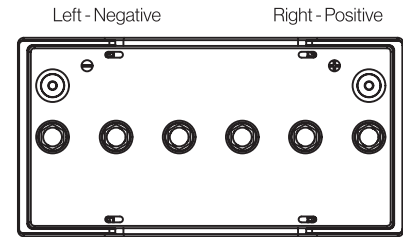
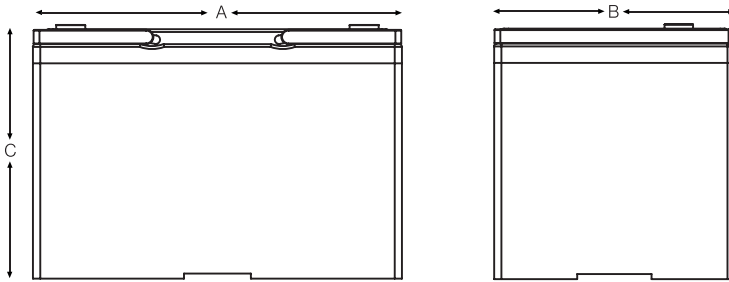


# EQ-31M

## Carbon Nano Gel Bloc



### Electrical Specifications

<b>Voltage</b>	12V
<b>M.R.C. 25 Amps</b>	170
<b>80% DOD Voltage Cutoff</b>	11.2V
<b>Low Voltage Cutoff</b>	10.8V
<b>Self Discharge</b>	Less than 3% per month (20°C/68°F)
<b>Charge Temperature</b>	Min: -10°C (14°F) / Max: 50°C (122°F)
<b>Discharge Temperature**</b>	Min: -40°C (-40°F) / Max: 50°C (122°F)
<b>Storage</b>	Min: -20°C (-4°F) / Max: 60°C (140°F)

Cell Type Ue (100%) / VPC Ref Temp	C5 1.70 25°C	C10 1.75 25°C	C20 1.75 25°C	C100 1.80 25°C
EQ-31M	85	88	94	100

\*\* CAUTION: Depths of discharge, operating voltages and currents, when designing systems for use at maximum temperatures, will vary.

### Mechanical Specifications

Industry Reference	BCI31	
<b>Length (A)</b>	13 in	329 mm
<b>Width (B)</b>	6.7 in	170mm
<b>Height (C)</b>	8.1 in	205mm
<b>Weight</b>	71lbs	32 kgs
<b>Terminal (Opt'l)*</b>	M8	
<b>Cell(s)</b>	6	
<b>Electrolyte</b>	Gel	
<b>Terminal Torque Nm</b>	8	

NOTE: There is a tolerance of +/-2%.

### Terminal Options Available:

- M8
- A-Pole
- Dual
- Stud

### Features

- Maintenance free - no topping up required
- Ultra energy efficient due to low resistance
- Reduced operating temperatures for increased cycle life (>1500 cycles) and battery lifetime
- Cost savings due to increased efficiency
- Up to 2 x faster recharge
- Increased design life from 12 to 15 years
- Allows for opportunity charging to give you those extra running times when required
- Suitable for extreme temperature variants

### Applications: all motive, leisure & solar:

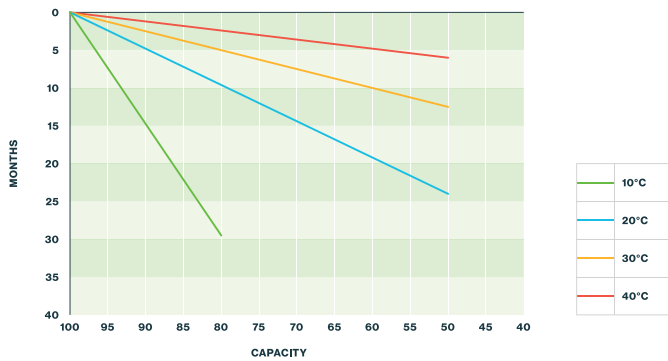
- Electric vehicles, including cleaning machines
- Wheelchairs
- Electric Working Platforms
- UPS Systems
- Traffic Systems
- Telecommunications & Emergency Lighting
- Caravans / Motorhomes RV's & Maritime
- Solar & Renewable Energy & Home Invertor

## Charging profile

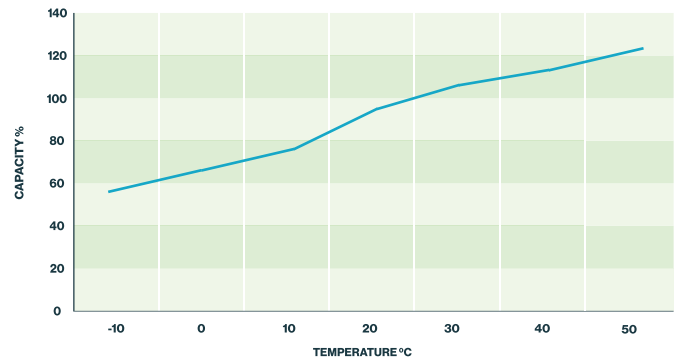
**IU Charging** I = min. 12% C<sub>5</sub> max. 30% C<sub>5</sub>  
U = 2.4 V per cell

**IUI Charging** I<sub>1</sub> = min. 12% C<sub>5</sub> max. 40% C<sub>5</sub>  
U = 2.35 V per cell  
I<sub>2</sub> = 1.5% C<sub>5</sub> for max. 4 hours

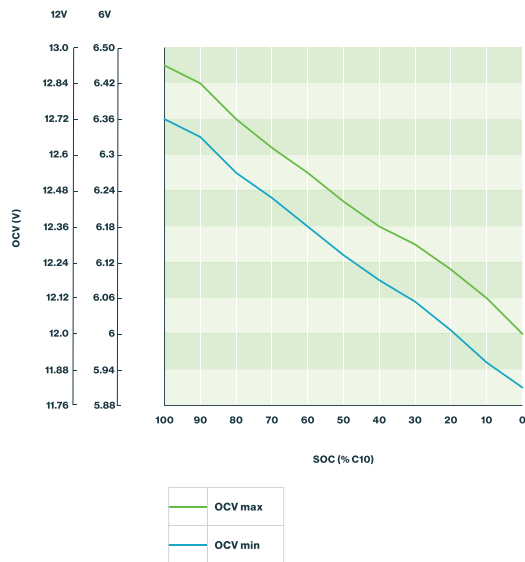
### Self discharge at different temperatures



### Capacity vs. temperature



### Storage: Determine the state of charge



### Relation between charging, voltage and temperature

