DCS-33H/DCS-33

VALVE REGULATED LEAD ACID BATTERY
FOR DEEP CYCLE MOBILITY APPLICATIONS
12V 29AH @ 5 HR RATE
12V 33AH @ 20 HR RATE

FEATURES & BENEFITS
- Robust plate for extended cycle life.
- Computer-generated grid design optimized for high power density.
- Low calcium grid alloy for reduced gas emissions and ease of recycling.
- Flame-arresting one-way pressure-relief vent for safety and long life.
- UL-recognized component.
- Multicell design for economy of installation and maintenance.
- Case and cover available in standard polypropylene.
- Thermally welded case-to-cover bond to eliminate leakage.
- Removeable carrying handles.
- Can be used in any orientation. Upright, side, or end mounting recommended.
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance.
- Not restricted for air transport - Complies with IATA/ICAO Special Provision A67.
- Not restricted for surface transport - classified as non-hazardous material as related to DOT-CFR Title 49 parts 171-189.
- Not restricted for water transport - classified as non-hazardous material per IMDG Amendment 27.

APPLICATIONS
- Cycling Applications
- Mobility Markets
- Medical
- Elevator
- Electric Wheelchair
- Electric Bikes

12 Volts - 33 Ampere Hour Capacity @ 20 Hour Rate

<table>
<thead>
<tr>
<th>Discharge in Hours</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>20</th>
<th>24</th>
<th>72</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amp-Hr Capacity</td>
<td>19.7</td>
<td>23.6</td>
<td>26.1</td>
<td>28.0</td>
<td>29.0</td>
<td>29.6</td>
<td>30.1</td>
<td>30.4</td>
<td>31.1</td>
<td>31.7</td>
<td>33.0</td>
<td>33.1</td>
<td>33.8</td>
<td>34.0</td>
</tr>
</tbody>
</table>

DCS-33 - Specifications

<table>
<thead>
<tr>
<th>Cells Per Unit</th>
<th>Voltage Per Unit</th>
<th>Weight</th>
<th>Maximum Discharge Current</th>
<th>Short Circuit Current</th>
<th>Ohms Imped. 60 Hz (Ω)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>12</td>
<td>27 lbs. (12 kg)</td>
<td>600 Amps</td>
<td>2150 Amps @ 0.1 sec</td>
<td>0.0070 Ohms</td>
</tr>
</tbody>
</table>
### DCS-33

#### Capacity
- 29.0 Ah @ 5 hr. rate to 1.75 volts per cell @ 77°F (25°C)
- 33.0 Ah @ 20 hr. rate to 1.75 volts per cell @ 77°F (25°C)
- 28.5 Ah @ 10 hr. rate to 1.80 volts per cell @ 20°C (68°F)

#### Operating Temperature Range
- **Discharge**: -40°F (-40°C) to + 160°F (71°C),
- **Charge**: -10°F (-23°C) to +140°F (60°C) with temperature compensation

#### Recommended Operating Temperature Range
+ 74°F (23°C) to +80°F (27°C)

#### Float Charging Voltage
13.5 to 13.8 VDC/unit Average at 77°F (25°C)

#### Recommended Maximum Charging Current Limit
C/5 amperes (6.6 amperes @ 100% depth of discharge) @ 20 hour rate

#### Equalization and Cycle Service Charging Voltage
14.4 to 14.8 VDC/unit Average at 77°F (25°C).

#### Maximum AC Ripple (Charger)
- 0.5 % RMS or 1.5% P-P of float charge voltage recommended for best results.
- Maximum AC ripple float charge voltage allowed = (4% P-P)
- Maximum AC ripple current allowed = 1.65 amperes RMS (C/20)

#### Self Discharge
Dynasty batteries may be stored for up to 6 months at 77°F (25°C) and then a freshening charge is required. For higher temperatures the time interval will be shorter.

#### Accessories
- Inter unit connectors, and racks are available.
- "L" terminal with 0.28" clearance hole to accept 0.25" (6mm) bolt.

#### Terminal Hardware Initial Torque
- 40 in.-lbs. (4.5-m).
- 32 in.-lbs. (3.48-m).

### Constant Current Discharge Ratings - Amperes @ 77°F (25°C)

<table>
<thead>
<tr>
<th>End Point Volts/Cell</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>20</th>
<th>24</th>
<th>72</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.90</td>
<td>15.9</td>
<td>9.83</td>
<td>7.30</td>
<td>5.80</td>
<td>4.80</td>
<td>4.16</td>
<td>3.65</td>
<td>3.25</td>
<td>2.67</td>
<td>2.27</td>
<td>1.42</td>
<td>1.19</td>
<td>0.42</td>
<td>0.30</td>
</tr>
<tr>
<td>1.85</td>
<td>17.4</td>
<td>10.5</td>
<td>7.71</td>
<td>6.15</td>
<td>5.14</td>
<td>4.40</td>
<td>3.85</td>
<td>3.43</td>
<td>2.84</td>
<td>2.41</td>
<td>1.52</td>
<td>1.28</td>
<td>0.44</td>
<td>0.32</td>
</tr>
<tr>
<td>1.80</td>
<td>18.4</td>
<td>11.1</td>
<td>8.10</td>
<td>6.49</td>
<td>5.40</td>
<td>4.60</td>
<td>4.02</td>
<td>3.57</td>
<td>2.91</td>
<td>2.47</td>
<td>1.57</td>
<td>1.34</td>
<td>0.46</td>
<td>0.34</td>
</tr>
<tr>
<td>1.75</td>
<td>19.7</td>
<td>11.8</td>
<td>8.70</td>
<td>7.00</td>
<td>5.80</td>
<td>4.93</td>
<td>4.30</td>
<td>3.80</td>
<td>3.11</td>
<td>2.64</td>
<td>1.64</td>
<td>1.38</td>
<td>0.47</td>
<td>0.34</td>
</tr>
</tbody>
</table>

*All dimensions in inches and (millimeters). All dimensions are for reference only.
Contact a C&D Representative for complete dimensional information.