

One Charge

Your Superpower



Lithium Ion Batteries
for the Material Handling Industry

Batteries

We offer over 550 models of Lithium Ion Batteries for nearly every make and model of electric industrial trucks

Class I



Electric Motor Rider Trucks are the loading/unloading tractor-trailers. They are used primarily for handling pallets.

Class II



Electric Motor Narrow Aisle Trucks operate in tight spaces, handling pallets, picking/storing inventory.

Class III



Electric Motor Hand Trucks or Hand/Rider Trucks are used for unloading deliveries from tractor-trailers; they often do short runs in smaller space.

Sweepers & Scrubbers (Drop-In Solutions)



Floor sweepers and cleaners for heavy duty cleaning applications are generally used on hard floors such as concrete, asphalt, and others.

Ground Support Equipment (GSE)



GSE is defined as all off-road equipment used on the aircraft side at an airport. Airport Ground Support Equipment includes pushback tugs, baggage and cargo tractors, carts, lifts, forklifts, ground power units, air conditioning units, and belt loaders.

Automatic guided vehicles (AGVs)



AGVs are autonomous vehicles used to transport materials or accomplish specific tasks in many different industrial settings – such as: manufacturing and product assembly, warehouse, material handling, food and beverage, etc.

Chargers

Get a new OneCharge Battery Charger, or upgrade and continue to use your own

Chargers



OneCharge offers a full line of OneCharge Ecotec Access Chargers produced in cooperation with Ecotec, USA. These chargers are 100% compatible with our lithium batteries.

Charger retrofit



OneCharge engineers can help you upgrade your existing chargers to be used with OneCharge Li-ion Batteries. We'll customize the battery communication, power connector and charging profile. OneCharge partners with over a dozen of charger manufacturers to give you a wide range of choices.

Packages

We customize and upgrade our batteries for specific clients' needs. Here are the standard upgrade options

FROST



OneCharge FROST I & II are solutions to working with products that must be stored in a cooler or freezer. The Thermostat Controlled FROST II option allows battery operation and charging at temperatures as low as -20F. OneCharge FROST batteries will maintain 95% of their rated capacity even at extremely low operating temperatures.

SEAL KIT TS1



Seal kit TS1 is a solution for damp or dusty environments. TS1 will seal the cover, Battery Management System (BMS) and gauges from dust or light water spray and will help minimize sweating internally inside a cooler or freezer. Washing the battery and BMS is NOT recommended.

Controller Area Network (CAN)



CAN communication is a standard protocol used to allow Electronic Control Units (ECUs) to communicate without a central computer. The BMS and the lift truck computer will talk to each other and share management of the overall safety of the equipment. The lift truck dashboard will display the current state of charge. The lift interrupt and creep speed will function normally. When a charger is plugged into the battery the forward and reverse functions will be disabled on the lift as well.

Battery Discharge Indicator (BDI)



The external BDI is a clone of the controls present on the face of the BMS on every OneCharge battery. The BDI serves as an intermediate solution when an operator cannot see the controls of the BMS from the driving position or full CAN bus integration is not available. The BDI is typically mounted in the drivers view so the State of Charge and Audible warnings can't be missed.

Built-in Charger (BIC)



Some OneCharge batteries can be upgraded with a 110V, 56A output built-in charger. This solution is typically used on small pallet jacks that travel inside of delivery trucks daily and where 480V, 3 phase charging is not possible. Opportunity charging is still recommended to optimize performance.

External Power Outlet



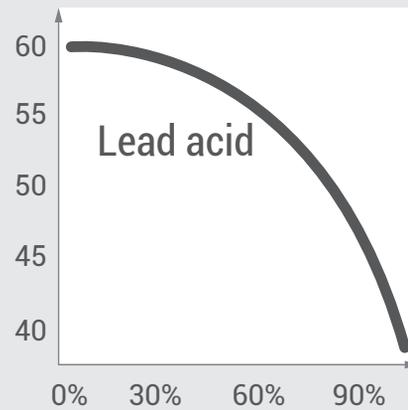
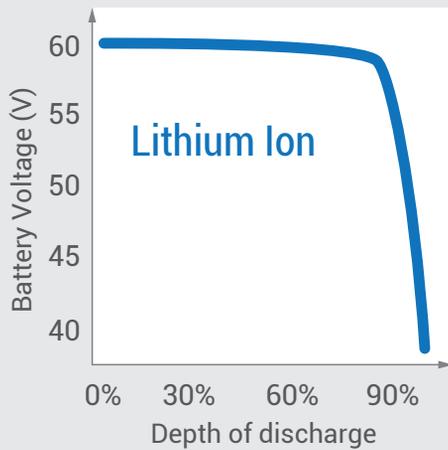
The external power outlet is a solution for applications that need to run accessories on the lift. Using this option, inventory equipment, scanners and laptops can be connected directly to a OneCharge battery even if the lift is shut off. No more waiting to power up equipment every time you turn the key on/off.

Extra Weight



Every OneCharge battery is engineered to meet the manufacturers minimum weight specification listed on the lift data plate. Depending on the application and the attachment in use, OneCharge can add the extra weight necessary to keep the counterbalance correct.

Minimal or no voltage drop throughout the whole shift



“Paid for” vs “Usable” Ah Capacity

Lead Acid Battery

100%/1000 Ah	— “Paid for” Ah Capacity
80%/800 Ah	— Capacity after lift Interrupt threshold
60% 600 Ah	— Remaining “Usable” Ah capacity after heat loss during use, charging or cooling Voltage drops, heat issues, memory effect can further reduce Ah capacity as the battery gets older.

**You pay for 1000 Ah
You get 600 Ah**

Lithium Ion Battery

**100%
600 Ah**

Depending on compartment size we may be able to add even more Ah Capacity!

**You pay for 600 Ah
You can use 600 Ah**

Higher voltage battery is more efficient

Voltage (V)	Capacity (Ah)	Energy (kWh)	Charging current (A)	Cable requirements
36 V	720 Ah	25.92 kWh	360 A	Dual 4/0
48 V	540 Ah	25.92 kWh	270 A	4/0
80 V	324 Ah	25.92 kWh	162 A	2/0

Higher voltage means less overall battery capacity is necessary to do the same work

Greater Efficiency = Smaller Cables

Battery capacity in kWh
kWh = Ah x V / 1000

Why Lithium Ion



Superior Performance

- Fast lifting and travel speeds at all levels of discharge
- Single battery operation
- Service life >3000 cycles
- Fast charge (2 hours or less)
- No "Memory" effect



Safety and Sustainability

- Reduce carbon footprint*
- No hazardous fumes or acid spills*
- Eliminate battery watering*
- Eliminate battery changes at each shift*



Leading Edge Technology

- Rapidly expanding market
- Big design advantage over the competition
- Battery Management System and Telemetry
- Wireless Capability
- Remote trouble-shooting



Reduced Costs

- Lower Total Cost of Ownership*
- 2-3X cycle life*
- Zero daily maintenance*
- No battery room required*
- Up to 15% savings on electricity bills*
- Smaller battery, shorter trucks, narrower aisles, more available pallet positions*
- Less lift truck component wear*

* Compared to a lead acid battery

Why OneCharge

Over
550
models

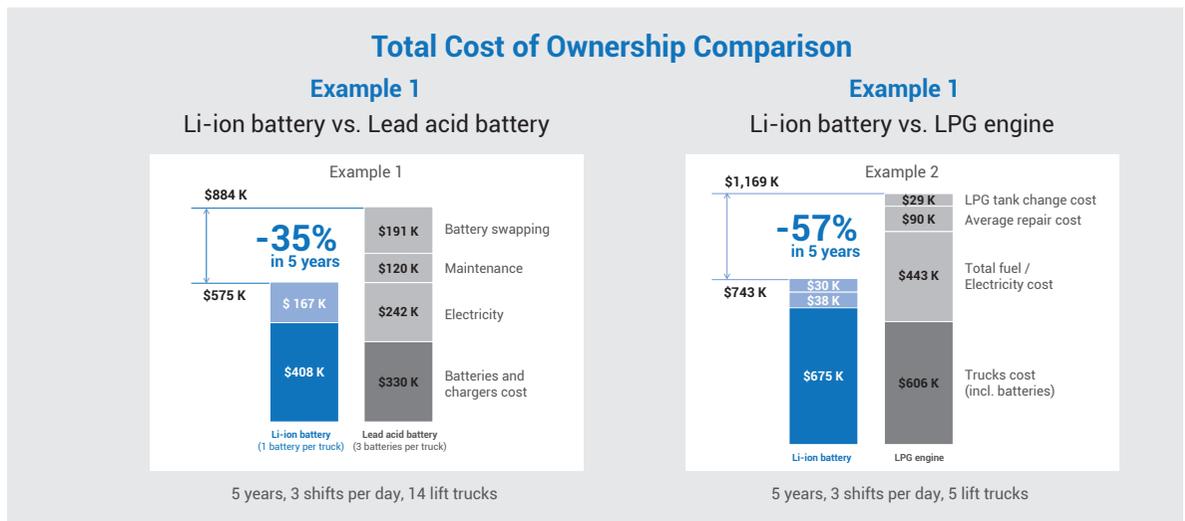
Versatile Product Line

- Fits Class I, II and III Lift trucks, Ground Support Equipment, Sweepers and Scrubbers, Personnel Carriers
- Options: FROST, BIC, BDI, CAN, WIRELESS, BALLAST
- OneCharge own chargers and retrofit options

Focus on Material Handling Industry

- Customized solution for nearly every truck make and model
- Plug & Play – seamless integration and compatibility with all truck models
- Factory to Dealer support and service

Li-ion Batteries save 30% and more in the course of 5 years



“OneCharge batteries are remarkably reliable and can stand much more abuse and need much less attention compared to lead acid.”

Allen Grady, Equipment Maintenance Manager at Spirit AeroSystems



“We were wowed with the benefits of Li-ion, and OneCharge Batteries totally met our expectations.”

Randy Long, Forklift Fleet Manager, Allan Brothers



“OneCharge Batteries ensured the switch to Li-ion was smooth and caused no interruption to Standard Distributing operations. On top of minimizing downtime during shifts we finally got rid of the lead acid batteries daily maintenance and messy charging area. Both are simply not needed with OneCharge Li-ion Batteries.”

Mike Tielleman, Warehouse Manager at Standard Distributing Co Inc