

## BEFORE INQUIRING ABOUT LFP CELLS

Before you inquire with EV Power about purchasing LFP (LiFePO<sub>4</sub>) cells please consider the following points:

**1) Please give us a short explanation of the intended application and your level of experience.** Prices vary according to volume, client type and exchange rate fluctuations. On first request we will give you a ball park figure to see if it is in your budget range. If it is we will offer more detail and if you wish to proceed, a quotation. We will always offer the best price we can. **If you get a better quote for a similar product please tell us.**

**2) Do you know what you are doing?** It is essential that you have a good working knowledge of electricity (AC and DC). Competence is required in using tools, multimeters and soldering irons. You must be familiar with terms such as DoD and Ahr. If you are not competent or are inclined to take shortcuts and risks you will cause trouble for yourself.

**3) Size your battery system appropriately.** CALB batteries are guaranteed to perform to their specifications. Some battery manufacturers make exaggerated claims about their products (not mentioning names...).

For long life EV Power recommends some rules of thumb. For LFP cells the continuous average current draw should not exceed 0.8C. For example a 100Ah cell should not be drawn continuously at greater than 80 Amps (average). The peak current draw should not exceed 3-4C for more than a few seconds. You can go higher but battery life will be reduced. This is true for all prismatic LiFePO<sub>4</sub> cells even though they may be rated to 10C or more.

**4) Select the voltage range carefully.** LFP cells in most circumstances require specialized chargers. We have chargers available in a limited range of sizes so please ask for advice before choosing system size. **A battery management system is required on all LFP batteries.**

**5) Take into account DoD when calculating range or discharge duration.** Allow at least a 20% safety margin and do not go below it when discharging LFP batteries. In other words there is 80% of the specified capacity to use in most applications. Do not rely on the BMS to terminate discharge or charge. Generally work on about 180 Whrs/km for a small EV to calculate the range.

**6) Engineer the application around the batteries.** If cells are distributed in different inaccessible places invariably problems will arise. Plan carefully the space you have before you order and save time and money. Cell sizes and weights are on the EV Power website. We charge a modest fee for battery pack design.

**7) Large battery packs are not kept in stock.** We place bulk orders with the factory at regular intervals to supply orders of fresh cells to clients at a discounted price. Please take this into account when considering your timeline.

**8) There is a 36 month factory warranty on CALB cells.** It is extremely rare for a LFP cell to fail without a reason. In the event of a cell failure EV Power will help with a factory claim but does not offer any additional warranty. No warranty is offered if the BMS causes cell damage as we have no control over how the system is installed. A 12 month limited warranty applies to other parts.

9) Quoted prices are subject to change without notice due to exchange rate fluctuations.

10) **Have fun!** Changing to LFP batteries will be the best thing you ever did.