



**Ethium**<sup>®</sup>  
by **EControls**<sup>®</sup>



MATERIAL HANDLING  
**BATTERIES**

ET Series

# UNMATCHED SAFETY

Our parent company EControls is the number one provider of spark-ignited engine control systems with over 20 years of global experience in supplying OEM fuel injection systems for emissions-regulated markets. These products meet world-class levels of performance and efficiencies while reducing environmental impact to create responsible forklift solutions. Ethium by EControls is just the next Game Changing technology in our storied history.

Ethium’s lithium-iron phosphate (LiFePO<sub>4</sub>) chemistry is the safest of all lithium, outperforming even lead acid. As you can see (right), it is clearly an industry leader in safety.



Some of our unique competitive advantages include:

- UL 2580 Listed
- Tested to meet UN/DOT 38.3 certification requirements
- Utilizes UL 1642 certified cells

## PRODUCT SPECIFICATIONS

Type	Advanced lithium-ion technology	Voltage/Capacity Range	24V, 500-1,100 Ah 36V, 450-1,000 Ah 48V, 400-900 Ah
Chemistry	Lithium-iron phosphate (LiFePO <sub>4</sub> )	Product Life	4,000 cycles @ 0.5 C
Battery Management System (BMS)	Temperature, voltage, battery health, current, state of charge	Continuous Charge Rate	1.0 C
Temperature Control	Active forced air cooling and active heating	Continuous Discharge Rate	1.0 C
Charger	Compatible with CAN based chargers	Module Case Material	Aluminum
Short Circuit Protection	Yes	Battery Enclosure Material	Powder Coated Steel
Self-Discharge Rate	< 2% / month	Warranty	Full 8 years / 4,000 cycles
Discharge Temp Range*	-40 to 131° F	Certification	UL 2580 Listed and Compliant with UN/DOT 38.3
Charge Temp Range*	-40 to 113° F		

\*Model dependent, actively controlled

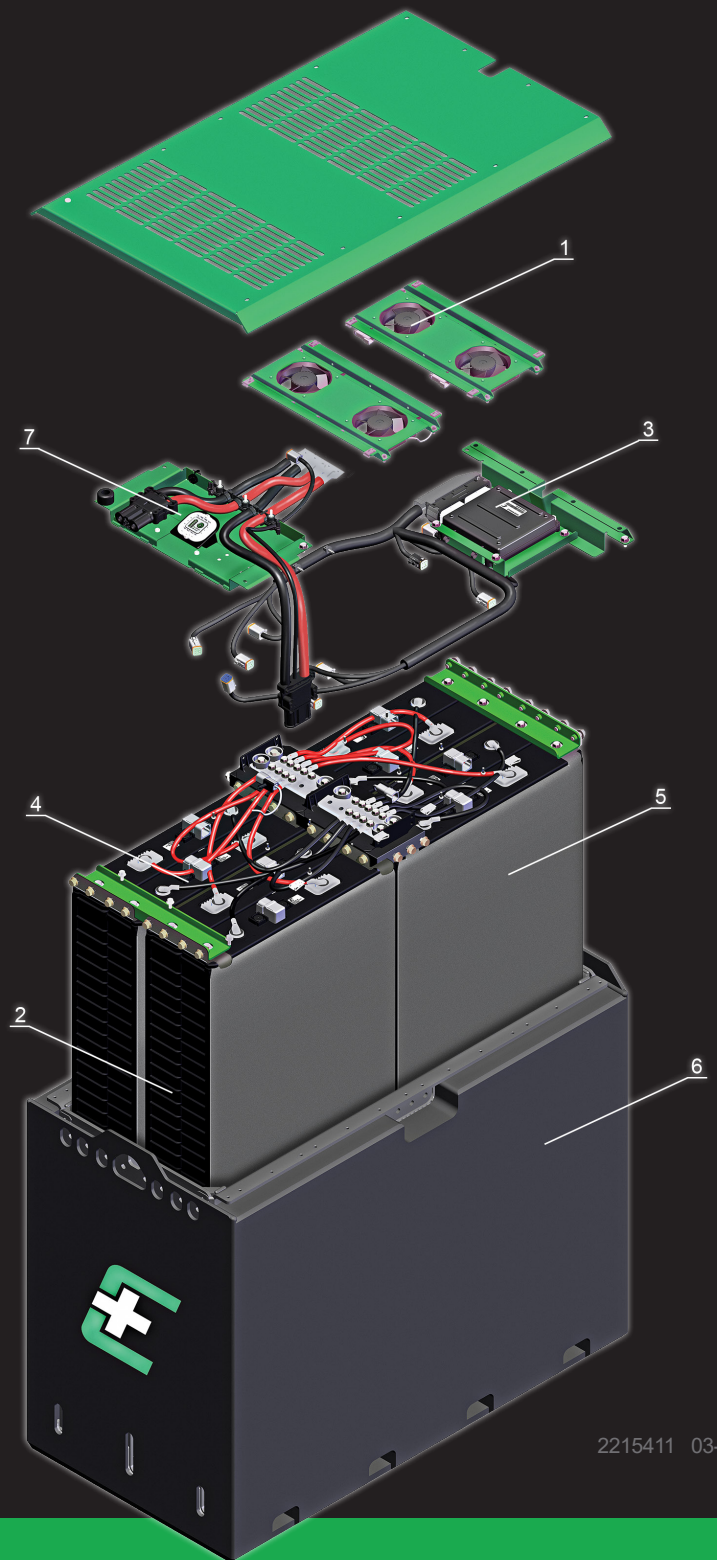
# ETHIUM BATTERY SOLUTIONS

Ethium's lithium-ion batteries are a drop-in solution, compatible with any conventional lead acid system. Our portfolio of batteries seamlessly integrate with your equipment and chargers.

- Completely Maintenance Free
- Safer than Lead Acid
- No Battery Swap
- Typical Charge Rate of 1% Per Minute
- Full Charge as Fast as 1-Hour
- 4x Longer Life
- Most Advanced Electronics
- Extensive CAN Based Control and Communication

We proudly serve customers worldwide with best in class quality, continuous development and reliable service assurance.

Cylindrical LifePO4 Cells: UL 1642 rated lithium iron phosphate cells for durability, safety, and compatibility with existing vehicles.



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**1. Thermal Management (Heating/Cooling)**  
Forced air-cooling for faster charging and prolonged life. Internal module heating for superior cold temperature performance.

**2. Active Cell Balancing (ACB)**  
Ethium's BMS consists of electronics that have the capacity to actively transfer the most energy within cell banks and between modules of any battery in existence. This is key to keeping the most energy available to your equipment.

**3. BMS and BOSS Technology**  
Battery management system (BMS) integrated

on each module to manage safety and other vital functions (state of charge, temperature, cell balancing). Supervisory controller (BOSS module) to oversee each battery module and maintain communication with the equipment via CAN or analog signal.

**4. Modularity**  
Multiple independently smart modules can be easily connected and mounted to the modular frame, providing discrete increments of capacity.

**5. Internal Construction**  
Battery modules are highly energy dense and

designed to withstand high impact and vibration using a virtually wire-free, heavy-duty honeycomb cell structure.

**6. Enclosure**  
The unique external counterweight design allows the weight requirements of any application to be matched.

**7. ON/OFF Switch with LED Indicator**  
Each battery can be switched on/off using a fully sealed push button. State of charge and fault/status are also displayed on the user-friendly LED indicator.



The first tri-mode (dual-cell/satellite) option to deliver on complete connectivity. From on-site services to remote office needs, E-Link provides unmatched access, reliability and remote insights into your batteries. Our trained engineering and service departments have 24/7 intelligence available to provide you with one click access to the health of your battery, wherever you are. We also give you access to complete diagnostics at the most granular level.

## REMOTE ACCESS

With support for AT&T, Verizon and Iridium in one device, E-Link chooses the best service without the need for user intervention to ensure a reliable signal. This connectivity puts data where you need it to schedule repairs, plan responses and avoid unplanned downtime.

## MOBILE APPLICATIONS

Bluetooth and Wi-Fi capabilities free you from standing in front of a battery or tethering you to a laptop. A smart device and E-Link app change the way you operate equipment and how you interact with real-time information so you can put it to work.

## OVER THE AIR

E-Link integrates Ethium-connected devices to manage over-the-air updates and changes across your fleet with ease. Remote troubleshooting assistance puts Ethium Technical Services at your site with you for first-hand rapid support.



Tri-Mode option supports three of the best services and instantly auto-selects the strongest connection.



## CONTACT US

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