





Lithium Iron Phosphate Chemistry Compatibility to Lead Acid Batteries

K2 Energy Solutions, Inc., develops and engineers cells, modules, and battery systems using their proprietary chemistry - K2 Lithium Iron Phosphate (LiFePO₄). The nominal voltage in Lithium Iron Phosphate chemistry is 3.2 volts per cell. When 4 cells are connected in series the nominal voltage is 12.8 volts. The normal, maximum, and minimum voltage levels of 4 cells connected in series ensures backward compatibility to all varieties of Open and Sealed Lead Acid (SLA) battery systems without adjustment to the output (discharge). Our field-proven products offer industry-leading energy density, better low temperature performance, superior power, and are made of environmentally friendly, lightweight materials, providing increased cycle life and enhanced safety.

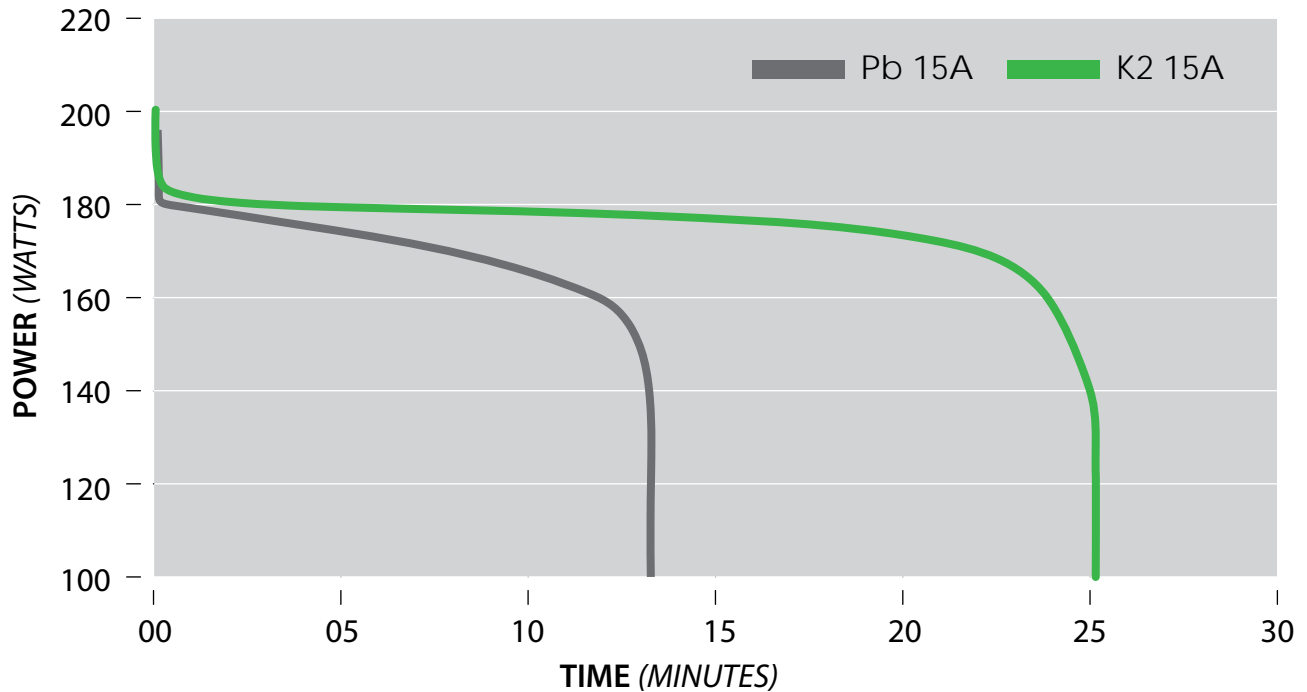
The following table outlines specifications recommended and maximum operating conditions for K2's line of SLA replacement batteries.

	K2B12V7EB	K2B12V10EB	K2B12V19EB	K2B24V10EB
K2 LiFePO₄				
Lead Acid Replacement Product Specifications				
Dimensions (mm)	97.3 X 64.3 X 15	97.3 X 64.3 X 15	165 X 89.5 X 11	165 X 89.5 X 11
Nominal Voltage	12.8	12.8	12.8	12.8
Weight (g)	0.9	1.3	2.45	2.45
Nominal Capacity @ C/5 (Ahr)	6.4	9.6	19	19
Recommended Operating Conditions				
Continuous Discharge (A)	<6.4	<6.4	<6.4	<6.4
Pulse Discharge (A)(30 sec)	25	25	25	25
Charge Current (A)	<3.2	<3.2	<3.2	<3.2
Charge Voltage Cutoff (V)	14.6	14.6	14.6	14.6
Discharge Voltage Cutoff (V)	10	10	10	10
Operating Temperature (C)	-20C to 85C*	-20C to 85C*	-20C to 85C*	-20C to 85C*
Cycle Life	>2000	>2000	>2000	>2000
Maximum Operating Conditions				
Continuous Discharge (A)	<24	<24	<24	<24
Pulse Discharge (A)(2 sec)	40	40	40	40
Charge Current (A)	<6.4	<6.4	<6.4	<6.4
Charge Voltage Cutoff	14.6	14.6	14.6	14.6
Discharge Voltage Cutoff	8	8	8	8

*May reduce cycle life

Based on the "Peukert Effect," which demonstrates applications over (10C) discharge current, using Lithium Iron Phosphate requires less stored energy to deliver the same rate of power as compared to a sealed lead acid battery system, thus allowing more energy in a smaller, lighter size.

K2 LFP 12V 6.4 Ahr Vs. PbA Battery 12V 7.0 Ahr



The K2 Energy Solutions battery chemistry has been designed to optimize the cell performance for both energy and power applications. From cells to modules, and to battery systems, K2 Energy has developed its products with the intent of achieving modularity and scalability to meet customer specifications and cost targets. Our power and energy modules are capable of continuous discharge currents between 300 - 1200 amps, and a 5 second pulse discharge between 700-4200 amps.

Please go to www.k2battery.com, or email info@k2battery.com for a complete listing of our cells, modules, and battery systems.



**SUPERIOR
POWER**



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SAFETY



**ENVIRONMENT
FRIENDLY**



**CYCLE
LIFE**



**LIGHT
WEIGHT**