



**NorthBa** 

*Power for Life*

**OPzS BATTERIES**

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# EXECUTIVE SUMMARY

Our company ranks amongst the leaders in energy solutions companies in Greece, currently expanding in the global market. Northbatt specializes in batteries for industrial applications. (i.e. batteries for motive and reserve power).

Having four decades of experience, Northbatt is committed to provide the most efficient solutions to cover its customer's industrial needs, giving power to people's life. Our company has long-lasting collaborations, high quality product standards and comprehensive after-sales technical support, offering solutions for batteries, chargers and all the relevant equipment.

Our products are designed to satisfy the needs for the following applications like industrial vehicles, forklifts, solar & renewable energy sources, IT information technology, utility networks, telecommunications, UPS, marine, etc. We proudly welcome you to our battery and energy solutions family!

## OPzS BATTERIES

OPzS batteries have been proven energy suppliers for decades, the ideal solution for standby applications with robustness, reliability and extremely long service life.

### ADVANTAGES

- > Optimised design according to DIN international standards
- > Use of high quality raw materials
- > State of the art manufacturing processes
- > Excellent standby and cycling behaviour – long life-high capacity performance
- > Completely recyclable – low CO<sup>2</sup> footprint

1.70 V/cell	Discharge current in A									
	15'	30'	1h	2h	3h	4h	5h	6h	8h	10 h
4 OPzS 200	205	154	105	66	50	41	35	30	24	20
5 OPzS 250	256	192	132	82	62	51	43	38	30	25
6 OPzS 300	307	230	158	99	75	61	52	45	36	30
5 OPzS 350	336	268	191	120	90	73	64	55	45	38
6 OPzS 420	403	322	229	144	108	88	76	66	54	45
7 OPzS 490	471	375	268	168	126	102	89	77	63	53
6 OPzS 600	528	426	318	202	151	123	105	90	73	61
8 OPzS 800	704	568	424	270	201	164	139	120	97	81
10 OPzS 1000	880	710	530	337	251	205	174	150	121	101
12 OPzS 1200	1056	852	636	405	301	246	209	180	145	121
12 OPzS 1500	1152	1056	780	525	394	316	269	233	185	154
16 OPzS 2000	1536	1408	1040	699	525	421	359	311	247	205
20 OPzS 2500	1920	1760	1300	874	656	526	448	388	308	256
24 OPzS 3000	2304	2112	1560	1049	787	631	538	466	370	307

Nomenclature	C <sub>10</sub> Nominal Capacity upto 1.80 Vpc	C <sub>10</sub> /1.80 VPC	C <sub>5</sub> /1.77 VPC	C <sub>3</sub> /1.75 VPC	C <sub>1</sub> /1.67 VPC	Weight ± : 5% (Kg)		Approx Qty. of acid 1.220 sp gr(Litres)	Overall Cell Dimensions			Cell Centre
						Dry	Acid Filled		L ± 3 (mm)	W ± 3 (mm)	H ± 5 (mm)	
4 OPzS 200	200	216	182	162	118	14.3	19.1	3.9	103	206	430	112
5 OPzS 250	250	270	227	201	147	16.0	22.0	4.9	124	206	430	132
6 OPzS 300	300	324	273	240	177	19.1	26.5	6.1	145	206	430	153
5 OPzS 350	350	390	345	303	217	22.0	30.3	6.8	124	206	546	132
6 OPzS 420	420	468	414	363	261	25.8	35.9	8.3	145	206	546	153
7 OPzS 490	490	546	483	426	304	29.3	40.9	9.5	166	206	546	174
6 OPzS 600	600	686	590	510	353	35.4	49.4	11.5	145	206	721	153
8 OPzS 800	800	915	790	681	470	47.0	65.4	15.1	210	191	721	220
10 OPzS 1000	1000	1140	985	852	588	57.4	80.2	18.7	210	233	721	220
12 OPzS 1200	1200	1370	1185	1023	706	67.0	93.2	21.5	210	275	721	220
12 OPzS 1500	1500	1700	1400	1242	873	84.0	117.9	27.8	210	275	871	220
16 OPzS 2000	2000	2250	1865	1656	1162	110.7	160.0	40.4	214	399	847	220
20 OPzS 2500	2500	2800	2330	2073	1452	145.0	204.8	49.0	212	487	847	220
24 OPzS 3000	3000	3350	2795	2487	1739	170.0	241.2	58.4	212	576	847	220

1.75 V/cell	Discharge current in A									
	15'	30'	1h	2h	3h	4h	5h	6h	8h	10h
4 OPzS 200	183	140	100	66	54	41	35	30	24	20
5 OPzS 250	228	175	125	82	67	51	43	38	30	25
6 OPzS 300	274	210	150	99	80	61	52	45	36	30
5 OPzS 350	296	244	180	120	101	73	64	55	45	38
6 OPzS 420	355	293	216	144	121	88	76	66	54	45
7 OPzS 490	415	342	252	168	142	102	89	77	63	53
6 OPzS 600	456	378	294	195	170	123	105	90	73	61
8 OPzS 800	608	504	392	260	227	164	139	120	97	81
10 OPzS 1000	760	630	490	325	284	205	174	150	121	101
12 OPzS 1200	912	756	588	390	341	246	209	180	145	121
12 OPzS 1500	936	876	708	498	414	312	269	233	185	154
16 OPzS 2000	1248	1168	944	664	552	416	359	311	247	205
20 OPzS 2500	1560	1460	1180	830	691	520	448	388	308	256
24 OPzS 3000	1872	1752	1416	996	829	624	538	466	370	307

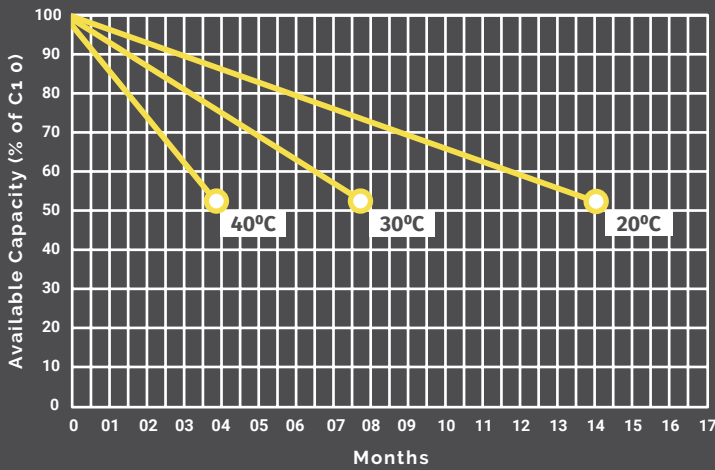
1.8 V/cell	Discharge current in A									
	15'	30'	1h	2h	3h	4h	5h	6h	8h	10h
4 OPzS 200	156	127	92	61	48	40	34	30	24	21.6
5 OPzS 250	195	158	115	77	60	50	43	38	30	27
6 OPzS 300	234	190	138	92	72	60	51	45	36	32.4
5 OPzS 350	248	216	164	111	86	71	62	54	44	39
6 OPzS 420	298	259	197	133	103	85	75	65	53	46.8
7 OPzS 490	347	303	230	156	121	99	87	76	62	54.6
6 OPzS 600	384	330	258	180	143	118	102	90	73	68.6
8 OPzS 800	512	440	344	240	191	158	136	119	97	91.5
10 OPzS 1000	640	550	430	300	238	197	170	149	121	114
12 OPzS 1200	768	600	516	360	286	237	204	179	145	137
12 OPzS 1500	768	744	624	456	355	295	256	225	181	170
16 OPzS 2000	1024	992	832	608	474	394	341	299	242	225
20 OPzS 2500	1280	1240	1040	760	592	492	426	374	302	280
24 OPzS 3000	1536	1488	1248	912	711	591	511	449	363	335

1.83 V/cell	Discharge current in A									
	15'	30'	1h	2h	3h	4h	5h	6h	8h	10h
4 OPzS 200	140	116	86	59	46	38	33	29	23	20
5 OPzS 250	175	145	108	73	57	48	41	36	29	25
6 OPzS 300	210	174	129	88	69	57	49	43	35	30
5 OPzS 350	220	195	152	105	82	67	59	52	43	36
6 OPzS 420	264	234	183	126	98	81	71	62	51	43
7 OPzS 490	308	273	213	147	114	94	83	72	60	51
6 OPzS 600	312	294	234	171	136	114	97	86	70	59
8 OPzS 800	416	392	312	228	181	152	130	115	93	79
10 OPzS 1000	520	490	390	285	226	190	162	143	116	98
12 OPzS 1200	624	588	468	342	271	228	195	172	139	118
12 OPzS 1500	624	624	564	423	334	280	244	215	175	148
16 OPzS 2000	832	832	752	563	445	373	325	287	234	197
20 OPzS 2500	1040	1040	940	704	556	466	406	358	292	246
24 OPzS 3000	1248	1248	1128	845	667	559	487	430	351	295

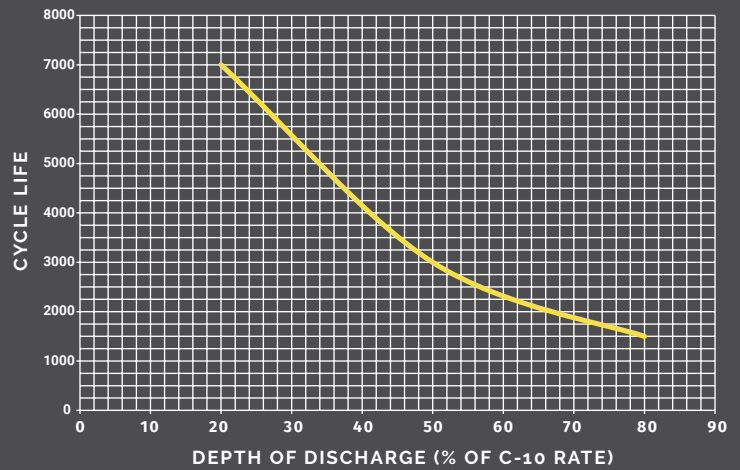
1.9 V/cell	Discharge current in A									
	15'	30'	1h	2h	3h	4h	5h	6h	8h	10h
4 OPzS200	92	83	68	48	38	32	28	25	21	18
5 OPzS250	115	104	85	60	48	40	35	32	26	23
6 OPzS300	138	125	102	72	57	48	42	38	31	27
5 OPzS 350	125	125	115	83	67	55	49	44	37	33
6 OPzS420	150	150	138	100	80	66	58	52	44	40
7 OPzS490	175	175	161	116	93	77	68	61	51	46
6 OPzS600	189	189	177	138	112	94	82	73	61	54
8 OPzS800	252	252	236	184	149	126	109	98	81	71
10 OPzS1000	315	315	295	230	186	157	136	122	101	89
12 OPzS1200	378	378	354	276	223	189	163	147	121	107
12 OPzS1500	360	360	360	318	259	228	198	177	145	126
16 OPzS 2000	480	480	480	424	346	304	264	235	194	168
20 OPzS 2500	600	600	600	530	432	380	330	294	242	210
24 OPzS 3000	720	720	720	636	519	456	396	353	291	252

# TECHNICAL SPECIFICATIONS (2V OPzS)

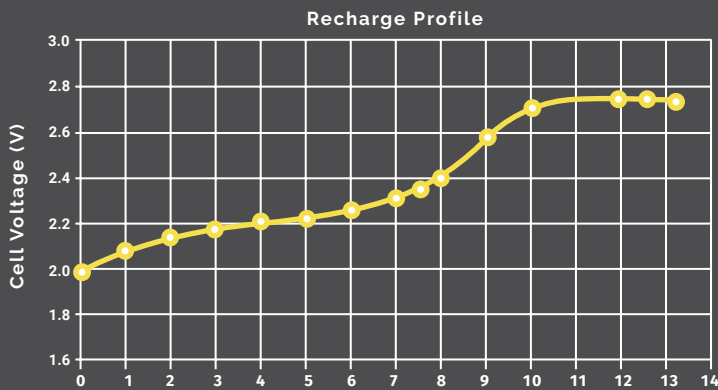
**SELF DISCHARGE CURVE FOR OPzS**



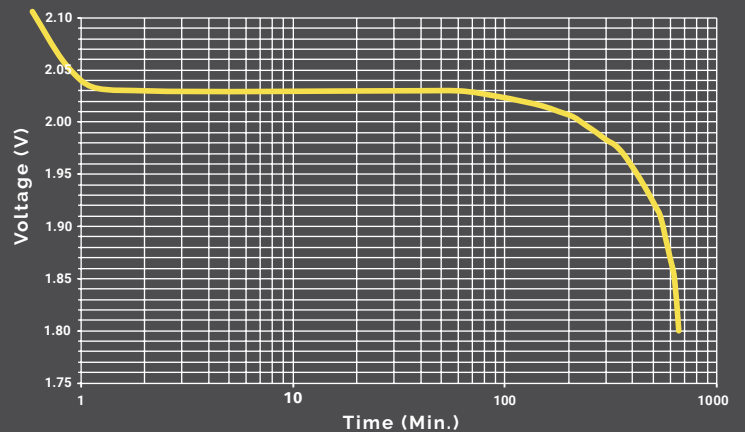
**DEPTH OF DISCHARGE VS CYCLE LIFE FOR OPzS TYPE**



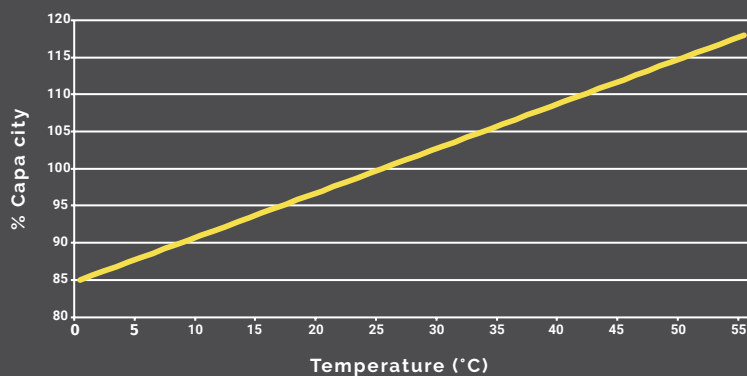
**TYPICAL RECHARGE PROFILE OF TUBULAR – OPzS TYPE**



**DISCHARGE CHARACTERISTICS**



**TEMPERATURE VS CAPACITY CURVE**



## FEATURES



POSITIVE  
TUBULAR  
PLATES



INSULATED  
INTERCELL  
COPPER  
CONNECTORS



LOW  
ANTIMONY  
ALLOY IN  
POSITIVE  
PLATE



LONG  
LIFE  
SERVICE



MICROPOROUS  
AND RESIN  
BASED  
SEPARATORS



TRANSPARENT  
SAN CONTAINER



LARGE  
ELECTROLYTE  
VOLUME



PLASTIC  
ENCAPSULATED  
BOLTS ON  
TERMINALS



MICROPOROUS  
VENT PLUGS

## BENEFITS



LONG  
SERVICE  
LIFE



HIGH  
TEMPERATURE  
STABILITY



SAFE FROM  
SHORT  
CIRCUITS



EASY  
MONITORING

## APPLICATIONS



TELECOM  
POWER  
SYSTEMS



POWER  
PLANTS



SWITCH  
GEARS



UPS



POWER  
GRIDS



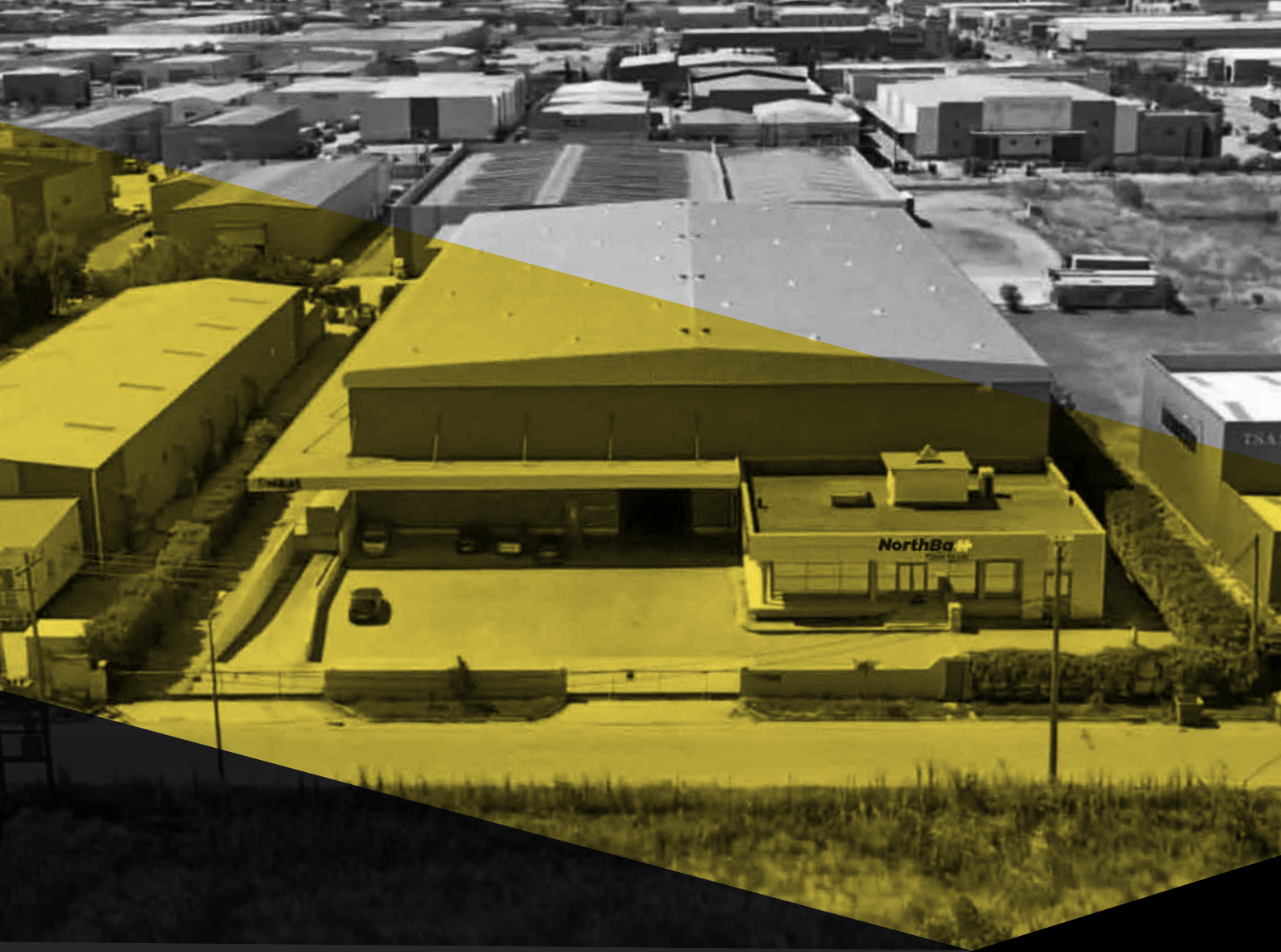
SOLAR  
PHOTOVOLTAIC



# Power for Life

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