



# BB5024 / BB5024H

50 Amp Hour • 24 Volt • LiFePO<sub>4</sub> Battery



## Features

Maintenance Free

100% Depth of Discharge

10-Year Warranty

Heated Options Available

## Li-Ion vs. Lead Acid Batteries

1/5 of the Weight

5x Faster Charging

> 10x Longer Lifespan

2x - 3x More Power

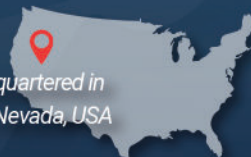
## Specifications

- 50 Amp Hour, 24 Volt Battery
- LiFePO<sub>4</sub> Chemistry
- 3,000 to 5,000 Cycles
- Dimensions (L x W x H):  
12.75" x 6.87" x 9.00"
- 31 lbs.
- Operating Temp Range:  
-4°F (-20°C) to 135°F (57.2°C)  
(Batteries should not be submerged)
- Water Resistant and Sealed
- Built in BMS  
(Battery Management System)

## Charging Parameters

- Absorption Voltage: 28.8V to 29.2V
- Float Voltage: 26.8V to 27.6V
- Equalization Voltage: 28.8V (if Applicable)
- Absorption Time: 20 to 30 minutes per  
100Ah battery bank
- No Temperature Compensation

Headquartered in  
Reno, Nevada, USA



## Built-In BMS

Our BMS keeps you and your battery safe and ensures your battery will last for years.

- 60 Amps Continuous
- 100 Amps Surge for 30 Seconds
- 1/2 Second Surge for Larger Loads
- High/Low Voltage Protection
- Short Circuit Protection
- High/Low Temperature Protection
- Cold Charging Protection
- Automatic Cell Balancing

*Please Note: This built-in protection will reset after five seconds in most fault conditions. Disconnecting the battery from loads will also reset the BMS*

Questions? Call 855.292.2831 or email us at [info@battlebornbatteries.com](mailto:info@battlebornbatteries.com)



# BB5024 / BB5024H FAQ'S

## Can LiFePO<sub>4</sub> batteries be mounted in any position?

You can mount our batteries in any position. Our batteries use a non-liquid based chemistry and do not emit any fumes or gases. When mounting, make sure to properly secure and protect your terminals.

## How can I check my batteries voltage?

If you do not have a battery monitor, you can purchase a multimeter to monitor the voltage of your batteries. Please reference the voltage vs. capacity table on the right.

## How do I properly store my LiFePO<sub>4</sub> batteries?

We recommend bringing the Battle Born Batteries to a 100% state of charge. Then disconnect the battery from any loads by removing the negative cable from one battery. On average, the batteries lose approximately 3-5% capacity per month. This is subject to increase if placed in extreme environmental conditions while in storage.

If you have the heated version, you will need to deactivate the heater for storage. To deactivate the heater simply disconnect the heat enable jumper wire from the heat enable post.

## What is the maximum amperage I can charge my batteries?

Our batteries allow a charge of 50 amps per 100-amp hour battery bank. For more than one battery, you can simply take the entire amp hours of the bank and cut it in half (e.g. a total of 300-amp hours can be charged at 150 amps).

## Is it necessary to charge my batteries out of the box?

Yes, if you are connecting your batteries in series you will need to charge your batteries out of the box. If you are connecting in parallel then you do not need to. See the diagram below.

## How much power does the heat function consume?

On average, the internal heating function consumes about 1.8 amps. Our tests show at 0°F with no insulation, the heater function is on about 30% of the time.

## How long does it take for the heat function to work?

The heater will activate when the internal temperature for the battery reaches 35°F. If the battery has been exposed to below freezing temperatures for a long time without the heater enabled, it will take 2 to 4 hours for the internals of the battery to heat up enough for the battery to take a charge.



**Parallel Connection 12V 100Ah Bank**  
Increases Ah, Voltage stays the same.



**Series Connection 48V 100Ah Bank**  
Increases Voltage, Ah stays the same.

## Voltage vs. Capacity

\*for a single battery\*

Voltage Level	14.4V	100%
	13.6V	100%
	13.4V	99%
	13.3V	90%
	13.2V	70%
	13.1V	40%
	13.0V	30%
	12.9V	20%
	12.8V	17%
	12.5V	14%
	12.0V	9%
	10.0V	0%

Remaining Capacity

## Quick Installation Tips:

- Torque specifications - 9 to 11 ft-lb.  
DO NOT finger tighten
- Our batteries do not require ventilation since they do not emit fumes or gases, so you can put them in enclosed areas.
- Our batteries can be mounted in any orientation that is suitable for you.
- DO NOT reverse the polarity of the battery and the device connected.
- The batteries come equipped with a 3/8" hole on the terminal to fit either a 3/8" or a 5/16" bolt.

Please see the manual for additional installation instructions.



## Warranty

Every Battle Born Battery is backed by an industry-leading 10-year warranty.

Warranty is non-transferable.

Visit [battlebornbatteries.com](http://battlebornbatteries.com) for additional information.

Questions? Call 855.292.2831 or email us at [info@battlebornbatteries.com](mailto:info@battlebornbatteries.com)