Overview
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 oneway 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>Raw material</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></td>
<td>Lead dioxide</td>
<td>Lead</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
- Positive and negative plates in lead-calcium-tin alloy;
- Stable Quality & High Reliability;
- Sealed Construction;
- Long Service Life;
- Maintenance-Free Operation;
- Low Pressure Venting System;
- Low Self Discharge;
- U.L. Component Recognition;
- Six months shelf life at 20℃;
- Design life 10 years

Battery Specification

Performance Characteristics
- Nominal Voltage: 12V
- Number of Cell: 6
- Design Life: 10 years
- Nominal Capacity @ 77°F (25℃):
  - 10 hour rate: 200Ah
  - 5 hour rate: 180Ah
  - 1 hour rate: 128Ah
- Internal Resistance: ≤4.0 mOhms
- Self-Discharge: 3% of capacity declined per month at 20℃ (average)

Operating Temperature Range
- Discharge: -20~60℃
- Charge: -10~60℃
- Storage: -20~60℃

Max. Discharge Current @ 77°F (25℃)
- Cycle use: 60.0A
- Standby use: 2.40~2.45VPC
- Temperature compensation: -20mV/℃

Short Circuit Current: 3300A

Charge Methods: Constant Voltage Charge @ 77°F (25℃)
- Maximum charging current: 2.40~2.45 VPC
- Short circuit current: 3300A
- Temperature compensation: -20mV/℃

Discharge Constant Voltage @ 77°F (25℃)

<table>
<thead>
<tr>
<th>Voltage (V)</th>
<th>10min</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>360</td>
<td>220</td>
<td>159</td>
<td>128</td>
<td>57.6</td>
<td>38.2</td>
<td>20.4</td>
<td></td>
</tr>
<tr>
<td>1.65V</td>
<td>350</td>
<td>212</td>
<td>153</td>
<td>124</td>
<td>55.6</td>
<td>37.2</td>
<td>20.3</td>
<td></td>
</tr>
<tr>
<td>1.70V</td>
<td>337</td>
<td>206</td>
<td>149</td>
<td>120</td>
<td>55.0</td>
<td>36.6</td>
<td>20.2</td>
<td></td>
</tr>
<tr>
<td>1.75V</td>
<td>319</td>
<td>200</td>
<td>145</td>
<td>117</td>
<td>53.4</td>
<td>36.0</td>
<td>20.1</td>
<td></td>
</tr>
<tr>
<td>1.80V</td>
<td>269</td>
<td>187</td>
<td>140</td>
<td>114</td>
<td>51.0</td>
<td>35.4</td>
<td>20.0</td>
<td></td>
</tr>
</tbody>
</table>

Discharge Constant Power @ 77°F (25℃)

<table>
<thead>
<tr>
<th>Voltage (V)</th>
<th>10min</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>625</td>
<td>402</td>
<td>294</td>
<td>230</td>
<td>109</td>
<td>73.0</td>
<td>40.2</td>
<td></td>
</tr>
<tr>
<td>1.65V</td>
<td>604</td>
<td>390</td>
<td>286</td>
<td>225</td>
<td>107</td>
<td>72.0</td>
<td>39.2</td>
<td></td>
</tr>
<tr>
<td>1.70V</td>
<td>586</td>
<td>382</td>
<td>279</td>
<td>221</td>
<td>105</td>
<td>71.2</td>
<td>38.4</td>
<td></td>
</tr>
<tr>
<td>1.75V</td>
<td>578</td>
<td>372</td>
<td>274</td>
<td>217</td>
<td>101</td>
<td>70.2</td>
<td>37.6</td>
<td></td>
</tr>
<tr>
<td>1.80V</td>
<td>554</td>
<td>364</td>
<td>270</td>
<td>215</td>
<td>98.0</td>
<td>69.3</td>
<td>36.7</td>
<td></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 herein.