Sealed, Valve-Regulated, Gelled-Electrolyte Batteries for Renewable Energy Applications

Features
- Valve-regulated...
- Gelled electrolyte...
- Comp-u-cast, power path grids and computer-controlled oxide...
- Low stand loss...
- Tank formed plates...
- Rated non-spillable by ICAO, IATA and DOT...
- Made in the U.S.A...

Benefits
- Sealed construction eliminates periodic watering, corrosive acid fumes and spills.
- Electrolyte will not stratify. No equalization charging required.
- Increases durability and deep cycle ability for heavy demand applications.
- Less than 2% per month stand loss means little deterioration during transport and storage.
- Ensure voltage matching between cells.
- Transports easily and safely by air. No special containers needed.
- Ensures reliable service, support and quality.
The Deka Solar series of valve-regulated, gelled-electrolyte batteries is designed to offer reliable, maintenance-free power for renewable energy applications where frequent deep cycles are required and minimum maintenance is desirable.

**Applications**
- Water pumping
- Residential
- Communications
- Cathodic protection
- Remote monitoring
- Refrigeration
- Lighting
- Aids to navigation
- Wind generation

**Specifications**
- Voltage: 12 volts nominal (8GGC2 is 6 volts)
- Plate alloy: Lead calcium
- Element, post: Threaded stud or "flag" terminal, forged bushing
- Container/cover: Polypropylene
- Electrolyte: Sulfuric acid anhristropic gel
- Vent: Self sealing

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**Gel Cycle Life vs Depth of Discharge at +25°C (77°F)**

Based on BCI 2-hour Capacity

**Cycle Chart** applies to types with similar design characteristics, ex., U1, 22NF, 24, 27, 31.

The solar battery excels in cycling applications. **Dependent on proper charging and ambient temperatures.**

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**Photovoltaic Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Max Current (amps)</th>
<th>20% of 20 Hr Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Charge</td>
<td>Max Current (amps)</td>
<td>30% of 20 Hr Rate</td>
</tr>
<tr>
<td>Absorption (Regulation) Charge</td>
<td>Constant Voltage</td>
<td>2.35 - 2.40 vpc</td>
</tr>
<tr>
<td>Float Charge</td>
<td>Constant Voltage</td>
<td>2.25 - 2.30 vpc</td>
</tr>
<tr>
<td>Equalize Charge</td>
<td>Constant Voltage</td>
<td>2.15 - 2.20 vpc</td>
</tr>
<tr>
<td>Temperature Coefficient</td>
<td>0.005 mV/°C</td>
<td></td>
</tr>
</tbody>
</table>

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**Capacity vs. Operating Temperature**

**Equation**:

\[ \text{Capacity} = \text{Rated Capacity} \times (1 - \frac{\text{Ambient Temperature}}{185}) \]

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**Terminal Information**

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Footnotes</th>
<th>Volts</th>
<th>Discharge Amps per unit to 1.75VPC at 77°F (25°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 Min 10 Min 15 Min 20 Min 30 Min 60 Min 90 Min 3 Hr 6 Hr 8 Hr 20 Hr 24 Hr 48 Hr 100 Hr</td>
</tr>
<tr>
<td>BGU1</td>
<td>4,38,39,Y</td>
<td>12</td>
<td>74.7 54.3 44.6 38.8 31.9 21 15 21 15 8.50 4.67 3.58 1.58 1.33 0.73 0.73 0.36</td>
</tr>
<tr>
<td>BGU1H</td>
<td>4,38,39,Y</td>
<td>12</td>
<td>74.7 54.3 44.6 38.8 31.9 21 15 21 15 8.50 4.67 3.58 1.58 1.33 0.73 0.73 0.36</td>
</tr>
<tr>
<td>BGG2NF</td>
<td>4,38,39,G</td>
<td>6</td>
<td>120 86.7 69.1 60 47 31.8 21 15 21 15 8.50 4.67 3.58 1.58 1.33 0.73 0.73 0.36</td>
</tr>
<tr>
<td>BGG4</td>
<td>4,38,39,G</td>
<td>6</td>
<td>204 152 119 100 78 48.5 35 19 77 10.75 8.30 3.68 3.12 1.68 0.84</td>
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<tr>
<td>BG27</td>
<td>4,38,39,G</td>
<td>6</td>
<td>242 185.5 142.5 118.8 80.25 57 41.5 23.30 12.67 9.00 4.32 3.67 1.99 0.99</td>
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<tr>
<td>BG30H</td>
<td>4,38,39,G</td>
<td>6</td>
<td>266 199.5 161.5 137.8 104.5 84.5 47 26.20 14.20 11.00 4.88 4.10 2.15 1.08</td>
</tr>
<tr>
<td>BG31</td>
<td>4,38,39,X</td>
<td>12</td>
<td>266 199.5 161.5 137.8 104.5 84.5 47 26.20 14.20 11.00 4.88 4.10 2.15 1.08</td>
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<tr>
<td>BG32</td>
<td>4,38,39,G</td>
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<td>325 250 210 180 150 99 76 45.30 25.80 20.00 9.00 7.60 3.90 1.98</td>
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<tr>
<td>BG40</td>
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<td>6</td>
<td>485 370 300 255 195 122 88 49.20 26.70 20.70 9.15 7.37 4.22 2.10</td>
</tr>
<tr>
<td>BG50</td>
<td>4,38,39,G</td>
<td>6</td>
<td>600 460 370 315 245 150 105 80.69 33.00 25.50 11.50 9.24 5.18 2.65</td>
</tr>
</tbody>
</table>

**Footnotes:**
- 4 - Gray Cover / Gray Case
- 17 - Includes handle
- 38 - "Non-Spillable" defined by DOT (Department of Transportation) definitions
- 39 - "Non-Spillable" defined by ICAO (International Commercial Airline Organization) and IATA (International Airline Transport Association) definitions
- B - Flag terminal w/ 3/8" diameter hole
- G - Offset post w/ horizontal hole, stainless steel 5/16" bolt & hex nut
- S - SAE "automotive type" post
- X - 3/8" x 16" stainless steel stud posts
- Y - Small L terminal with round holes

Batteries manufactured in polypropylene cases and covers.