CL1500 2V 1500Ah (10hr)

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

- Absorbent 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 (150A, 1.8V) 1500Ah
5 hour rate (270A, 1.75V) 1350Ah
1 hour rate (930A, 1.6V) 930Ah
Internal Resistance
Fully Charged battery 77°F (25°C) ≤ 0.58mOhms
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) 4000A (5s)
Charge Methods: Constant Voltage Charge 77°F (25°C)
Cycle use 2.40-2.45VPC
Maximum charging current 300A
Temperature compensation -5.0mV/°C
Standby use 2.20-2.30VPC
Temperature compensation -3.3mV/°C

Dimensions and Weight

<table>
<thead>
<tr>
<th>Length (mm / inch)</th>
<th>Width (mm / inch)</th>
<th>Height (mm / inch)</th>
<th>Total Height (mm / inch)</th>
<th>Approx. Weight (Kg / lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 / 15.75</td>
<td>350 / 13.78</td>
<td>345 / 13.58</td>
<td>382 / 15.04</td>
<td>100 / 220.5</td>
</tr>
</tbody>
</table>

* 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>2048</td>
<td>1500</td>
<td>1132</td>
<td>930</td>
<td>408</td>
<td>288</td>
<td>161</td>
</tr>
<tr>
<td>1.65V</td>
<td>1950</td>
<td>1433</td>
<td>1087</td>
<td>900</td>
<td>395</td>
<td>282</td>
<td>159</td>
</tr>
<tr>
<td>1.70V</td>
<td>1848</td>
<td>1365</td>
<td>1039</td>
<td>870</td>
<td>381</td>
<td>276</td>
<td>157</td>
</tr>
<tr>
<td>1.75V</td>
<td>1745</td>
<td>1294</td>
<td>989</td>
<td>833</td>
<td>366</td>
<td>270</td>
<td>153</td>
</tr>
<tr>
<td>1.80V</td>
<td>1640</td>
<td>1221</td>
<td>938</td>
<td>795</td>
<td>350</td>
<td>262</td>
<td>150</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>3451</td>
<td>2495</td>
<td>1990</td>
<td>1638</td>
<td>975</td>
<td>745</td>
<td>526</td>
</tr>
<tr>
<td>1.65V</td>
<td>3266</td>
<td>2368</td>
<td>1899</td>
<td>1563</td>
<td>930</td>
<td>723</td>
<td>520</td>
</tr>
<tr>
<td>1.70V</td>
<td>3077</td>
<td>2242</td>
<td>1804</td>
<td>1491</td>
<td>887</td>
<td>701</td>
<td>515</td>
</tr>
<tr>
<td>1.75V</td>
<td>2887</td>
<td>2112</td>
<td>1705</td>
<td>1446</td>
<td>860</td>
<td>679</td>
<td>501</td>
</tr>
<tr>
<td>1.80V</td>
<td>2695</td>
<td>1979</td>
<td>1609</td>
<td>1335</td>
<td>794</td>
<td>657</td>
<td>492</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**