



# HIGH PERFORMANCE



## ES20-12G

**EVEREXCEED GEL TECHNOLOGY  
EXCELS IN CYCLING APPLICATIONS**

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

**12V 18.4AH @ 20 HR RATE to 1.75VPC  
12V 20.4AH @ 100 HR RATE to 1.75VPC  
12V 16.1AH @ 10 HR RATE to 1.80VPC**



### Innovative Features

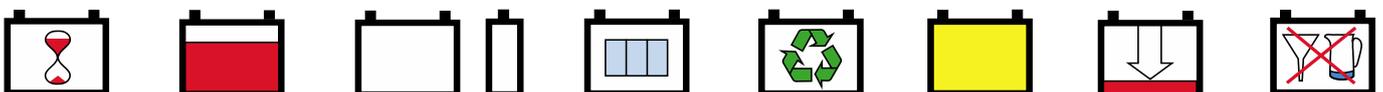
- ☑ Valve regulated lead acid (VRLA);
- ☑ Sulfuric acid thixotropic gel, electrolyte in solid gel form will not stratify - no equalization charge required, Gel powder from Europe leading supplier to ensure the unique performance of gel battery;
- ☑ Microporous rubber and corrugated PVC SiO<sub>2</sub> 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 - 18.4 AMPERE HOUR @ 20 HOUR RATE

AH Capacity to 1.75VPC @ 25°C (77°F)

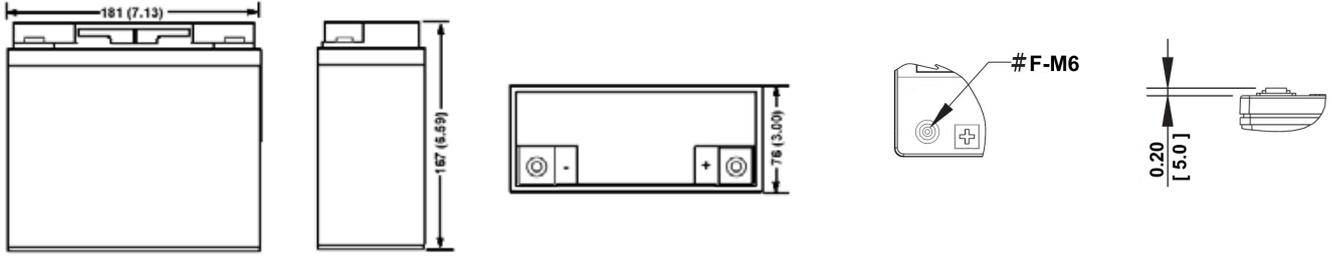
End Point Volts/Cell	1.5hr	2hr	3hr	4hr	5hr	8hr	10hr	12hr	20hr	24hr	48hr	72hr	100hr
1.75	10.7	12.0	13.1	13.7	14.2	15.9	16.5	16.8	18.4	18.7	19.2	19.8	20.4

### THE MOST RELIABLE BATTERY FOR RENEWABLE ENERGY



# Solar Gel Range VRLA

**EverExceed**<sup>®</sup>  
power your applications



Length: 181mm Width: 76mm Height: 167mm

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	13.2lbs 6.00kg	SG = 1.280	120 Amps	750 Amps	0.0150

<b>Capacity</b>	18.4 Ah @ 20 hr. rate to 1.75 volts per cell @ 25°C (77°F). 20.4 Ah @ 100 hr. rate to 1.75 volts per cell @ 25°C (77°F). 16.1 Ah @ 10 hr. rate to 1.80 volts per cell @ 25°C (77°F).
<b>Applicable Operating Temperature Range</b>	-40°C (-40°F) to +70°C (+158°F).
<b>Ideal Operating Temperature Range</b>	+20°C (+68°F) to +35°C (+95°F).
<b>Floating Charging Voltage</b>	13.5 to 13.8 VDC/unit Average at 25°C (77°F).
<b>Recommended Maximum Charging Current Limit</b>	0.25C20 amperes (4.60 amperes @ 100% depth of discharge) @ 20 hr. rate to 1.75VPC.
<b>Equalization and Cycle Service Charging Voltage</b>	14.1 to 14.4 VDC/unit Average at 25°C (77°F).
<b>Maximum AC Ripple (Charger)</b>	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 = 0.92 amperes RMS (C/20) to 1.75VPC.
<b>Self Discharge</b>	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.
<b>Accessories</b>	Inter unit connectors racks and cabinet systems are available.
<b>Terminal: Inserted</b>	Threaded copper alloy insert terminal.
<b>Terminal Hardware Initial Torque: Inserted Terminal</b>	9 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	11.3	10.7	7.83	6.19	5.15	3.62	3.00	2.56	1.68	1.44
1.80	13.4	11.3	8.19	6.53	5.43	3.83	3.17	2.72	1.77	1.51
1.75	13.7	10.9	7.83	6.21	5.17	3.62	3.02	2.58	1.69	1.44

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	6.60	5.56	4.01	3.16	2.61	1.83	1.50	1.28	0.85	0.72	0.38	0.26	0.19
1.80	6.94	5.92	4.25	3.37	2.77	1.94	1.61	1.37	0.89	0.75	0.39	0.27	0.20
1.75	7.14	6.02	4.36	3.42	2.84	1.99	1.65	1.41	0.92	0.78	0.40	0.28	0.20

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

