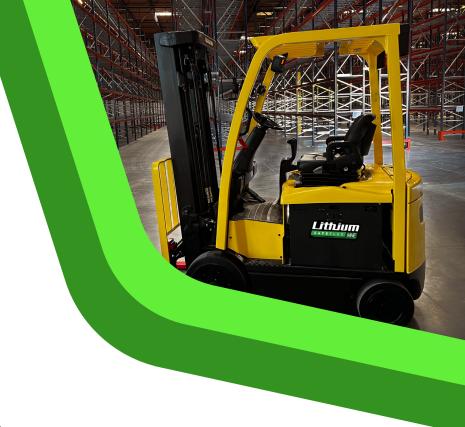




Motive Power Lithium Batteries



Overview

Efficient material handling starts with reliable power. Our state of the art Lithium-Ion battery, **designed specifically for Material Handling Equipment,** offers a performance upgrade that minimizes downtime and maximizes safety. With user-friendly access to wearable parts, improved safety features, and LFP technology for extended battery life, we deliver a **low total cost of ownership and a smarter, seamless service experience.**

Features

Improved Robustness, Reliability and Serviceablity

- State of Charge Measurement: Enhanced design for stable tracking
- Improved Isolation: CAN and USB communication interfaces
- **Diagnostic Tools:** Advanced technician software and Diagnostic trouble codes (DTC)
- Design for MHE: Battery Control Module (BCM), easily accessible for improved serviceability
- **Common Building Blocks:** Improved serviceability and reduction in spare inventory
- Power Distribution Board: Elimination of I/O harness and inline components

Flexible Design for Optimized Truck Applications

- Green Cubes custom Battery Management System (BMS) can be adjusted for different performance based upon the application
- High current trucks with accessories
- Extreme low temperature cold storage operations
- Fast Opportunity Charging without effecting cycle life
- Fully ballasted battery for heavy counterbalance trucks or non-ballasted batteries for light application

Safety & Protection

- Higher safety Lithium Iron Phosphate chemistry cells utilized in the battery systems
- Voltage, Current, and Temperatures are continuously monitored by Green Cubes Technology's custom Battery Management System (BMS) which controls the internal safety contactors and disconnect fuse

Benefits: Low Total Cost of Ownership

- High cycle life
- True fast charge/ Opportunity Charge
- Low Maintenance
- Drop in Lead Acid replacement
- No watering
- No equalization charging
- No battery watering or washing

Energy Savings

- Recharge efficiency of 98% or higher helps save electricity and also reduce damaging effects of heating the batteries
- Improvements in runtime capacity efficiency of 10% or higher

Specifications

| SAFEFlex MHE | | | | | |
|------------------------------------|--|---------------|---------------|---------------|---------------|
| Voltage class | 24V | 36V | 48V | 72V | 80V |
| Nominal Capacity | 105 - 945 Ah | 210 - 1050 Ah | 210 - 1050 Ah | 420 - 1050 Ah | 210 - 1050 Ah |
| | 2 - 24 kWh | 8 - 40 kWh | 10 - 53 kWh | 32 - 80 kWh | 17 - 87 kWh |
| Nominal Voltage | 25.6 V | 38.4 V | 51.2 V | 76.8 V | 83.2 V |
| Operating Voltage | 24 - 28.4 V | 36 - 42.6 V | 48 - 56.8 V | 72 - 85.2 V | 78 - 92.3 V |
| Operating Temperature | -4°F - 122°F | | | | |
| Charge Current continuous (max) | 100 - 320 A | 200 - 320 A | | | |
| Discharge Current continuous (max) | 100 - 320 A | 200 - 320 A | | | |
| Discharge Current peak | 1C/30s, 2C/7s | | | | |
| Protections | Over and Under Voltage Protection (software, hardware) | | | | |
| | Over and Under Temperature Protection | | | | |
| | Over Current Protection | | | | |
| Communication | CANBus | | | | |
| | USB | | | | |
| | Wi-Fi | | | | |
| Storage Temperature | -4°F - 113°F (One Month) | | | | |
| | 32°F - 95°F (One Year) | | | | |
| Storage Humidity | ≤ 70% RH | | | | |
| Ingress Protection | IP 2X | | | | |
| Battery Modes | Active Charge/Discharge | | | | |
| | Sleep (low current) | | | | |
| | Ship/Storage (no current) | | | | |
| Chemistry | Lithium Iron Phosphate (LiFePO4) | | | | |

ABOUT GREEN CUBES TECHNOLOGY

Green Cubes Technology harnesses over 30 years of industry experience to ensure we design, develop and deliver solutions for the most challenging energy needs. We offer battery technology innovation, application design and performance management to drive productivity, scalability and sustainability.

For more information, email **info@greencubes.com** or visit **greencubes.com**



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