



LITHIUM GUIDE

Lead-Acid to Lithium: A Retrofit Checklist

Swapping lead-acid for lithium is often a drop-in, but a few checks protect the battery and the machine. Run through these before you fit.

ATB Power · Battery Solutions · 6 min read

ATB lithium monoblocs are sized to common lead-acid footprints, so most upgrades are straightforward. Work through this checklist to avoid the few issues that catch people out.



ATB LFP-M lithium monobloc, sized to common lead-acid footprints for drop-in replacement.

— 1. Match the voltage and footprint

Confirm the system voltage (24, 36, 48 or 72 V) and that the monobloc fits the tray or compartment. Lithium nominal voltage is close to lead-acid, so most equipment runs unchanged.

— 2. Use a lithium charger

Set the charger to a LiFePO4 profile at the correct voltage. Do not use a lead-acid charger with desulfation or equalization modes, and never apply a continuous float. An incorrect profile will under- or over-charge the pack.

— 3. Check the BMS limits

Make sure peak charge and discharge currents stay within the pack rating. For high-draw equipment, confirm the continuous and peak current specs on the datasheet.

— 4. Mind the weight and stability

COUNTERWEIGHT

Lithium is much lighter than the lead-acid pack it replaces. On counterbalanced machines such as forklifts, you may need added counterweight to keep the original stability. Confirm with the equipment maker.

— 5. Temperature and charging

Lithium cannot charge below 0 degrees C. In cold stores or winter outdoor use, plan for a heated pack or warm-up before charging. Discharge works to well below freezing.

— 6. Commission and document

- Fully charge before first use.
- Record the model, charger settings and install date.
- Brief operators: no special routine, just recharge after use.

Need help choosing or specifying?

Talk to ATB for datasheets, fitment and custom configurations.

[Request specifications](#)

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