**MR12-400**
(Premium Replacement for UPS12-370FR)

**VALVE REGULATED LEAD ACID BATTERY FOR UPS STANDBY POWER APPLICATIONS**

12V 102 AH @ 20 HR RATE, 12V 400 WATTS/CELL @ 15 MIN RATE

**FEATURES**
- 10 year design life @ 25˚C (77˚F)
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance.
- 3 Year Warranty (refer Dynasty warranty card, 41-9011)
- Patented Long Life Alloy having the lowest calcium levels in the industry - minimizing grid growth, reducing gassing, and extending battery life.
- Patented UL Recognized Flame-arresting vents in each cell for safety and long life.
- Designed with the same recombination, thermal runaway prevention, gassing and flame retardant characteristics of the Bellcore 4228 compliant Dynasty Telecom products.
- Proprietary computer modeled radial grid matrix using multiple conductors to provide the lowest internal resistance and highest current carrying capability.
- Proprietary Fixed Orifice Plate Pasting technology applying active material on both sides of the grid for consistent cell-to-cell performance, higher capacity and uniform grid protection.
- UL-recognized component complying with UL1778, 924, 1989 and 94 V-0
- Thermally welded case-to-cover bond to eliminate leakage.
- Can be operated 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.
- Flame-retardant polypropylene case and cover compliant with UL 94 V-0 with an Oxygen Limiting Index of greater than 28.

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**12 Volts – 400 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>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>505</td>
<td>400</td>
<td>325</td>
<td>237</td>
<td>189</td>
<td>172</td>
<td>158</td>
<td>136</td>
<td>98</td>
</tr>
</tbody>
</table>

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**C&D Technologies, Inc.**

**DYNASTY Division**

900 East Keefe Avenue
Milwaukee, WI 53212
Phone: 800-396-2789
Fax: 414-961-6506
### MR12-400 – Specifications

<table>
<thead>
<tr>
<th>Cells Per Unit</th>
<th>Voltage Per Unit</th>
<th>Weight</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>75.8 lbs.</td>
<td>Absorbed H₂SO₄, Sg = 1.300</td>
<td>800 Amps</td>
<td>5100 Amps @ 0.1 sec.</td>
<td>0.0025 Ohms</td>
</tr>
</tbody>
</table>

**Capacity**
- 400 watts per cell at the 15 minute rate to 1.67 volts per cell at 77°F (25°C).
- 102 Ah @ 20 hr. rate to 1.75 volts per cell @ 77°F (25°C).
- 92.5 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).

**Nominal Operating Temperature Range**
- +74°F (23°C) to +80°F (27°C).

**Floating Charging Voltage**
- 13.5 to 13.8 VDC/unit Average at 77°F (25°C).

**Recommended Maximum Charging Current Limit**
- C/5 amperes (20.4 amperes @ 100% depth of discharge) @ 20 hr. 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 voltage allowed = 1.4% RMS (4% P-P).
- Maximum current allowed = 5.10 amperes RMS (C/20).

**Self Discharge**
- Dynasty MaxRate 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, racks and cabinet systems are available.

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

**Terminal Hardware Initial Torque: L Terminal**
- 65 in.-lbs. (7.4 N-m); Annual Retorque: 52 in.-lbs. (5.88 N-m).

**Terminal Hardware Initial Torque: Inserted Terminal**
- 110 in.-lbs. (12.4 N-m).

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

<table>
<thead>
<tr>
<th>End Point Volts/Cell</th>
<th>Operating Time to End Point Voltage (in minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>1.75</td>
<td>461</td>
</tr>
<tr>
<td>1.70</td>
<td>490</td>
</tr>
<tr>
<td>1.67</td>
<td>505</td>
</tr>
<tr>
<td>1.65</td>
<td>515</td>
</tr>
<tr>
<td>1.60</td>
<td>525</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>End Point Volts/Cell</th>
<th>Operating Time to End Point Voltage (in hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1.85</td>
<td>56.0</td>
</tr>
<tr>
<td>1.80</td>
<td>62.0</td>
</tr>
<tr>
<td>1.75</td>
<td>68.0</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 without notification.