UPS12-170

VALVE REGULATED LEAD ACID BATTERY FOR UPS STANDBY POWER APPLICATIONS

12V 50.0 AH @ 20 HR RATE, 12V 170 WATTS/CELL @ 15 MIN RATE

FEATURES

- Robust plate for extended cycle life.
- Flame-arresting one-way pressure-relief vent for safety and long life.
- Thermally welded case-to-cover bond to eliminate leakage.
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance.
- Computer-generated grid design optimized for high power density.
- UL-recognized component.
- Multicell design for economy of installation and maintenance.
- Can be used in any orientation. Upright, side, or end mounting recommended.
- 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.
- Computer designed lead, low calcium alloy grid for minimal gassing and ease of recycling.
- Case and cover available in both standard and flame retardant polypropylene.
- Flame retardant polypropylene case and cover compliant with UL 1778 (optional).

12 Volts – 170 Watts Per Cell For 15 Minutes to 1.67 Volts per Cell

Constant Power Discharge Ratings – Watts Per Cell @ 77°F (25°C)

<table>
<thead>
<tr>
<th>End Point Volts/Cell</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>45</th>
<th>50</th>
<th>60</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.67</td>
<td>280</td>
<td>210</td>
<td>170</td>
<td>140</td>
<td>107</td>
<td>88.1</td>
<td>81.5</td>
<td>75.2</td>
<td>65.5</td>
<td>47.3</td>
</tr>
</tbody>
</table>

SPECIALTY BATTERY DIVISION
900 East Keefe Avenue
P.O. Box 591
Milwaukee, WI 53201
Phone: 800-397-2789
Fax: 414-961-6506

Form 41-7107 (Rev. 10/98) Printed in the U.S.A.
## UPS12-170 – Specifications

<table>
<thead>
<tr>
<th>Cells Per Unit</th>
<th>Voltage Per Unit</th>
<th>Weight (lbs. / kg)</th>
<th>Electrolyte</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>12.84</td>
<td>39.6 / 18.0</td>
<td>Absorbed H₂SO₄ SG = 1.300</td>
<td>600 Amps</td>
<td>2500 Amps @ 0.1 sec.</td>
<td>0.0060 Chms</td>
</tr>
</tbody>
</table>

**Capacity**

- 170 watts per cell at the 15 minute rate to 1.67 volts per cell at 77°F (25°C).
- 50 Ah @ 20 hr. rate to 1.75 volts per cell @ 77°F (25°C).
- 44.8 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: -4°F (-20°C) to +160°F (71°C).

**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 (10.0 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 voltage allowed = (4%) P-P.
- Maximum AC ripple current allowed = 2.5 amperes rms (C20).

**Self Discharge**

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

**Accessories**

- Inter unit connectors, racks and cabinet systems are available.

**Terminal**

- "L" terminal with 0.28" clearance hole to accept 0.25" (6mm) bolt.

**Terminal Hardware Initial Torque**

- 40 in.-lbs. (4.5 n-m).

**Terminal Hardware Annual Torque**

- 32 in.-lbs. (3.48 n-m).

### Constant Power Discharge Ratings – Watts Per Cell @ 77°F (25°C)

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<tr>
<th>End Point Volts/Cell</th>
<th>5</th>
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<th>15</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>45</th>
<th>50</th>
<th>60</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.75</td>
<td>250</td>
<td>190</td>
<td>155</td>
<td>130</td>
<td>100</td>
<td>82.5</td>
<td>76.7</td>
<td>70.8</td>
<td>62.0</td>
<td>45.3</td>
</tr>
<tr>
<td>1.70</td>
<td>272</td>
<td>204</td>
<td>165</td>
<td>136</td>
<td>105</td>
<td>86.6</td>
<td>80.0</td>
<td>74.4</td>
<td>65.0</td>
<td>46.7</td>
</tr>
<tr>
<td>1.67</td>
<td>280</td>
<td>210</td>
<td>170</td>
<td>140</td>
<td>107</td>
<td>88.1</td>
<td>81.7</td>
<td>75.2</td>
<td>65.5</td>
<td>47.3</td>
</tr>
<tr>
<td>1.65</td>
<td>284</td>
<td>213</td>
<td>173</td>
<td>142</td>
<td>108</td>
<td>88.5</td>
<td>82.1</td>
<td>75.8</td>
<td>66.0</td>
<td>47.7</td>
</tr>
<tr>
<td>1.60</td>
<td>290</td>
<td>215</td>
<td>174</td>
<td>143</td>
<td>109</td>
<td>88.9</td>
<td>82.6</td>
<td>76.2</td>
<td>66.5</td>
<td>48.1</td>
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### Constant Current Discharge Ratings – Amperes @ 77°F (25°C)

<table>
<thead>
<tr>
<th>End Point Volts/Cell</th>
<th>.083</th>
<th>.25</th>
<th>.50</th>
<th>.75</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>20</th>
<th>24</th>
<th>72</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.90</td>
<td>73.0</td>
<td>53.6</td>
<td>38.0</td>
<td>31.7</td>
<td>25.2</td>
<td>16.0</td>
<td>11.8</td>
<td>7.80</td>
<td>5.15</td>
<td>4.25</td>
<td>3.58</td>
<td>2.17</td>
<td>1.83</td>
<td>0.63</td>
</tr>
<tr>
<td>1.85</td>
<td>107</td>
<td>69.2</td>
<td>45.6</td>
<td>37.3</td>
<td>30.0</td>
<td>17.5</td>
<td>12.7</td>
<td>8.26</td>
<td>5.45</td>
<td>4.43</td>
<td>3.75</td>
<td>2.33</td>
<td>1.96</td>
<td>0.68</td>
</tr>
<tr>
<td>1.80</td>
<td>120</td>
<td>75.6</td>
<td>49.2</td>
<td>39.8</td>
<td>30.4</td>
<td>18.2</td>
<td>13.0</td>
<td>8.48</td>
<td>5.60</td>
<td>4.57</td>
<td>3.88</td>
<td>2.45</td>
<td>2.06</td>
<td>0.71</td>
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<tr>
<td>1.75</td>
<td>134</td>
<td>81.6</td>
<td>52.6</td>
<td>42.3</td>
<td>32.0</td>
<td>18.6</td>
<td>13.3</td>
<td>8.66</td>
<td>5.75</td>
<td>4.69</td>
<td>3.98</td>
<td>2.50</td>
<td>2.10</td>
<td>0.72</td>
</tr>
</tbody>
</table>

**Note:** Batteries to be mounted with 0.5 in. (1.25 cm) spacing minimum and free air ventilation. Specifications subject to change.