



RELi³ON[®]

**How Customizing Lithium
Iron Phosphate Batteries
Revolutionizes Your Product**



How Customizing Lithium Ion Phosphate Batteries Revolutionizes Your Product

Finding the ideal battery for your product isn't always easy. Maybe stock batteries don't fit, or you need something with more energy or power to keep your applications running at top capacity. Custom batteries are the answer. But, when you're choosing a custom battery manufacturer, there are a lot of questions to ask before making the right selection. To help make your decision easier, here are the answers to the most common questions about custom-made batteries.

LET'S START WITH THE BASICS: WHY LITHIUM IRON PHOSPHATE IN THE FIRST PLACE?

Making the switch from lead acid to lithium iron phosphate batteries might seem difficult at first. You're investing a little more upfront financially, and when you're marketing a product, you want to keep it affordable. But, by choosing LiFePO₄, you're investing in a far superior product, and one that better fits your customers' needs and actually costs less over the life of the product.

Lightweight

Your applications are going to go farther and be faster when you select lightweight LiFePO₄.

High-Energy Density

You get more energy in the same size container allowing you to operate longer between charges

More Usable Capacity

Compared to a lead acid battery with the same rated capacity you will get 25-50% more runtime with LiFePO₄

Low Self-Discharge

Are you worried about batteries losing their charge over time? With LiFePO₄, the rate of self-discharge is far lower than that of lead acid.



No Maintenance

Some lead acid batteries require maintenance to ensure they're up to par, but LiFePO₄ batteries require no maintenance to remain high-performing products.

Faster Recharge

LiFePO₄ batteries have very low resistance, which allows you to charge at a much higher rate.

Customizable

You have a greater variety of options when you're working with lithium iron phosphate batteries. Not only are LiFePO₄ batteries more powerful, lighter and hold charge longer than lead acid batteries, but they're also customizable to fit your needs.

Let's learn a little more about customizing lithium iron phosphate batteries, and why it's the right choice for many manufacturers.

WHY SHOULD I WANT A CUSTOMIZED BATTERY?

Would you rather build your product around a designated battery size or design your product and have a custom battery that fits in? If you choose a lead acid battery, your only options are the sizes that are already on the market. All lead acid batteries are built to Battery Council International size. So, not only are you choosing an inferior product, but you're losing the freedom to design a product you want.

WHAT ARE THE FINANCIAL BENEFITS OF A CUSTOMIZED BATTERY?

Like most buying decisions, when you choose a higher-quality product, it's an investment. The same is true with custom LiFePO4 batteries. Although your initial cost is higher, your return on investment is much greater over the life span of the battery.

Building a customizable battery ensures proper charge rate, discharge rate and depth of discharge, all factors in increasing your battery's life span. And a battery with a long life span saves you money in the long run.

WHAT FEATURES ARE CUSTOMIZABLE?

When you're customizing a battery, there are five basic features that can be tailored to your needs:

- Voltage
- Capacity
- Charging current
- Discharge current
- Dimensions
- Communication



So, whether you're looking for a battery with a specific size or level of energy output, with more options to fit your needs, customizing your batteries is the solution.

WHAT ABOUT THE FUTURE?

There's no need to worry about resale or warranty when you're using custom-built batteries. Usually, you'll receive a longer manufacturer's warranty with the battery. And, when it comes to reselling a product with a custom battery, it won't be difficult for the new owner to replace the battery in the future. Proprietary packs are available for you to sell to the new owner.

Choosing a custom lithium iron phosphate battery that's right for you isn't as difficult as it seems. The key is to find the right custom battery manufacturer. Use these questions and answers to find the right partner for your LiFePO4 battery needs.

A green square containing the white letters 'Li' in a stylized font.

Looking for more insight into custom lithium-ion batteries? [Click here to contact a RELiON Certified PowerPro](#) and receive guidance on making the switch to lithium-ion.