Mighty Max Battery ML125-12

Mighty Max Battery ML125-12 12V 125AH SLA Battery Instruction Manual

Model: ML125-12 | Brand: Mighty Max Battery

1. Product Overview

The Mighty Max ML125-12 is a 12V 125AH Sealed Lead Acid (SLA) rechargeable, maintenance-free battery. This battery is designed for various applications, including off-grid power systems, and offers reliable performance across a wide range of operating temperatures.

Key Features:

- **UL Certified:** Ensures safety and quality standards are met.
- **SLA / AGM Spill-Proof Design:** Features an Absorbent Glass Mat (AGM) technology, making it spill-proof and allowing for mounting in any position.
- **High Discharge Rate:** Capable of delivering high current when needed.
- **Wide Operating Temperatures:** Designed for long-lasting high performance in both high and low temperatures.
- **Maintenance-Free:** Requires no water additions or specific maintenance during its service life.
- **Shock and Vibration Resistant:** Built to withstand demanding environments.

Figure 1: Mighty Max 12V 125AH SLA Battery, front view.

This image displays the overall appearance of the Mighty Max 12V 125AH SLA battery, highlighting its compact and robust design.

2. Safety Information

Always adhere to safety precautions when handling batteries to prevent injury or damage.

- **Eye Protection:** Always wear appropriate eye protection (safety glasses) when working with batteries.
- **Gloves:** Wear insulated gloves to prevent electrical shock and protect against potential acid exposure.
- **Ventilation:** Ensure adequate ventilation in the work area, especially during charging, to disperse any gases.
- **Avoid Short Circuits:** Do not short circuit the battery terminals. This can cause severe burns, fire, or explosion.
- **Proper Tools:** Use insulated tools to prevent accidental short circuits.
- **Temperature:** Do not expose the battery to temperatures above 60°C (140°F) or below -20°C (-4°F).
- **Disposal:** Batteries must be recycled or disposed of properly according to local regulations. Do not dispose of in household waste.

- **Children:** Keep batteries out of reach of children.

3. Setup

Initial Charging

Although SLA batteries are typically shipped charged, it is recommended to fully charge the battery before its first use to ensure maximum capacity and lifespan. Use a compatible 12V SLA battery charger. Refer to the charger's instructions for proper usage.

Physical Installation and Connection

The ML125-12 battery can be mounted in any position due to its spill-proof design. Ensure the mounting location is secure, well-ventilated, and protected from extreme temperatures.

1. **Inspect Battery:** Before installation, visually inspect the battery for any signs of damage.
2. **Prepare Cables:** Ensure your connection cables are clean and free of corrosion.
3. **Connect Terminals:** Connect the positive (+) cable to the positive terminal of the battery and the negative (-) cable to the negative terminal. Ensure connections are tight and secure. The ML125-12 typically uses internal thread (INT) terminals, requiring a bolt and nut for connection.
4. **Secure Battery:** Secure the battery in its intended location to prevent movement or vibration during operation.

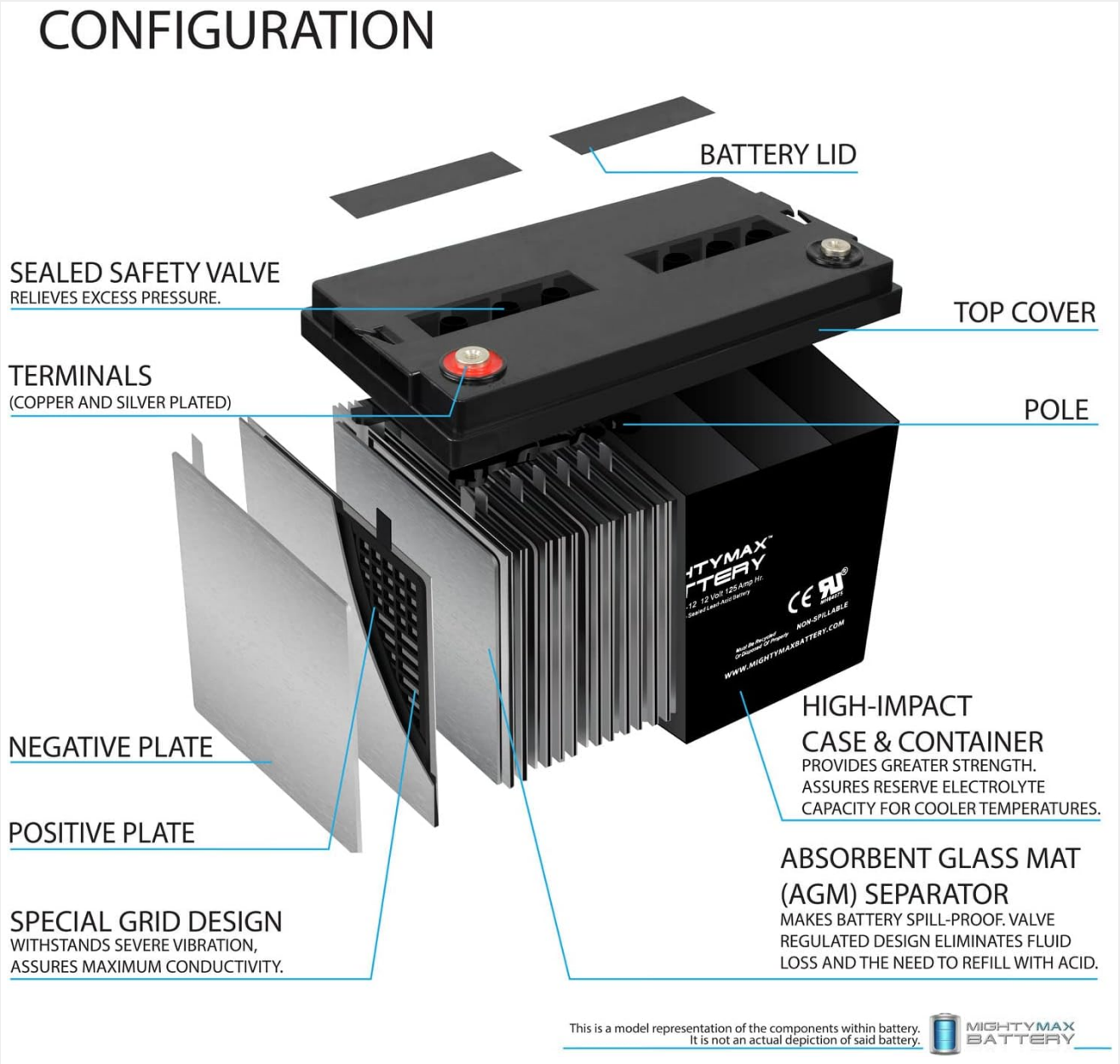

Figure 2: Dimensions of the Mighty Max 12V 125AH SLA Battery.

This image provides the precise measurements of the battery (13.11 inches x 6.81 inches x 8.74 inches), crucial for planning installation space.

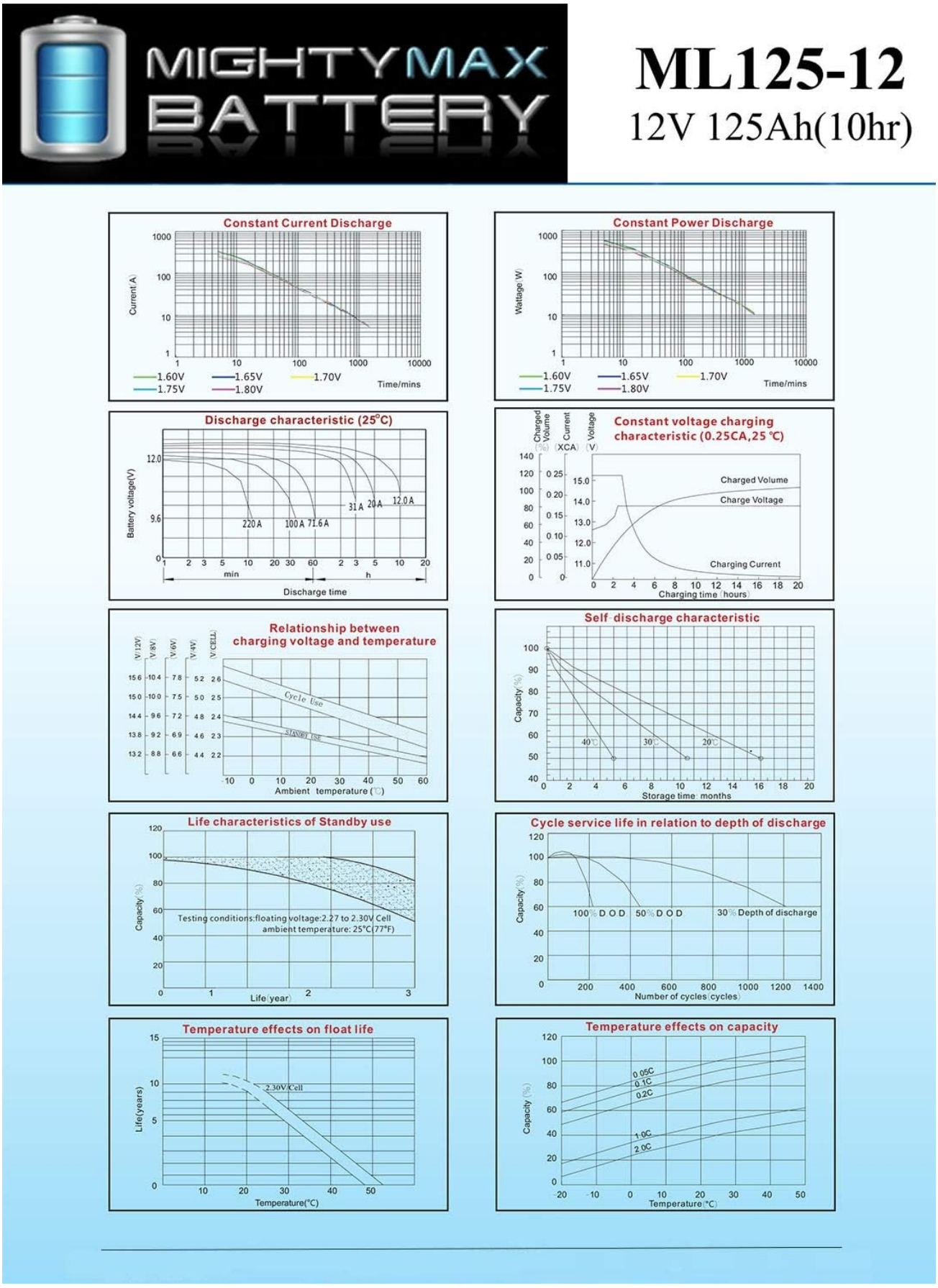

Figure 3: Close-up of the internal thread terminal.

This image shows a detailed view of the internal thread terminal, which requires a bolt and nut for secure electrical connections.

4. Operating Guidelines

The Mighty Max ML125-12 battery is designed for deep cycle applications and can be used in various power systems. Ensure the load connected to the battery is within its specified current limits to prevent damage.

- **Discharge Depth:** While the battery is designed for deep discharge recovery, frequent deep discharges can reduce overall lifespan. Aim to keep the battery charge above 50% whenever possible.
- **Charging Voltage:** For floating use, the recommended voltage regulation is 13.6-13.8V. For cyclic use, it is 14.5-14.9V.
- **Charging Current:** The initial current should be less than 37.5A.
- **Parallel/Series Connection:** If connecting multiple batteries, ensure they are of the same type, age, and charge state. Consult a professional for complex configurations.

Your browser does not support the video tag.

Video 1: Mighty Max Battery Product Overview.

This video provides a general overview of Mighty Max batteries, showcasing their features such as shock resistance, ease of recharging, various terminal types, spill-proof design, and diverse applications. It helps in understanding the product's versatility and robust construction.

5. Maintenance

The ML125-12 is a maintenance-free battery, meaning it does not require water additions. However, proper care ensures optimal performance and longevity.

- **Regular Charging:** Always recharge the battery immediately after discharge. Avoid leaving the battery in a discharged state for extended periods.
- **Proper Storage:** When storing the battery for extended periods, ensure it is fully charged and stored in a cool, dry place. Recharge every 3-6 months to prevent self-discharge.
- **Clean Terminals:** Keep battery terminals clean and free of corrosion. Use a wire brush and a mixture of baking soda and water to clean any corrosion, then rinse with clean water and dry thoroughly.
- **Temperature Control:** Operate and store the battery within the recommended temperature ranges to maximize its lifespan.

6. Troubleshooting

This section addresses common issues you might encounter with your SLA battery.

Problem	Possible Cause	Solution
Battery not holding charge	Undercharging, sulfation, end of life, faulty charger.	Ensure charger is compatible and functioning. Perform a full charge cycle. If issue persists, battery may need replacement.
Low power output	Partially discharged battery, loose connections, undersized battery for application.	Fully charge the battery. Check and tighten all terminal connections. Verify battery capacity meets application requirements.
Battery overheating during charge	Overcharging, faulty charger, high ambient temperature.	Disconnect charger immediately. Check charger voltage settings. Ensure adequate ventilation. Replace faulty charger.
Corrosion on terminals	Exposure to moisture, improper ventilation, loose connections.	Clean terminals with a wire brush and baking soda solution. Apply anti-corrosion grease. Ensure connections are tight.

7. Specifications

Detailed technical specifications for the Mighty Max ML125-12 battery.

Specification	Value
Model Number	ML125-12
Voltage	12 Volts
Battery Capacity	125 Amp Hours
Battery Cell Composition	Lead Acid (SLA / AGM)
Dimensions (L x W x H)	13.11 x 6.81 x 8.74 inches
Item Weight	74 Pounds
Reusability	Rechargeable
Terminal Type	Internal Thread (NB)
UL Certified	Yes
Recommended Uses	Off-grid power systems, power tools, general purpose

Figure 4: Detailed technical specifications for the ML125-12 battery.

This image presents a comprehensive data sheet, including battery construction details, general features, battery specifications, and dimensions, providing in-depth technical information.

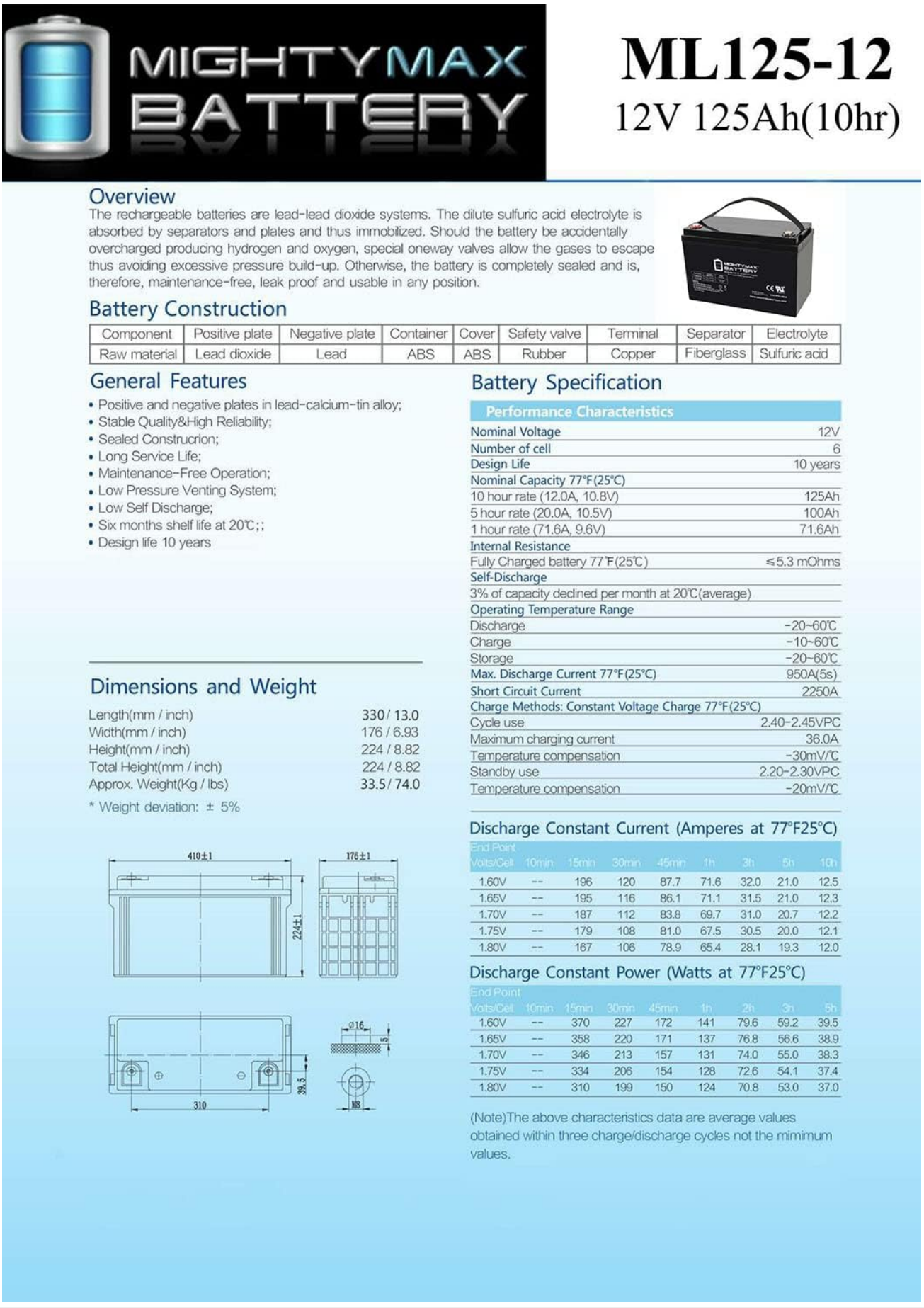

Figure 5: Performance graphs for the ML125-12 battery.

This image displays various performance graphs, including constant current discharge, constant power discharge, discharge characteristics, charging characteristics, relationship between charging voltage and temperature, self-discharge, life characteristics of standby use, cycle service life in relation to depth of discharge, and temperature effects on float life and

capacity.

8. Warranty and Support

Warranty Information

The Mighty Max ML125-12 battery comes with a **Full One Year Manufacturer's Warranty**. This warranty covers defects in materials and workmanship under normal use and service. Please retain your proof of purchase for warranty claims.

Customer Support

For any questions, technical assistance, or warranty claims, please contact Mighty Max Battery customer support. Refer to the product packaging or the official Mighty Max Battery website for the most current contact information.