WaterWorld LFP Batteries:

Advanced Technology and Reliable Design

Cell Shape and Technology

WaterWorld LFP batteries are designed with advanced cell technology to ensure optimal performance and longevity. The use of cylindrical cells plays a crucial role in this design.

Prismatic vs. Cylindrical Cells

Prismatic cells are larger and square-shaped, making them susceptible to expansion during charge and discharge cycles. This expansion can lead to material degradation and faster battery deterioration. In contrast, cylindrical cells, with their smaller and round shape, offer increased mechanical stability and strength, resulting in significantly less degradation over the battery's lifespan.

Thermal Management

The compact size of cylindrical cells provides a larger contact surface area per volume, allowing for better heat dissipation. This design minimizes heat buildup during use, causing the batteries to heat up more slowly and require less cooling. This contributes to a longer battery lifespan.

Cell Usage in Leading Brands

High-performance battery brands such as Tesla and Eleo choose cylindrical cells for their superior thermal management and resistance to shocks and vibrations. WaterWorld follows this trend, using cylindrical cells for enhanced performance and durability in marine applications.

WaterWorld Electronics
Weerdijk 14
8375 AX Oldemarkt
The Netherlands

Telefoon: 0561 451636
E-mail: info@ww-el.com
Website: ww-el.com

Housing Features

The housing of WaterWorld LFP batteries includes unique features that enhance reliability and durability:

- **IP67 Waterproof Design**: Essential for marine environments.
- **Fully Anodized Aluminum (3.5 mm)**: This recyclable, durable material acts as a heat sink, aiding in battery cooling and extending cell life.
- **Structural Strength**: Resistant to physical impact.
- **Safety Features**: In the unlikely event of a fire, the fire remains contained within the housing, which only melts at 600 degrees, while LFP cells can burn at a maximum of 400 degrees.
- **Versatile Design**: Three different placement orientations and type 30 T-slots for secure mounting.
- **Aesthetic Appeal**: Premium look.

Advanced Battery Management System (BMS)

WaterWorld LFP batteries are equipped with an upgraded BMS that offers a continuous discharge current of 150 A. This intelligent system uses a self-learning algorithm to accurately display the state of charge throughout its lifespan, even as the battery degrades.

Cycles and Configuration

With configurations of 16s22p or 16s44p, where 16 cells are connected in series and 22 or 44 cells in parallel, WaterWorld minimizes the impact of cell degradation on overall battery performance. This design ensures that even in the rare event of a cell failure, the consequences are limited to minimal capacity loss, enhancing the battery's reliability and lifespan.

The cylindrical cell architecture and advanced thermal management technology of WaterWorld LFP batteries provide a reliable and durable energy solution, ideal for a variety of applications.

WaterWorld Electronics
Weerdijk 14
8375 AX Oldemarkt
The Netherlands

Telefoon: 0561 451636
E-mail: info@ww-el.com
Website: ww-el.com