzSblock 12/50	50	50,2	46,0	41,8	38,3	30,9	22,8	15,4	11,8	8,3	5,8	5,0	2,9	2,49	0,72
OPzSblock 12/100	100	100,3	92,0	83,5	76,6	61,9	45,6	30,7	23,7	16,6	11,6	10,0	5,8	4,99	1,45
OPzSblock 12/150	150	150,5	138,1	125,3	114,9	92,8	68,3	46,1	35,5	25,0	17,4	15,0	8,7	7,48	2,17
OPzSblock 6/200	200	200,6	184,1	167,0	153,2	123,7	91,1	61,4	47,4	33,3	23,2	20,0	11,5	9,98	2,90
OPzSblock 6/250	250	250,8	230,1	208,8	191,4	154,7	113,9	76,8	59,2	41,6	29,0	25,0	14,4	12,47	3,62
OPzSblock 6/300	300	301,0	276,1	250,5	229,7	185,6	136,7	92,2	71,1	49,9	34,8	30,0	17,3	14,96	4,35

All the above data are actual values after the 5th cycle with a general tolerance of $\pm 2\%$

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OPzS LIFECYCLES AT 20°C vs D.o.D

OPzS Midac cells are made with lead selenium low antimony alloys that permit low water consumption and low self discharge and high resistance to corrosion to allow long life use.

Elements are mainly designed to be used in stationary equipments (energy reserve) with expected lifetime of more than 15 years in floating operation.

These products can be also used with cycling mode, with different expected life depending by D.o.D. (depth of discharge) as indicated in the curve above.

In case of use with different D.o.D. and or different cycle shapes contact our sales organisation to receive further information.



- 1 - Insulated rigid copper inter-cell connectors*
- 2 - Insulated flex copper connectors
- 3 - Terminal lugs
- 4 - Protection caps
- 5 - Lead plated terminal adaptors
- 6 - Insulated stainless steel bolts and post protecting bushes*
- 7 - Stainless steel hardware
- 8 - Insulated tools
- 9 - Flame arrestor vent plugs*
(tested according to UL standard)

- 10 - Flip-top flame arrestor vent plugs (in compliance with DIN N norms and tested according to UL standard)
- 11 - Automatic topping-up flame arrestor vent plugs
- 12 - Hydrometers and thermometers
- 13 - Funnels
- 14 - Jugs
- 15 - No-oxide grease
- 16 - Number stickers

* standard equipment included as scope of supply

The above picture is just an overview of the most common accessories. Standard Racks, Seismic Racks and all the necessary for the battery installation are available on demand.

You can complete your OPzS application by requiring the above accessories. Do not hesitate to contact our sales organisation to understand how to fit our cells and blocks using our complete range of accessories and special tools. We will be available to provide our complete offer of products.

Our sales and technical department are at your disposal to understand your needs and to support you on the choice of the type matching the performances required.