

Reserve Power OPzS Batteries

Stand-By Applications



GRID



TELECOM



GENSET



UPS

 **SUNLIGHT**
Reliable Battery Solutions

Reserve Power

As a member of a strong and developing business ecosystem, SUNLIGHT relies on its modern infrastructure, continuous innovation and its passion for excellence, to develop and supply reliable battery solutions.

Our manufacturing plant, located in Xanthi, Northern Greece, is a core element of our dynamic growth. We have systematically invested in the development of **one of the most modern industrial units**, in accordance with the strictest international standards. It covers **200.000m²**, with indoors areas of more than 60.000m².

The company has consistently invested in developing one of **the most advanced industrial plants in the world**, running highly specialized production and assembly lines. The plant is fully compliant with the strict-

est international standards and is certified for Quality, Occupational Health & Safety and Environmental management systems.

The products are developed by SUNLIGHT R&D team which constantly designs and evaluates new innovative solutions to better meet market needs based on the latest technological trends, industry developments and market feedback.

SUNLIGHT products and services have gained international recognition by ensuring uninterrupted and reliable operations in a wide range of critical applications for a broad spectrum of industries, such as Telecom and Power networks.

The complete Reserve Power portfolio consists of:



Vented Tubular Plate Batteries for Stand-By Applications

SUNLIGHT OPzS batteries are characterized by **low maintenance requirements, long service life** and **excellent capacity performance** while operating at high temperatures or unstable power network, thus providing a premium **efficient and cost effective energy solution**.

Optimum design, according to DIN international standards, exclusive use of high quality raw materials, robust construction and state of the art manufacturing processes make this OPzS range **the ideal solution for stand-by applications requiring high level of safety and reliability**.



Power Generation



Transportation signalling

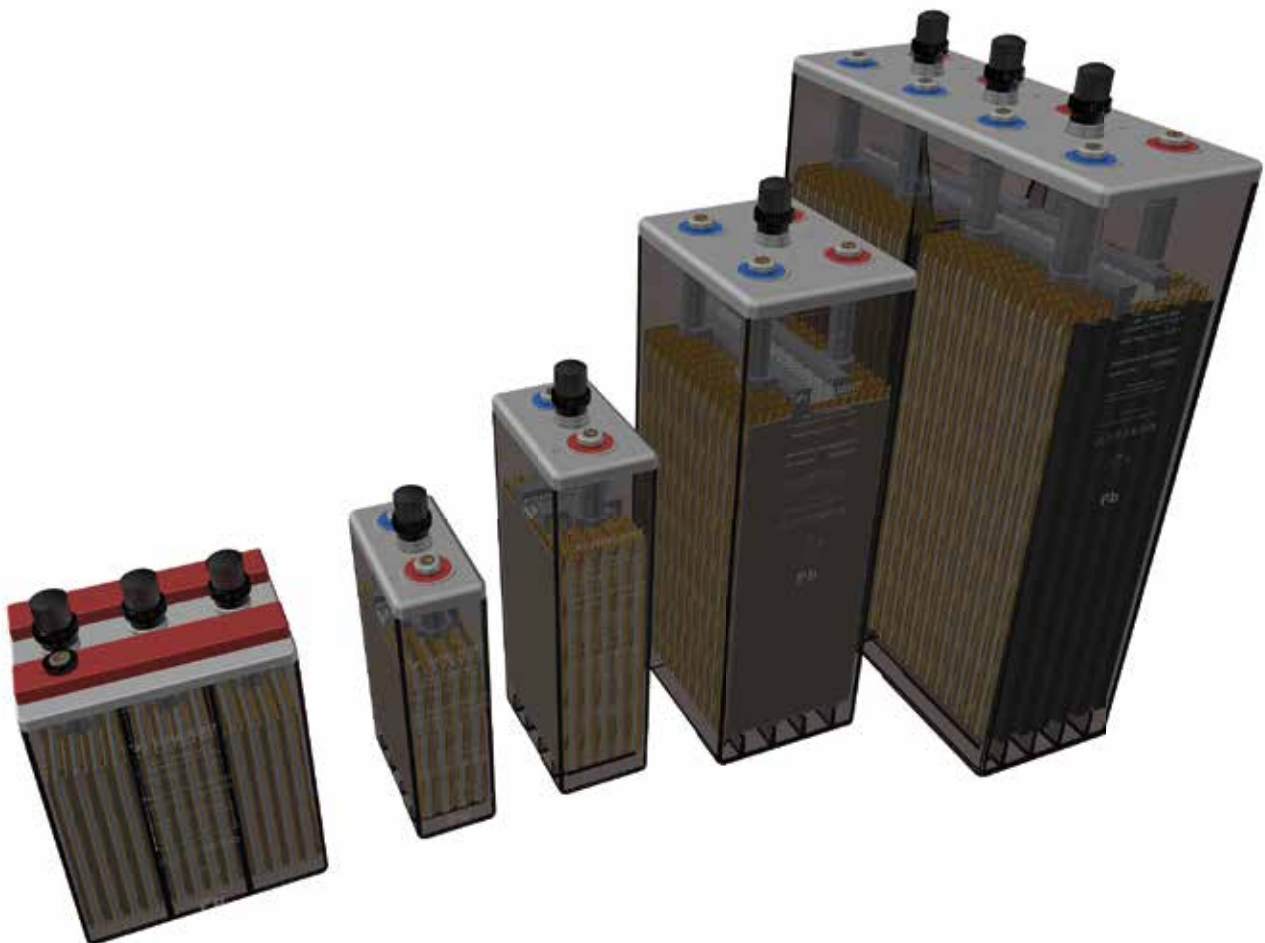


UPS

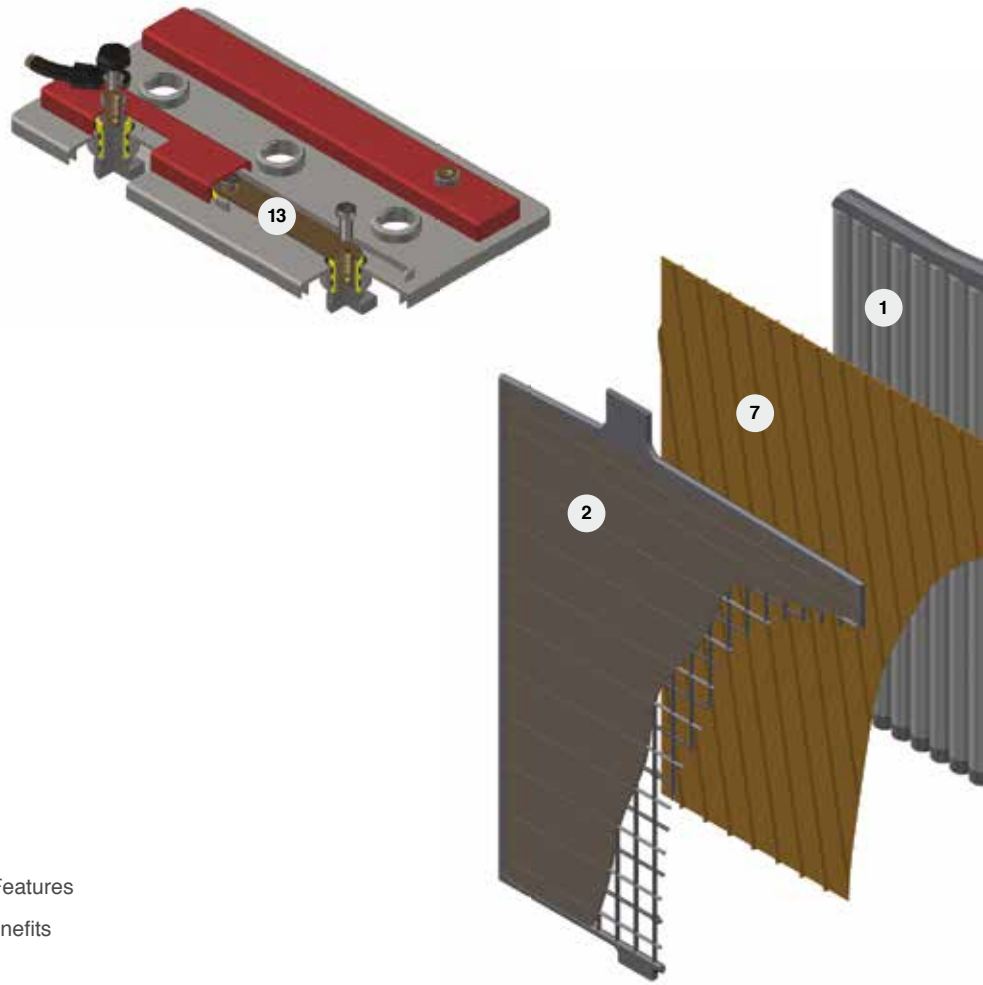


Telecommunications

▶	Telecommunications	Backup power systems for base stations, cell towers & radio transmission installations
	UPS systems	Critical equipment backup power supply & protection from frequency & voltage fluctuations
	Utilities	Power grid stabilization, power quality and reliability improvement
	Power generation & distribution	Switches control & switchboards in substations connected to power generation line
	Transportation signalling	Signalling systems, communication/control nodes in demanding environmental conditions
	Emergency lighting	Lighting in critical situations when main electrical supply is interrupted



Technical features & product benefits



1 Positive Plates

- ⚙️ Tubular plate design
- ⚙️ Special low antimony lead alloy ($\leq 1.65\%$ Sb)
- ⚙️ Red Lead in-house production by 99.99% Primary Lead
- ⚙️ Dry Filling process
- ✓ Long cycle life
- ✓ Excellent cycling properties
- ✓ Quality and homogeneity
- ✓ High capacity performance
- ✓ Reduced corrosion
- ✓ Reduced self-discharge rate
- ✓ Increased tolerance even in cases of poor charging conditions

2 Negative Plates

- ⚙️ Paste mixture ensures high adherence and cohesion
- ⚙️ Pasted negative plates of grid design
- ⚙️ Optimized low antimony lead alloy
- ⚙️ Robust construction
- ⚙️ Long life expander
- ✓ Stability
- ✓ Long battery life

- ⚙️ Technical Features
- ✓ Product Benefits

3 Gauntlet

- ⚙️ Highly microporous material
- ⚙️ Fine pore structure
- ⚙️ Low electrical resistance
- ✓ Effective active material retention
- ✓ Eliminates active mass shedding

4 Bottom Bar

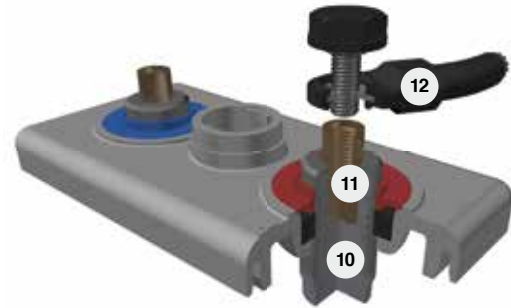
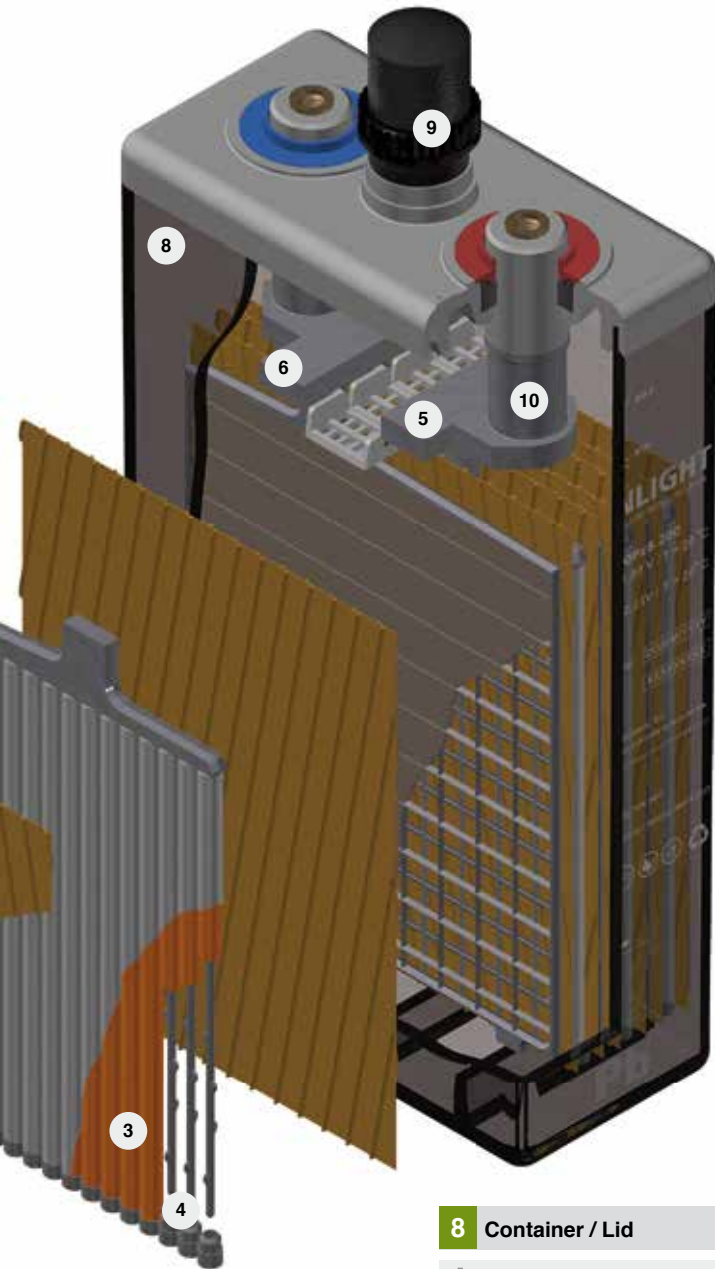
- ⚙️ Ultrasonic welding
- ✓ Secured fit to the gauntlet
- ✓ Long battery life

5 Pole bridge

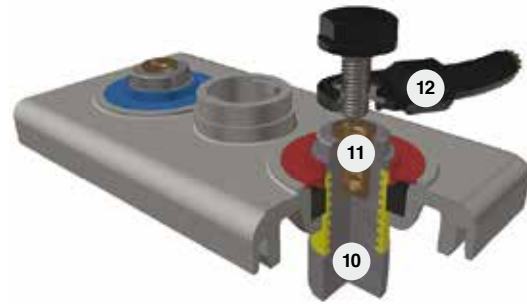
- ⚙️ Welding with high quality alloy
- ⚙️ Optimized design
- ✓ Increased robustness and durability
- ✓ Consistent and uniform poles-bridge-plate block connection

6 Electrolyte

- ⚙️ High purity sulphuric acid with nominal density of 1.24 +/- 0,01 kg/l (20°C/68°F)
- ✓ Low self discharge rates
- ✓ Excellent performance on deep discharges



US pole (optional)
(different codes for US pole cells)



Standard pole

9 Vent Plugs

- ⚙️ Ceramic plugs available as an option
- ⚙️ Low maintenance design
- ⚙️ Flame arresting
- ⚙️ Ceramic funnel plugs and recombination plugs also available as an option
- ✓ Efficient containment of acid fumes
- ✓ No electrolyte spillage
- ✓ Reduced water evaporation
- ✓ Funnel plugs allow topping-up and electrolyte density measuring without plug removal
- ✓ Increased safety

11 Pole Insert

- ⚙️ Brass insert
- ⚙️ Threaded female M10 terminal posts
- ✓ High conductivity
- ✓ Maximum torque retention

12 External Intercell Connectors

- ⚙️ Flexible
- ⚙️ Copper
- ⚙️ Fully insulated
- ⚙️ Fixed with plastic head safety bolt and probe hole on the top
- ✓ Allow voltage measurements
- ✓ High conductivity
- ✓ Increased safety

13 Intercell Connectors

- ⚙️ Copper bars premium design
- ⚙️ Outside of the container connection
- ✓ High conductivity
- ✓ Safe and long operational life

10 Sliding Poles

- ⚙️ Premium sliding design with rubber seal in the lid
- ⚙️ Corrosion resistance
- ✓ Effectively prevents top lid cracks and acid leakages
- ✓ Positive plate's expansion is safely absorbed
- ✓ Optimum current conductivity
- ✓ Perfect sealing
- ✓ Available also with taller poles with extra space for measurements
- ✓ Safe and long operational life

8 Container / Lid

- ⚙️ High impact resistant, transparent SAN (Styrene Acrylonitrile) for the container
- ⚙️ Robust ABS (Acrylonitrile Butadiene Styrene) Material for the lid
- ⚙️ Sealing between container - lid with polyurethane resin
- ⚙️ 100% leakage quality control with high precision equipment
- ⚙️ Optionally flame retardant (Class V0) material
- ✓ Easy visual electrolyte level monitoring
- ✓ Long term leakage free warranty
- ✓ Unsurpassed mechanical strength
- ✓ Robust and durable battery construction

7 Separators

- ⚙️ High porosity grade material
- ⚙️ Allow migration of ions during charge/discharge
- ⚙️ More acid in the surrounding area of the plates
- ✓ Secured protection against short circuits
- ✓ High temperature stability
- ✓ Mechanical strength
- ✓ Low internal resistance

The ideal energy solution for stand-by applications

Long cycle life

Tubular positive plates, unique sliding pole design and special alloys composition offer a design life of 20 years for 2V cells and 18 years for 6V & 12V blocks as well as more than 1600 cycles at 80% Depth of Discharge.

Outstanding performance and reliability

Products of optimum design with use of high quality raw materials, European state-of-the-art production facilities and cumulative experience on advanced submarine battery manufacturing ensure remarkable performance, exceeding values as defined by the DIN international standards.

Minimum maintenance

Low maintenance design with reduced topping up requirements. Transparent container for easy visual electrolyte level monitoring.

Space optimization

Racks designed for optimal space utilization, quick installation and easy battery maintenance. 6V and 12V blocks available for applications where space is limited.

Operational safety

Extensive compliance testing performed under European and Global norms and verified by independent 3rd party certification agency.

Complete battery solution

Complete and ready to install systems, batteries in filled and charged or dry charged state with all the necessary accessories. Also flame retardant containers and battery management systems are available upon request.

Flexibility

Design and production of customized products and services, high volume orders handling capability, fast delivery.

Peace-of-mind

24x7 experienced pre-sales and after sales support, through SUNLIGHT Global Partners Network.

Optimum Total Cost of Ownership (TCO)

Maximum lifetime value and cost efficiency.



**Certified
Quality**

- Fully compliant with **IEC 60896-11** requirements for vented lead-acid batteries
- Full conformity to **DIN 40736-1** specifications for OPzS cells and **DIN 40737-3** for OPzS blocks
- Compliant to the safety requirements of **IEC 62485-2** for stationary batteries
- Manufactured in SUNLIGHT European production facilities, certified with **ISO 9001**, **ISO 14001**, **BS OHSAS 18001**

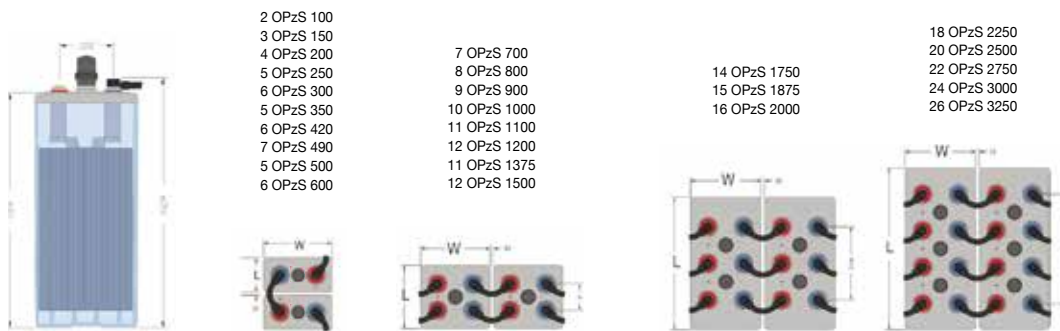
OPzS model	Rated Capacity (Ah) at 20°C (68°F)				Dimensions mm (in)				Weight kg (lb)		Internal Resistance (mOhm)	Short Circuit Current (A)	
	C10 1.80 Vpc	C8 1.75 Vpc	C5 1.75 Vpc	C3 1.75 Vpc	Length	Width	Height ₁	Height ₂	Wet	Dry			
Cells	2V 2 OPzS 100	126	121	106	91	103 (4.06)	206 (8.11)	355 (13.98)	383 (15.08)	15.5 (34.2)	8.2 (18.1)	1.430	1420
	2V 3 OPzS 150	180	174	153	131	103 (4.06)	206 (8.11)	355 (13.98)	383 (15.08)	17.0 (37.5)	10.6 (23.4)	0.950	2120
	2V 4 OPzS 200	215	209	186	161	103 (4.06)	206 (8.11)	355 (13.98)	383 (15.08)	17.5 (38.6)	12.8 (28.2)	0.740	2720
	2V 5 OPzS 250	270	263	234	203	124 (4.88)	206 (8.11)	355 (13.98)	383 (15.08)	21.2 (46.7)	15.3 (33.7)	0.590	3420
	2V 6 OPzS 300	324	316	281	243	145 (5.71)	206 (8.11)	355 (13.98)	383 (15.08)	24.9 (54.9)	18.0 (39.7)	0.510	3940
	2V 5 OPzS 350	396	391	346	298	124 (4.88)	206 (8.11)	471 (18.54)	499 (19.65)	28.6 (63.1)	20.6 (45.4)	0.540	3750
	2V 6 OPzS 420	474	468	415	356	145 (5.71)	206 (8.11)	471 (18.54)	499 (19.65)	33.5 (73.9)	24.2 (53.4)	0.460	4400
	2V 7 OPzS 490	541	535	475	408	166 (6.54)	206 (8.11)	471 (18.54)	499 (19.65)	38.5 (84.9)	27.6 (60.8)	0.410	4950
	2V 5 OPzS 500*	609	602	526	441	145 (5.71)	206 (8.11)	646 (25.43)	674 (26.54)	42.3 (93.3)	29.3 (64.6)	0.510	3950
	2V 6 OPzS 600	672	669	589	499	145 (5.71)	206 (8.11)	646 (25.43)	674 (26.54)	46.5 (102.5)	33.7 (74.3)	0.430	4700
	2V 7 OPzS 700*	836	828	725	610	191 (7.52)	210 (8.27)	646 (25.43)	674 (26.54)	59.4 (131.0)	42.3 (93.3)	0.360	5600
	2V 8 OPzS 800	893	888	783	665	191 (7.52)	210 (8.27)	646 (25.43)	674 (26.54)	63.5 (140.0)	46.7 (103.0)	0.310	6500
	2V 9 OPzS 900*	1028	1021	897	760	233 (9.17)	210 (8.27)	646 (25.43)	674 (26.54)	73.5 (162.0)	52.3 (115.3)	0.280	7250
	2V 10 OPzS 1000	1114	1108	977	830	233 (9.17)	210 (8.27)	646 (25.43)	674 (26.54)	77.7 (171.3)	56.7 (125.0)	0.250	8100
	2V 11 OPzS 1100*	1287	1278	1119	942	275 (10.83)	210 (8.27)	646 (25.43)	674 (26.54)	87.7 (193.3)	62.4 (137.6)	0.240	8450
	2V 12 OPzS 1200	1329	1326	1166	988	275 (10.83)	210 (8.27)	646 (25.43)	674 (26.54)	91.9 (202.6)	66.8 (147.3)	0.220	9250
	2V 11 OPzS 1375*	1623	1610	1412	1179	275 (10.83)	210 (8.27)	797 (31.38)	825 (32.48)	108.9 (240.1)	77.0 (169.8)	0.230	8800
	2V 12 OPzS 1500	1630	1628	1439	1213	275 (10.83)	210 (8.27)	797 (31.38)	825 (32.48)	114.0 (251.3)	82.4 (181.7)	0.220	9200
	2V 14 OPzS 1750	1978	1965	1726	1445	399 (15.71)	214 (8.43)	772 (30.39)	800 (31.50)	145.8 (321.4)	100.3 (221.1)	0.190	10650
	2V 15 OPzS 1875*	2114	2104	1855	1560	399 (15.71)	214 (8.43)	772 (30.39)	800 (31.50)	150.9 (332.7)	105.9 (233.5)	0.170	11900
	2V 16 OPzS 2000	2186	2179	1930	1635	399 (15.71)	214 (8.43)	772 (30.39)	800 (31.50)	156.1 (344.1)	111.4 (245.6)	0.156	12950
	2V 18 OPzS 2250	2689	2659	2337	1961	487 (19.17)	212 (8.35)	772 (30.39)	800 (31.50)	183.7 (405.0)	128.6 (283.5)	0.137	14750
2V 20 OPzS 2500	2926	2899	2553	2150	487 (19.17)	212 (8.35)	772 (30.39)	800 (31.50)	194.0 (427.7)	139.5 (307.5)	0.122	16550	
2V 22 OPzS 2750	3191	3165	2784	2339	576 (22.68)	212 (8.35)	772 (30.39)	800 (31.50)	219.6 (484.1)	153.7 (338.9)	0.114	17700	
2V 24 OPzS 3000	3361	3344	2954	2493	576 (22.68)	212 (8.35)	772 (30.39)	800 (31.50)	229.8 (506.6)	164.9 (363.5)	0.105	19250	
2V 26 OPzS 3250	3510	3496	3106	2646	576 (22.68)	212 (8.35)	772 (30.39)	800 (31.50)	240.1 (529.3)	175.8 (387.6)	0.098	20600	
Blocks	6V 3 OPzS 150**	177	173	154	133	233 (9.17)	224 (8.82)	345 (13.58)	394 (15.51)	41.1 (90.6)	30.5 (67.2)	3.18	1900
	6V 4 OPzS 200	215	211	190	165	272 (10.71)	205 (8.07)	332 (13.07)	375 (14.76)	46.4 (102.3)	34.1 (75.2)	2.52	2420
	6V 5 OPzS 250	287	281	250	216	380 (14.96)	205 (8.07)	332 (13.07)	375 (14.76)	59.8 (131.8)	42.0 (92.6)	2.13	2860
	6V 6 OPzS 300	312	308	277	242	380 (14.96)	205 (8.07)	332 (13.07)	375 (14.76)	66.8 (147.3)	49.3 (108.7)	1.86	3260
	12V 1 OPzS 50	63	61	55	48	272 (10.71)	205 (8.07)	332 (13.07)	375 (14.76)	41.0 (90.4)	27.8 (61.3)	17.20	700
	12V 2 OPzS 100	103	102	93	83	272 (10.71)	205 (8.07)	332 (13.07)	375 (14.76)	48.4 (106.7)	37.0 (81.6)	8.61	1400
	12V 3 OPzS 150	150	149	137	122	380 (14.96)	205 (8.07)	332 (13.07)	375 (14.76)	68.7 (151.5)	52.2 (115.1)	6.09	2000

Cells type according to DIN 40736-1:2015 except.*
Monoblocks type according to DIN 40737-3:2015 except.**

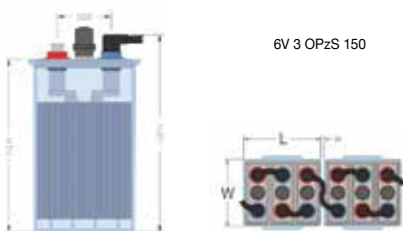
Height₂ includes installed connectors and bolts.

All dimensions and weights shown are subject to manufacturing tolerances.

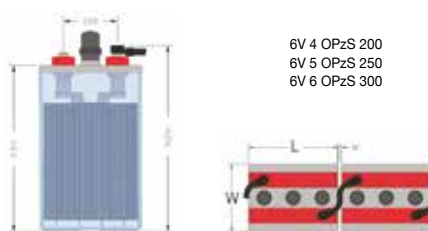
2V OPzS



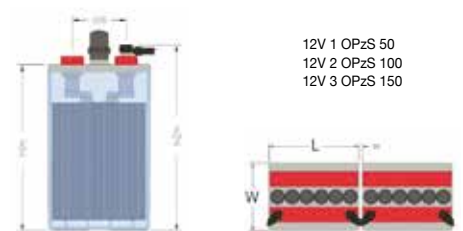
6V 3 OPzS 150



6V OPzS



12V OPzS



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