

Reserve Power RES SOPzV Batteries

Cyclic Applications



SOLAR PV



GENSET



WIND

Reserve Power

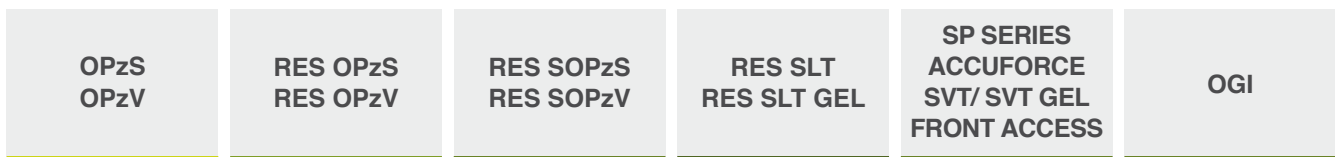
As a member of a strong and developing business ecosystem, SUNLIGHT relies on its modern infrastructure, continuous innovation and its passion for excellence, to develop and supply reliable battery solutions.

At the core of the company's growth lies its state-of-the-art manufacturing plant in Northern Greece, covering an area of 142.000 m². The company has consistently invested in developing one of the most advanced industrial plants in Europe, running highly specialized production and assembly lines. The plant is fully compliant with the strictest international standards and is certified for Quality, Occupational Health & Safety and Environmental management systems.

The products are developed by SUNLIGHT's 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's 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:



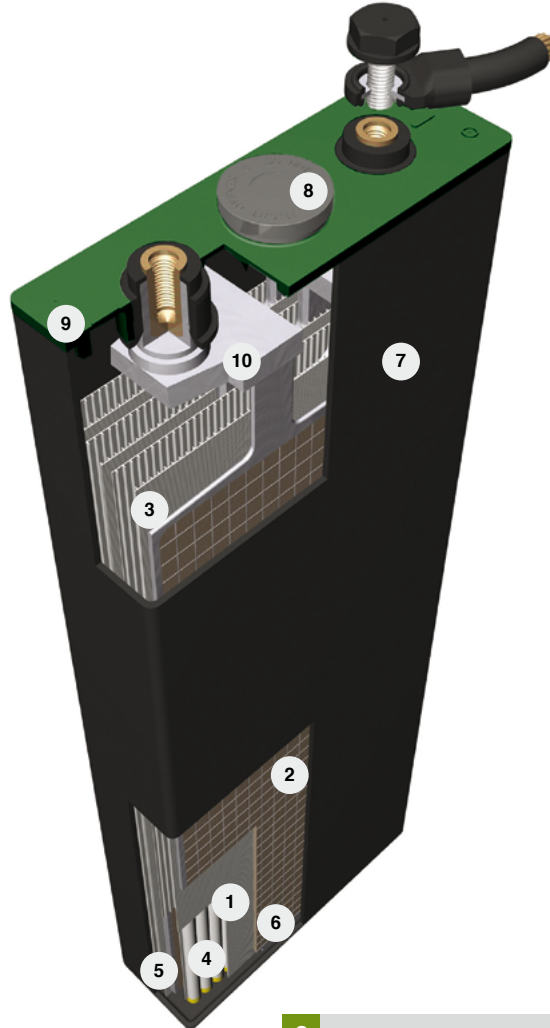
Advanced Maintenance-Free Tubular Plate GEL Batteries for Renewable Energy Storage

RES SOPzV is an **advanced energy storage solution** ideal for autonomous/hybrid PV systems in residential, telecom or infrastructure installations where demand for **no water refilling** and **long cycle life** is essential.

Enhanced valve regulated technology with **electrolyte in GEL form** and high performance **tubular positive plates** are used to produce an exceptional combination of benefits in a single battery.

Cell

Technical features & product benefits



1 Positive Plates

- ⚙️ Tubular plate design
- ⚙️ Optimized Lead Calcium Tin Alloy reducing hydrogen evolution
- ⚙️ Red Lead in-house production by 99.99% Pure 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
- ✓ Wide operational temperature range

2 Negative Plates

- ⚙️ Pasted negative plates of grid design
- ⚙️ Paste mixture that ensures high adherence and cohesion
- ⚙️ Optimized corrosion resistant Lead Calcium Tin Alloy
- ⚙️ Robust construction
- ⚙️ Long life expander
- ✓ Stability
- ✓ Increased cyclic performance
- ✓ Long battery life

3 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

4 Gauntlet

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

5 Bottom Bar

- ⚙️ Ultrasonic welding
- ✓ More secure fitment with gauntlet
- ✓ Growth of positive spine into bottom bar's cavity is easily accommodated
- ✓ Retains active material on the spines

6 Electrolyte

- ⚙️ Sulphuric acid immobilized in GEL form
- ⚙️ State of the art GEL filling equipment
- ⚙️ High purity silica for GEL formation
- ⚙️ Effective diffusion of GEL
- ✓ Operation without acid stratification or dendrite growth
- ✓ High performance on deep discharges
- ✓ Low self discharge

7 Cell Container

- ⚙️ High impact resistant Polypropylene for the container
- ⚙️ Lid welding, trimming and tightness control
- ✓ Long term leakage free operation
- ✓ Unsurpassed mechanical strength
- ✓ Robust and durable battery construction

⚙️ Technical Features

✓ Product Benefits

8 Valve

- ⚙️ Maintenance-free design
- ⚙️ Pressure relief
- ⚙️ Integral flame arrestor
- ✓ No topping-up required
- ✓ 3 Increased safety

9 Pole Terminal

- ⚙️ Advanced design of pole post and its sealing to the lid. Rubber ring with optimized hardness and acid resistance
- ✓ Operational safety
- ✓ Perfect sealing
- ✓ Low maintenance requirements
- ✓ Better current conductivity
- ✓ Positive plate's expansion is safely absorbed
- ✓ Prevention of top lid cracks and acid leakages

10 Pole Bridge

- ⚙️ Terminal bridge manufactured with Cast On Strap process
- ✓ Consistent and uniform pole bridge composition
- ✓ Increased robustness and durability
- ✓ Perfect connection for poles-bridge-plate block as a whole

Applications



Residential Installations

Off-grid or smart grid connected power systems electrifying houses, hotels, hospitals, schools or factories.

Infrastructure PV systems

Remote telecom stations, water pumping, oil & gas distribution, traffic signaling, road lighting, telemetry, security systems.



Features & Benefits

The ideal energy solution for Renewable Energy Storage applications

Long cycle life

Tubular positive plates and GEL electrolyte technology provide unique advantages in prolonging cycling operation to a 60% DoD cycle life of 2000 cycles at 20°C.

Performance and reliability

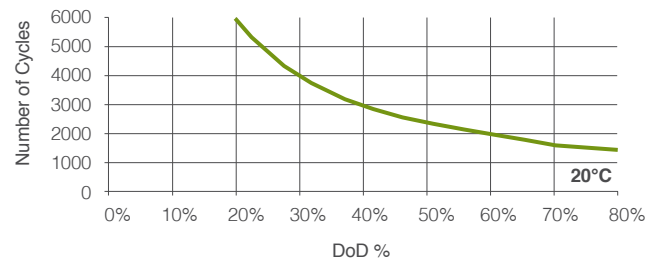
Optimum design, special lead calcium alloys composition, exclusive use of high quality materials and state of the art European manufacturing facilities ensure high capacity performance, efficiency and reliability.

Easy maintenance

Maintenance-free design with internal pressure relief valve ensures no site visits for topping up.

Operational safety

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



Complete & flexible energy storage solution

Fast delivery of modular battery systems with all the necessary accessories for safe installation in trays.

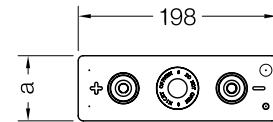
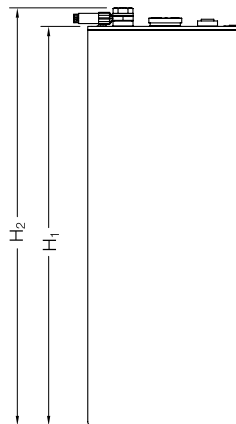
Optimum Total Cost of Ownership (TCO)

Significant benefits in terms of cost per cycle and lifetime value maximization.

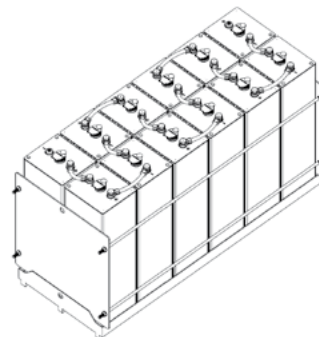
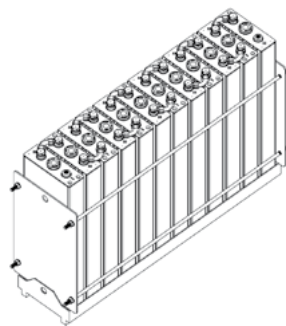
Product Range

2V Cell Type	Capacity (Ah at 20°C)				Dimensions				Weight kg	Internal Resistance (mOhm)	Short Circuit Current (A)
	C120 Uf=1.85V	C48 Uf=1.80V	C24 Uf=1.80V	C12 Uf=1.75V	Length (mm)	Width (mm)	Height ₁ (mm)	Height ₂ (mm)			
RES 2 SOPzV 150	150	145	135	126	198	47	343	367	9.0	1.58	1280
RES 3 SOPzV 225	225	218	203	189	198	65	343	367	12.7	1.08	1900
RES 2 SOPzV 280	284	279	260	244	198	47	568	592	15.4	1.08	1900
RES 3 SOPzV 425	426	419	390	366	198	65	568	592	22.0	0.72	2840
RES 4 SOPzV 565	568	558	520	488	198	83	568	592	28.7	0.54	3780
RES 5 SOPzV 710	710	698	650	611	198	101	568	592	35.3	0.43	4740
RES 6 SOPzV 850	852	837	780	733	198	119	568	592	42.1	0.36	5680
RES 7 SOPzV 990	994	977	911	855	198	137	568	592	48.8	0.31	6620
RES 8 SOPzV 1135	1136	1117	1041	977	198	155	568	592	55.5	0.27	7580
RES 7 SOPzV 1190	1190	1171	1087	1024	198	137	713	737	60.0	0.31	6560
RES 8 SOPzV 1360	1360	1338	1242	1170	198	155	713	737	68.1	0.27	7500

*All dimensions and weights shown are subject to manufacturing tolerances



Non portable metallic trays



- Manufactured at SUNLIGHT's European production facilities, certified with **ISO 9001**, **ISO 14001**, **BS OHSAS 18001**
- Compliant with **IEC 61427** requirements for photovoltaic energy systems
- Tested according to **IEC 60896-21** and fully compliant with **IEC 60896-22** requirements
- Compliant with the safety requirements of **IEC 62485-2**



Manufactured in Europe
delivered in more than **100** countries



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