Reserve Power
RES SOPzV Batteries

Cyclic Applications

SOLAR PV GENSET WIND

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 strictest 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:

OPzS OPzV	**RES OPzS RES OPzV**	**RES SOPzS RES SOPzV**	**RES SLT RES SLT GEL**	**SP SERIES ACCUFORCE SVT/ SVT GEL FRONT ACCESS**	**OGI**

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.

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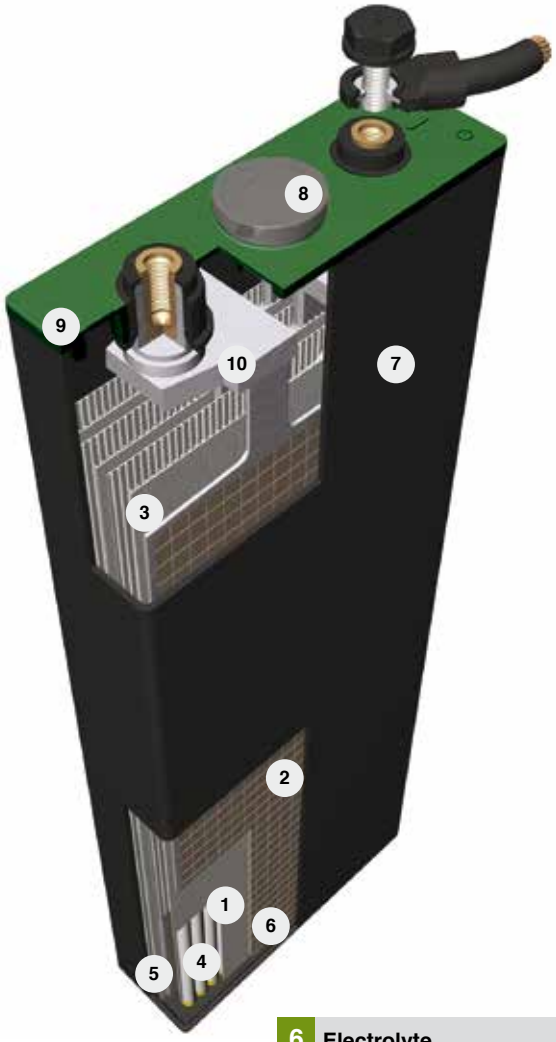
Cell

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% 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
- ✓ 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 accomodated
- ✓ 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 (68°F).

Performance and reliability

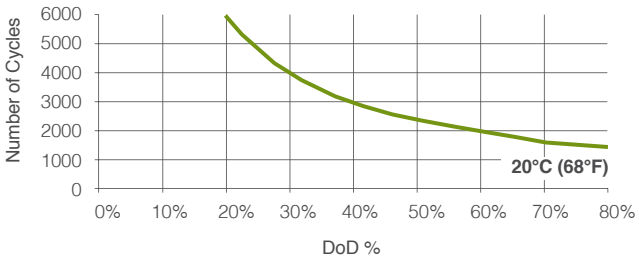
Optimum design, special lead calcium alloys composition, exclusive use of high quality materials and state of the art European manufacturing facilities ensure high capacity performance, efficiency and reliability.

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.

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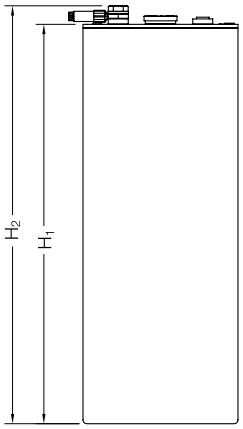
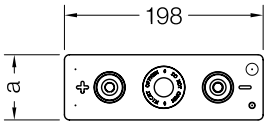
Product Range

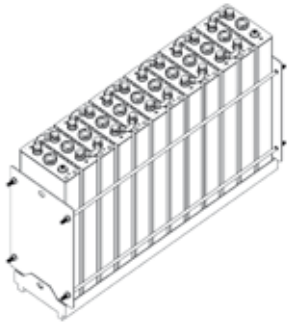
RES SOPzV model	Capacity (Ah) at 20°C (68°F)				Dimensions mm (in)				Weight kg (lb)	Internal Resistance (mOhm)	Short Circuit Current (A)
	C120 1.85Vpc	C48 1.80Vpc	C24 1.80Vpc	C12 1.80Vpc	Length	Width	Height$_1$	Height$_2$			
RES 2 SOPzV 150	150	145	135	123	198 (7.80)	47 (1.85)	343 (13.50)	367 (14.45)	9.0 (19.8)	1.58	1280
RES 3 SOPzV 225	225	218	203	184	198 (7.80)	65 (2.56)	343 (13.50)	367 (14.45)	12.7 (28.0)	1.08	1900
RES 2 SOPzV 280	284	279	260	236	198 (7.80)	47 (1.85)	568 (22.36)	592 (23.31)	15.4 (34.0)	1.08	1900
RES 3 SOPzV 425	426	419	390	354	198 (7.80)	65 (2.56)	568 (22.36)	592 (23.31)	22.0 (48.5)	0.72	2840
RES 4 SOPzV 565	568	558	520	473	198 (7.80)	83 (3.27)	568 (22.36)	592 (23.31)	28.7 (63.3)	0.54	3780
RES 5 SOPzV 710	710	698	650	591	198 (7.80)	101 (3.98)	568 (22.36)	592 (23.31)	35.3 (77.8)	0.43	4740
RES 6 SOPzV 850	852	837	780	709	198 (7.80)	119 (4.69)	568 (22.36)	592 (23.31)	42.1 (92.8)	0.36	5680
RES 7 SOPzV 990	994	977	911	827	198 (7.80)	137 (5.39)	568 (22.36)	592 (23.31)	48.8 (107.6)	0.31	6620
RES 8 SOPzV 1135	1136	1117	1041	945	198 (7.80)	155 (6.10)	568 (22.36)	592 (23.31)	55.5 (122.4)	0.27	7580
RES 7 SOPzV 1190	1190	1171	1087	982	198 (7.80)	137 (5.39)	713 (28.07)	737 (29.02)	60.0 (132.3)	0.31	6560
RES 8 SOPzV 1360	1360	1338	1242	1123	198 (7.80)	155 (6.10)	713 (28.07)	737 (29.02)	68.1 (150.1)	0.27	7500

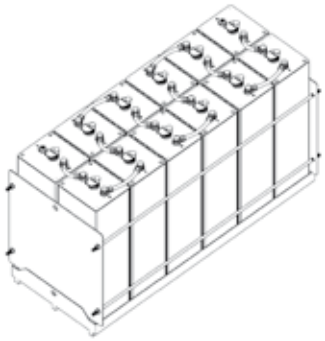
*All dimensions and weights shown are subject to manufacturing tolerances





Non portable metallic trays





Certified Quality

- Manufactured at SUNLIGHT 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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