SUNLIGHT
POWER IS KNOWLEDGE

RES SLT | RES SLT GEL

Energy from Nature

82
Pb
Lead

SUNLIGHT
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Sunlight **RES SLT** Key Advantages

Quality Batteries for Renewable Energy Storage Applications

RES SLT batteries are designed for daily cycling operation offering significant benefits in terms of cost per cycle

- Long Cycle Life
- Outstanding Performance
- Ease of Handling

Indicative Battery-based power supply systems

SYSTEM 1

Batteries

+ Solar PV or Wind

+ Genset

SYSTEM 2

Batteries

+ Solar PV or Wind

SYSTEM 3

Batteries

+ Genset

RES SLT
Vented Tubular Plate Batteries

RES SLT GEL
Sealed GEL Batteries

Applications

Residential Installations
Off-grid or smart grid connected power systems electrifying homes

Traffic Systems
Signaling and lighting roads, railways, airports and marines

Remote Monitoring & Controlling
Flow and pressure metering, instrumentation and measurements, process automation, Supervisory Control & Data Acquisition (SCADA), security monitoring devices

Residential installations

Street lighting

Traffic signal systems

Railway signalling

Sunlight RES SLT Vented Tubular Plate Batteries




Type	RES SLT 12-50	RES SLT 12-80	RES SLT 12-120	RES SLT 12-170
Voltage (V)	12	12	12	12
Length (mm)	205	265	308	345
Width (mm)	175	175	175	170
Height* (mm)	190	210	225	285
Weight (kg)	13.9	19.9	27.2	38.4
Number of batteries per europallet	72	48	56	36





Type	RES SLT 12-220	RES SLT 6-270	RES SLT 6-290	RES SLT 6-380	RES SLT 6-460
Voltage (V)	12	6	6	6	6
Length (mm)	510	260	260	305	305
Width (mm)	222	180	180	188	188
Height* (mm)	225	275	275	365	365
Weight (kg)	47.3	29.9	32.5	47.9	50.5
Number of batteries per europallet	28	48	48	28	28

*includes poles

Operation

Number of cycles
1600 cycles (@50% DoD, 20ºC)
Maintenance
Low water topping up requirements
Operating temperature
Min: -20ºC / Max: 45ºC
Recommended 15ºC to 35ºC
Self discharge rate
Approx. 2% per month at 20ºC
Storage Time
Maximum shelf life up to 5 months at 20ºC, 4 months at 30ºC or 2 months at 40ºC
Recommended Charging Voltage
2.25 to 2.30 V/cell (stand-by use at 20ºC), 2.35 to 2.45 V/cell (cycle use at 20ºC)

Design

Positive plates
Tubular plates with optimized anti-corrosion characteristics due to the use of special low antimony lead alloy. Tubes filled by injection with active material (mixture of lead oxide and red lead).
Negative plates
Plates composed of reinforced grids design pasted with optimized lead alloy.
Separators
High-porosity separators with minimal internal resistance.Secured insulation between positive and negative plates.
Electrolyte
Optimized electrolyte density (acid-water), for proper ionic exchange.
Container, lid material
Corrosion-resistant polypropylene material. Lids completely heat sealed.
Terminals
Automotive Post type. On the same side for 12V blocks and diagonally for 6V blocks.
Valves
Filler caps with vent valves for proper battery ventilation.

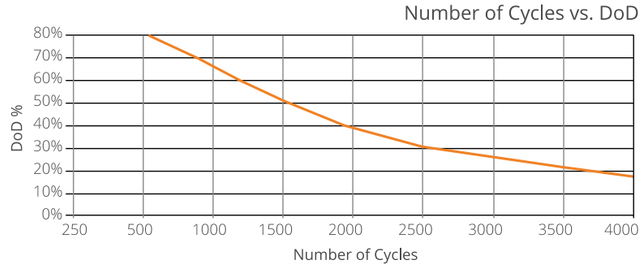
Sunlight RES SLT Vented Tubular Plate Batteries

Type	Capacity (Ah at 20°C)								
	C240 1.85 Vpc	C120 1.85 Vpc	C72 1.85 Vpc	C48 1.80 Vpc	C24 1.80 Vpc	C12 1.80 Vpc	C10 1.80 Vpc	C5 1.75 Vpc	C2 1.70 Vpc
RES SLT 12-50	61	53	52	53	45	41	39	36	28
RES SLT 12-80	95	82	81	83	70	63	60	56	44
RES SLT 12-120	144	125	123	126	106	96	92	85	66
RES SLT 12-170	201	173	170	175	147	134	127	118	92
RES SLT 12-220	255	220	216	222	186	170	162	150	117
RES SLT 6-270	314	271	267	274	230	210	200	185	144
RES SLT 6-290	340	293	289	297	249	227	216	200	156
RES SLT 6-380	450	388	382	393	329	300	286	265	207
RES SLT 6-460	544	469	462	474	398	363	345	320	250

Key Benefits

A remarkably high number of cycles that offers exceptional efficiency for daily cycling applications. The cycle life rating allows the determination of the true value of the battery over its life by understanding the total cost of ownership.

Number of Cycles vs. DoD



Vented tubular plate design is superior because of the following technical features

Product Benefits

- Long cycle life
- Excellent cycling properties
- High capacity performance
- Increased endurance even in cases of poor charging conditions

Technical Features

- Higher active mass surface area than plain flat plates
- No active material shedding
- Reduced grid corrosion
- Reduced self-discharge rate
- Quality and homogeneity

Sunlight RES SLT GEL Sealed GEL Batteries




Type	RES SLT GEL 12-60	RES SLT GEL 12-90	RES SLT GEL 12-120	RES SLT GEL 12-150
Voltage (V)	12	12	12	12
Length (mm)	240	308	345	345
Width (mm)	175	175	170	170
Height* (mm)	190	225	235	285
Weight (kg)	19.9	29.0	35.1	42.7
Number of batteries per europallet	57	30	24	24




Type	RES SLT GEL 12-200	RES SLT GEL 12-240	RES SLT GEL 6-260	RES SLT GEL 6-360
Voltage (V)	12	12	6	6
Length (mm)	513	517	244	305
Width (mm)	218	270	192	180
Height* (mm)	215	240	275	365
Weight (kg)	60.5	71.0	34.1	54.3
Number of batteries per europallet	14	12	36	24

*includes poles

Operation

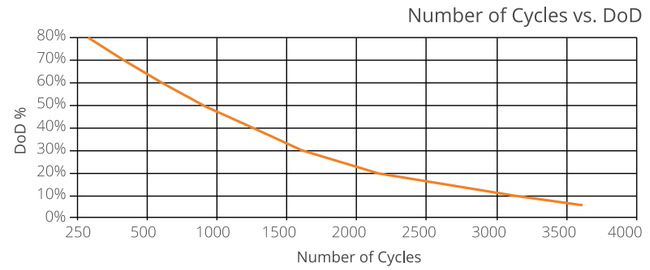
Number of cycles
900 cycles (@50% DoD, 20ºC)
Maintenance
Maintenance-free design without water topping-up needs
Operating temperature
Min: -20ºC / Max: 45ºC.
Recommended 15ºC to 35ºC
Self discharge rate
Approx. 2% per month at 20ºC
Storage Time
Maximum shelf life up to 6 months at 20ºC, 4 months at 30ºC or 2 months at 40ºC
Recommended Charging Voltage
2.25 to 2.30 V/cell (stand-by use at 20ºC), 2.35 to 2.45 V/cell (cycle use at 20ºC)

Design

Positive plates
Flat plates with lead calcium tin grid.
Negative plates
Plates of reinforced grids design pasted with optimized lead alloy.
Separators
High-porosity separators with minimal internal resistance. Secured insulation between positive and negative plates. Free flow of electrolyte throughout the cell.
Electrolyte
Sulphuric acid immobilised as a GEL.
Container, lid material
Corrosion-resistant polypropylene material. Lids completely heat sealed.
Terminals
Automotive Post type. On the same side for 12V blocks and diagonally for 6V blocks.
Pressure relief valve
One way valve with flame arrestor.

Sunlight RES SLT GEL Sealed GEL Batteries

Type	Capacity (Ah at 20°C)								
	C240 1.85 Vpc	C120 1.85 Vpc	C72 1.85 Vpc	C48 1.80 Vpc	C24 1.80 Vpc	C12 1.80 Vpc	C10 1.80 Vpc	C5 1.75 Vpc	C2 1.70 Vpc
RES SLT GEL 12-60	71	62	61	62	52	48	45	42	33
RES SLT GEL 12-90	110	95	94	96	81	74	70	65	51
RES SLT GEL 12-120	144	125	123	126	106	96	92	85	67
RES SLT GEL 12-150	178	154	151	156	131	119	113	105	82
RES SLT GEL 12-200	233	201	198	203	170	155	148	137	107
RES SLT GEL 12-240	280	242	238	245	205	187	178	165	129
RES SLT GEL 6-260	306	264	260	267	224	204	194	180	140
RES SLT GEL 6-360	425	366	361	371	311	284	270	250	195



Key Features & Benefits

- Maintenance free VRLA technology eliminates periodic water refilling associated with vented lead acid batteries.
- No electrolyte stratification due to its electrolyte GEL form. The electrolyte formulation produces a homogenous GEL that delivers consistent performance and long cycle life. The gelled electrolyte gives better protection to the battery plates, and is better suited for deep cycle discharge applications.
- Leak proof due to GEL technology. The use of gelled electrolyte means there is no free acid inside the cell. So the batteries are completely spillproof and are suitable for many available options of vertical or horizontal installation.
- Premium grade separators allow maximum charge flow between the plates for optimum performance even in harsh conditions.

Sunlight Group Energy Storage Systems is a world-leading technology company and provider of integrated and innovative energy storage solutions, with over 30 years of knowledge and experience. It exports to over 100 countries and operates state-of-the-art industrial units in Greece, Italy, and USA. Sunlight's clear vision and forward-facing strategy are driven and underpinned by a commitment to technological innovation and passion for excellence that supports sustainability and transition to a carbon-free future.

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