TUBULAR GEL

VRLA BATTERIES FOR TELECOM APPLICATION
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 On-Grid and Off-Grid Telecom BTS application. Exide Gel Tubular has the robustness & reliability of Tubular technology coupled with the comfort of VRLA. The performance of GTB batteries conforms to IEC 61427, IEC 60896 – 21/22 & TEC Spec No. TEC/GT/3X/BAT-003/02 MAR 2011.

**APPLICATIONS**
- TELECOMMUNICATION
- SOLAR
- HYBRID POWER STATIONS
- RAILWAY TRAFFIC SINGALING & LIGHTING
- UPS SYSTEM

**UNIQUE FEATURES**
- Positive Plate: Robust Torr Tubular Spine with Pb-Ca-Sn alloy
- Negative Plate: PbCe alloy grid
- Separator: Resin based Micro-porous
- Electrolyte: Sulphuric acid immobilized in gel form made by mixing inert additives
- Recharge Characteristic
- Container and Lid: Made of high grade polypropylene co-polymer material
- Valve: Flame arresting vent plug housing long life rubber safety valve
- Terminal: Bolt-on type with Lead-Tin coated Brass insert
- Connector: Insulated Lead coated solid copper connector

**USER BENEFITS**
- Rugged and reliable for cyclic application ideal for frequent discharge-charge cycle
- Very low self discharge. No water topping up ever
- Low electrical resistance, high charging efficiency. Resistant to separator damage
- No acid stratification, low gassing due to internal gas recombination, good heat dissipation characteristics resulting longer cycle life
- Excellent energy saving feature and quick recharge
- Low foot-print, cells are housed in stackable MS modules (6V)
- Explosion proof, self sealing, pressure regulating and can be safely used in high ambient temperature zone
- Specially designed to sustain high current discharge and mechanical ruggedness
- Good insulation, safety and reliability

### 48V SYSTEM WITH OVERALL DIMENSION

<table>
<thead>
<tr>
<th>Type of Battery</th>
<th>Nominal Voltage Per Cell (V)</th>
<th>Capacity @ 10hr / 1.75V (Ah)</th>
<th>Dimension (with Top cover / Shroud) L (mm) ± 10</th>
<th>D (mm) ± 10</th>
<th>H (mm) ± 20</th>
<th>Weight (kg) ± 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTB 200</td>
<td>2</td>
<td>200</td>
<td>730</td>
<td>468</td>
<td>1410</td>
<td>620</td>
</tr>
<tr>
<td>GTB 300</td>
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<td>300</td>
<td>730</td>
<td>517</td>
<td>1410</td>
<td>750</td>
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<tr>
<td>GTB 400</td>
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<td>400</td>
<td>730</td>
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<td>1410</td>
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<td>970</td>
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<tr>
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<td>600</td>
<td>730</td>
<td>520</td>
<td>1685</td>
<td>1115</td>
</tr>
</tbody>
</table>

**Commissioning Charge Of Battery:**

Before commissioning a new battery, follow procedure.

a) **Boost Charge:**
At a raised voltage of volts per bank.
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). Boost 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.

**Recharging Characteristics During Operations:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Recommended Parameters at ambient temperature 25°C</th>
<th>Temperature Compensation Reference 25°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charging Current</td>
<td>Maximum - 20% of the battery Ah capacity</td>
<td>Float: (-) 3mV/C/2V</td>
</tr>
<tr>
<td>Float Voltage</td>
<td>2.27 ± 0.02 V/cell</td>
<td>Cyclic: (+) 5mV/C/2V</td>
</tr>
<tr>
<td>Boost Voltage</td>
<td>2.40 ± 0.02 V/cell</td>
<td></td>
</tr>
<tr>
<td>Equalizing Voltage</td>
<td>2.30 ± 0.02 V/cell</td>
<td></td>
</tr>
<tr>
<td>Low Voltage Disconnect</td>
<td>1.85 ± 0.02 V/cell</td>
<td></td>
</tr>
</tbody>
</table>