





Lithium Iron Phosphate Chemistry Compatibility to Lead Acid Batteries:

The nominal voltage of LiFePO₄ chemistry is 3.2 volts per cell. When 4 cells are connected in series the nominal voltage is 12.8 volts. The nominal, maximal, and minimum voltage levels of 4 cells connected in series ensures backward compatibility to all varieties of Open and Sealed Lead Acid battery systems without adjustment to the output (discharge) voltage or input (charge) voltage of the battery or charging system. The same applies to the series connection of two or more 12 volt battery systems to create a 24 volt or higher output voltage.

The following table outlines Cell-Con's battery models that are backward compatible to Sealed Lead Acid battery systems. The following products were developed for users that require higher energy, lighter weight, longer cycle life, lower self discharge, and better low temperature performance from a battery system to power their product.

Lithium Ion Battery Lead Acid Replacement Product Specifications				
Model Number	D90483	D90470	D90484	D90493
Rating	12V 7Ah	12V 10Ah	12V 19Ah	24V 10Ah
Dimensions	6" x 2.5" x 3.8"	6" x 2.5" x 3.8"	6.5" x 3.5" x 4.5"	6.5" x 3.5" x 4.5"
Nominal Voltage	12.8V	12.8V	12.8V	25.6V
Weight	2 lbs	2.8 lbs	5.4 lbs	5.4 lbs
Nominal Capacity @ C/5	6.4Ah	9.6Ah	19Ah	9.6Ah
Recommended Operating Conditions				
Continuous Discharge	<6.4A	<9.6A	<9.6A	<9.6A
Pulse Discharge (30 Sec)	25A	25A	25A	25A
Charge Current	<3.2A	<4.8A	<4.8A	<4.8A
Charge Voltage Cutoff	14.6V	14.6V	14.6V	29.2V
Discharge Voltage Cutoff	10V	10V	10V	20V
High Operating Temperature	+ 60° C	+ 60° C	+ 60° C	+ 60° C
Low Operating Temperature	- 20° C	- 20° C	- 20° C	- 20° C
Cycle Life	>1000	>1000	>1000	>1000
Maximum Operating Conditions				
Continuous Discharge	>24A	>24A	>24A	>24A
Pulse Discharge	40A	40A	40A	40A
Charge Current	<6.4A	<9.6A	<9.6A	<9.6A
Charge Voltage Cutoff	16.4V	16.4V	16.4V	32.8V
Discharge Voltage Cutoff	8V	8V	8V	8V

