EverExceed®
power your applications

Solar Gel Range VRLA

HIGH PERFORMANCE

ES4DG

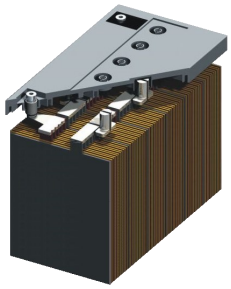
EVEREXCEED GEL TECHNOLOGY EXCELS IN CYCLING APPLICATIONS

GELLED VALVE REGULATED LEAD ACID BATTERY (GVR) FOR CYCLING APPLICATIONS

12V 163AH @ 20 HR RATE to 1.75VPC

12V 181AH @ 100 HR RATE to 1.75VPC

12V 143AH @ 10 HR RATE to 1.80VPC

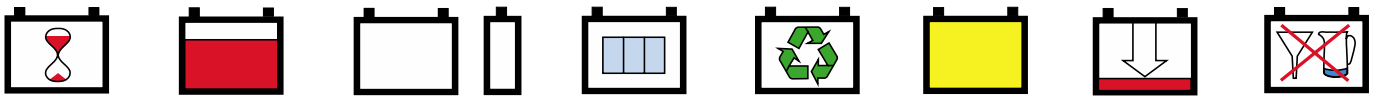


Innovative Features

- Valve regulated lead acid (VRLA);
- Sulfuric acid thixotropic gel, electrolyte in solid gel form will not stratify - no equalization charge required, Gel powder from Europe leading supplier to ensure the unique performance of gel battery;
- Microporous rubber and corrugated PVC SiO_2 separator, the special design increase the high porosity and anti-corrosion and decrease the internal resistance;
- Virgin Pure Lead Tin and thick positive plate technology design for maximum service float life - 12 years design life @25°C(77°F);
- Proprietary Fixed Orifice Plate Pasting technology applying active materials on both sides of the grid for consistent cell-to-cell performance, higher capacity and uniform grid protection.
- Thickness positive plate plus optimized plate alloy to anti-corrosion;
- Unique performance against high temperature;
- Spill-proof and leak-proof;
- Operates at a low internal pressure;
- Very low gassing due to internal gas recombination;
- Flame-arresting one-way pressure relief vent for safety and long life;
- Rated non-spillable by ICAO, IATA and DOT.

12 VOLTS - 163 AMPERE HOUR @ 20 HOUR RATE													
AH Capacity to 1.75VPC @ 25°C (77°F)													
End Point Volts/Cell	1.5hr	2hr	3hr	4hr	5hr	8hr	10hr	12hr	20hr	24hr	48hr	72hr	100hr
1.75	95.6	107	116	121	126	142	147	150	163	165	170	175	181

THE MOST RELIABLE BATTERY FOR RENEWABLE ENERGY



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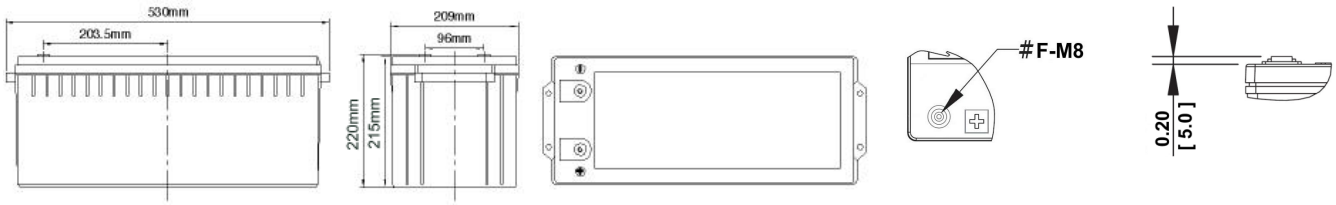

Length: 530mm Width: 209mm Height: 220mm

Electrical Specifications						
Cells Per Unit	Voltage Per Unit	Weight	Electrolyte	CCA @ -18°C (0°F)	Short Circuit Current	Ohms Imped 60 Hz(Ω)
6	12.84	115lbs 52.2kg	SG = 1.280	1020 Amps	4450 Amps	0.0028

Capacity	163 Ah @ 20 hr. rate to 1.75 volts per cell @ 25°C (77°F). 181 Ah @ 100 hr. rate to 1.75 volts per cell @ 25°C (77°F). 143 Ah @ 10 hr. rate to 1.80 volts per cell @ 25°C (77°F).
Applicable Operating Temperature Range	-40°C (-40°F) to +70°C (+158°F).
Ideal Operating Temperature Range	+20°C (+68°F) to +35°C (+95°F).
Floating Charging Voltage	13.5 to 13.8 VDC/unit Average at 25°C (77°F).
Recommended Maximum Charging Current Limit	0.25C20 amperes (40.8 amperes @ 100% depth of discharge) @ 20 hr. rate to 1.75VPC.
Equalization and Cycle Service Charging Voltage	14.1 to 14.4 VDC/unit Average at 25°C (77°F).
Maximum AC Ripple (Charger)	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results. Maximum voltage allowed = 1.4% RMS (4% P-P). Maximum current allowed = 8.16 amperes RMS (C/20) to 1.75VPC.
Self Discharge	EverExceed Solar Gel Range batteries may be stored for up to 24 months at 20°C (68°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.
Accessories	Inter unit connectors racks and cabinet systems are available.
Terminal: Inserted	Threaded copper alloy insert terminal.
Terminal Hardware Initial Torque: Inserted Terminal	11 N-m

Constant Power Discharging Ratings - Watts Per Cell @ 25°C (77°F)										
End Point Volts/Cell	1.5hr	2hr	3hr	4hr	5hr	8hr	10hr	12hr	20hr	24hr
1.85	113	95.3	69.3	55.1	45.8	32.2	26.6	22.7	14.9	12.9
1.80	118	100	73.1	58.0	48.3	34.0	28.2	24.2	15.8	13.4
1.75	120	103	74.7	59.1	49.3	34.6	28.9	24.6	16.1	13.7

Constant Current Discharging Ratings - Amperes Per Cell @ 25°C (77°F)													
End Point Volts/Cell	1.5hr	2hr	3hr	4hr	5hr	8hr	10hr	12hr	20hr	24hr	48hr	72hr	100hr
1.85	58.5	49.3	35.6	28.1	23.3	16.2	13.4	11.3	7.44	6.39	3.34	2.31	1.72
1.80	62.1	52.3	37.7	29.7	24.7	17.2	14.3	12.1	7.94	6.70	3.46	2.39	1.77
1.75	63.6	53.7	38.8	30.5	25.2	17.6	14.7	12.5	8.16	6.90	3.55	2.44	1.81

Note: Batteries to be mounted with 0.5 in (1.25 cm) spacing minimum and free air ventilation.
Specifications subject to change without notification.