

EXIDE

GEL TUBULAR VRLA BATTERIES FOR SOLAR PHOTOVOLTAIC APPLICATION

EXIDE
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Exide Industries Limited, the largest manufacturer of Lead Acid Battery in India for over 60 years launches its latest series of Gel Tubular VRLA batteries ideally designed for Off-Grid Solar Photovoltaic application. Exide Gel Tubular has the robustness & reliability of Tubular technology coupled with the comfort of VRLA. The performance of SG batteries conforms to IEC 61427, IEC 60896 – 21/22.

APPLICATIONS : ● SOLAR PHOTOVOLTAIC POWER PLANTS ● HYBRID POWER STATIONS ● TELECOMMUNICATION ● RAILWAY TRAFFIC SIGNALING & LIGHTING

UNIQUE FEATURES	USER BENEFITS
● Positive Plate : Robust Torr Tubular Spine with Pb-Ca-Sn alloy	● Rugged and reliable for cyclic application. Ideal for frequent discharge-charge cycle.
● Negative Plate : Pb-Ca alloy grid	● Low corrosion, very low self discharge, No water topping up ever
● Separator : Micro-porous and resin based with high porosity	● Low electrical resistance, high charging efficiency. Resistive to any malfunction due to separator damage during operation.
● Electrolyte : Sulphuric acid in immobilized gelled form specially made by mixing thixotropic inert additives	● No acid stratification, longer cycle life and allows recombination operation
● Container and Lid : Made of high grade additive filled polypropylene co-polymer material	● Low foot-print, cells are housed in stackable MS modules (8V)
● Valve – Flame arresting vent plug housing long life rubber safety valve	● Explosion proof, self resealing, pressure regulating and can safely used in high ambient temperature zone
● Bolt – on Terminal with brass insert	● Specially designed to sustain high current discharge and mechanical ruggedness
● Connector : Lead coated solid copper connector with insulating shroud/top cover	● Good insulation, safety and reliability.

Technical Characteristics

Type of Battery	Nominal Voltage (V)	Capacity @ 10hr / 1.75V (Ah)	Module Dimension			Weight (kg) ± 5	Height (Cell Vent top) ± 5
			Voltage	L (mm) ± 5	W (mm) ± 5		
SG 200	2V	200	8V	717	182	66	345
SG 300	2V	300	8V	717	214	115	512
SG 400	2V	400	8V	717	214	124	512
SG 500	2V	500	8V	717	214	144	512
SG 600	2V	600	8V	717	262	179	505
SG 800	2V	800	4V	386	262	125	680
SG 1000	2V	1000	4V	386	278	143	667

Commissioning Charge Of Battery:

Before commissioning a new battery, follow procedure either procedure (a) or (b). However, procedure (a) is recommended.

a) IU method (bulk charge)

At a raised voltage of 2.35 to 2.37 volts per cell. The charging time will be 12 to 24 hours depending on the initial charge condition. The current is required to be limited to 20% of the battery Ah capacity (0.2 C10).

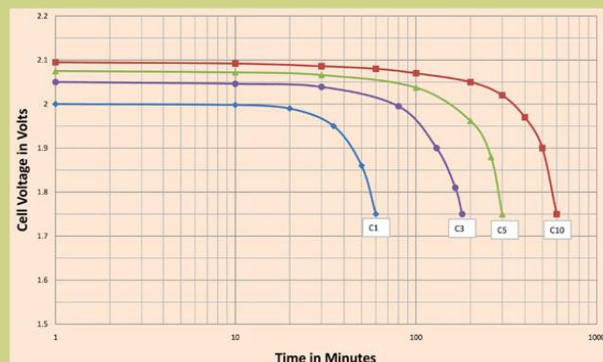
Bulk charging must be switched off or switched over to float charging as soon as the fully charged state is reached.

b) Float Charge :

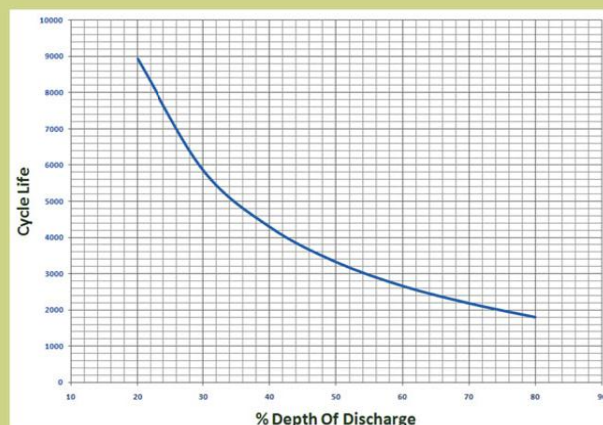
With a voltage of 2.27 volt per cell.

Full capacity will however be obtained after a long period of 4 to 6 weeks depending on state of charge.

Performance Curves at Different Rates of Discharge



DOD Vs No. of Cycle



Recharging Characteristics During Operations:

	Recommended Parameters for ambient temperature of 25-30°C	Temperature compensation factor at 25°C
Charging Current	Maximum - 20% of the battery Ah capacity Minimum - 10% of the battery Ah capacity	Float : -3mV/°C/2V cell Cyclic : -5mV/°C/2V cell
Bulk Voltage	2.40 ± 0.02 V/cell	
Float Voltage	2.28 ± 0.02 V/cell	
Equalizing voltage	2.40 ± 0.02 V/cell	
Load Reconnect voltage	2.20 ± 0.02 V/cell	
Low Voltage disconnect	1.90 ± 0.02 V/cell	
Recharge factor	105% of discharge Ah	

Go For **TORR TUBULAR**®
 ● Spines cast in HADI machine at 100 Bar
 ● Higher reliability, longer life



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