The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

**Battery Construction**

<table>
<thead>
<tr>
<th>Component</th>
<th>Positive plate</th>
<th>Negative plate</th>
<th>Container</th>
<th>Cover</th>
<th>Safety valve</th>
<th>Terminal</th>
<th>Separator</th>
<th>Electrolyte</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw material</td>
<td>Lead dioxide</td>
<td>Lead</td>
<td>ABS</td>
<td>ABS</td>
<td>Rubber</td>
<td>Copper</td>
<td>Fiberglass</td>
<td>Sulfuric acid</td>
</tr>
</tbody>
</table>

**General Features**

- Absorptent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

**Performance Characteristics**

- **Nominal Voltage**: 2V
- **Number of cell**: 1
- **Design Life**: 20 years
- **Nominal Capacity**: 77°F (25°C)
  - 10 hour rate (60A, 1.8V) 600Ah
  - 5 hour rate (108A, 1.75V) 540Ah
  - 1 hour rate (364A, 1.6V) 364Ah
- **Internal Resistance**: Fully Charged battery 77°F (25°C) ≤ 0.6mOhms
- **Self-Discharge**: 3% of capacity declined per month at 20°C (average)
- **Operating Temperature Range**
  - **Discharge**: -20~60°C
  - **Charge**: -10~60°C
  - **Storage**: -20~60°C
- **Max. Discharge Current**: 77°F (25°C) 3000A (5s)
- **Charge Methods: Constant Voltage Charge 77°F (25°C)**
  - **Cycle use**: 2.40-2.45V/PC
  - **Maximum charging current**: 120A
  - **Temperature compensation**: -5.0mV/°C
  - **Standby use**: 2.20-2.30V/PC
  - **Temperature compensation**: -3.3mV/°C

**Dimensions and Weight**

- **Length (mm / inch)**: 302 / 11.89
- **Width (mm / inch)**: 175 / 6.89
- **Height (mm / inch)**: 331 / 13.03
- **Total Height (mm / inch)**: 367 / 14.5
- **Approx. Weight (Kg / lbs)**: 40 / 88.24
- *** Weight deviation: ± 3%**

**Discharge Constant Current (Amperes at 77°F 25°C)**

<table>
<thead>
<tr>
<th>End Point Volts/Cell</th>
<th>15min</th>
<th>30min</th>
<th>45min</th>
<th>1h</th>
<th>3h</th>
<th>5h</th>
<th>10h</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.60V</td>
<td>887</td>
<td>618</td>
<td>480</td>
<td>364</td>
<td>186</td>
<td>115</td>
<td>65</td>
</tr>
<tr>
<td>1.65V</td>
<td>844</td>
<td>590</td>
<td>461</td>
<td>351</td>
<td>181</td>
<td>113</td>
<td>64</td>
</tr>
<tr>
<td>1.70V</td>
<td>800</td>
<td>562</td>
<td>440</td>
<td>337</td>
<td>174</td>
<td>111</td>
<td>63</td>
</tr>
<tr>
<td>1.75V</td>
<td>755</td>
<td>533</td>
<td>419</td>
<td>322</td>
<td>167</td>
<td>108</td>
<td>61</td>
</tr>
<tr>
<td>1.80V</td>
<td>710</td>
<td>503</td>
<td>397</td>
<td>307</td>
<td>160</td>
<td>105</td>
<td>60</td>
</tr>
</tbody>
</table>

**Discharge Constant Power (Watts at 77°F 25°C)**

<table>
<thead>
<tr>
<th>End Point Volts/Cell</th>
<th>15min</th>
<th>30min</th>
<th>45min</th>
<th>1h</th>
<th>2h</th>
<th>3h</th>
<th>5h</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.60V</td>
<td>1424</td>
<td>1123</td>
<td>905</td>
<td>710</td>
<td>483</td>
<td>358</td>
<td>225</td>
</tr>
<tr>
<td>1.65V</td>
<td>1347</td>
<td>1067</td>
<td>864</td>
<td>680</td>
<td>472</td>
<td>349</td>
<td>222</td>
</tr>
<tr>
<td>1.70V</td>
<td>1289</td>
<td>1009</td>
<td>820</td>
<td>649</td>
<td>460</td>
<td>340</td>
<td>218</td>
</tr>
<tr>
<td>1.75V</td>
<td>1191</td>
<td>951</td>
<td>776</td>
<td>617</td>
<td>446</td>
<td>330</td>
<td>214</td>
</tr>
<tr>
<td>1.80V</td>
<td>1112</td>
<td>892</td>
<td>731</td>
<td>583</td>
<td>418</td>
<td>309</td>
<td>211</td>
</tr>
</tbody>
</table>

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

All data shall be changed without notice. Vision reserves the right to explain and update the information contained hereinto.
Discharge characteristic (25°C)

Charging characteristic for standby use

Relationship between charging voltage and temperature

Self-discharge characteristic

Life characteristics of standby use

Cycle service life in relation to depth of discharge

Temperature effects on float life

Temperature effects on capacity