# How big a motor can a lead-acid battery use

What are the parameters of a lead acid car battery?
Typical parameters for a Lead Acid Car Battery include a specific energy range of 33-42 Wh/kg and an energy density of 60-110 Wh/L. The specific power of these batteries is around 180 W/kg,and their charge/discharge efficiency varies from 50% to 95%.

Can a lead acid battery stall a motor?
The motor can draw quite a lot of current when stalling and I am worried of overdischarging the lead acid battery. Unlike LiPo batteries with have a maximum current rating, the lead acid battery only stated the "initial current", which is used for charging. The label stated not to short the battery.

How much lead is in a car battery?
According to a 2003 report entitled "Getting the Lead Out",by Environmental Defense and the Ecology Center of Ann Arbor,Michigan,the batteries of vehicles on the road contained an estimated 2,600,000 metric tons(2,600,000 long tons; 2,900,000 short tons) of lead. Some lead compounds are extremely toxic.

How many Watts Does a lead-acid battery use?
This comes to 167 watt-hours per kilogram of reactants,but in practice,a lead-acid cell gives only 30-40 watt-hours per kilogramof battery,due to the mass of the water and other constituent parts. In the fully-charged state,the negative plate consists of lead,and the positive plate is lead dioxide.

What is a lead acid battery?
Lead acid batteries are fantastic at providing a lot of power for a short period of time. In the automotive world, this is referred to as Cold Cranking Amps. From GNB Systems FAQ page (found via a Google search):

What is the specific gravity of a lead-acid battery?
The specific gravity of the electrolyte (measured by means of a hydrometer) is used as an indication of the state of charge of a lead-acid battery. An electrolyte with a specific gravity of 1100 to 1150is 1.1 to 1.15 times as dense as water. At 1100 to 1150,the cell is completely discharged.

of the first electric motors and rechargeable lead acid batteries both fall into the 1800"s. In the field of motive power, progress in energy storage comes hand in hand with new machine. y design ...

Even though both battery types are classified as a 12V battery, a lead-acid battery sits at a nominal voltage of 12.6V while on the other hand, our lithium batteries sit at a nominal voltage of 13.6V. The voltage difference of the two batteries, combined with the internal BMS within the lithium and lack of BMS within the lead-acid can create a variety of concerns ...

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A Minn Kota trolling motor will operate with any lead-acid, deep cycle marine 12-volt battery/batteries. For best results, use a deep cycle, marine battery with at least a 110-ampere hour rating, usually a Group 27 or higher. If amp hour rating is not available, select a deep cycle battery with a minimum of 180 minutes of reserve capacity.

Although lead acid and AGM batteries are still the most popular trolling motor batteries, Lithium (LiFePO4) batteries are catching on! Flooded Lead Acid Batteries: Flooded lead acid batteries are common and affordable deep cycle batteries for trolling motors. They can handle frequent draining and re-charging associated with trolling motor use ...

12v Lead Acid Battery to Brushless Motor. I am currently building a Autonomous Airboat. The brushless motor i am using is a 20 pole 8T 110kv. Needing guidance in a proper ESC and Battery setup. I want to use multiple 12 volt Lead Acid Batteries [2 to 3] Any guidance would be very appreciated. Sign up now. to remove ads between posts. Apr 01, 2018, 01:45 ...

This article provides an overview of the construction, working principles, and maintenance of lead-acid batteries, commonly used in automobiles. It covers topics such as battery structure, plate arrangement, charging and discharging ...

Lead-Acid Battery Construction. The lead-acid battery is the most commonly used type of storage battery and is well-known for its application in automobiles. The battery is made up of several cells, each of which consists of lead plates ...

Cranking amps are the numbers of amperes a lead-acid battery at 32 degrees F (0 degrees C) can deliver for 30 seconds and maintain at least 1.2 volts per cell (7.2 volts for ...

Understanding the capacity and performance of large lead acid batteries is paramount for unlocking their full potential in energy storage applications. By optimizing these crucial parameters, we harness the unparalleled power of these electrochemical giants, ensuring reliable and efficient energy delivery for a wide range of critical systems.

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12.8V is not enough to fully charge a lead-acid battery. It would work to add some charge to a lead-acid, but it is not sufficient to properly charge the battery. Lead-acid needs to be kept at full charge as much as possible or it rapidly degrades.

Cranking amps are the numbers of amperes a lead-acid battery at 32 degrees F (0 degrees C) can deliver for 30 seconds and maintain at least 1.2 volts per cell (7.2 volts for a 12 volt battery). A car actually doesn"t need 30

seconds, normally only a few seconds to start, except in very cold weather or other extreme situations.

As the demand for efficient and reliable power storage solutions grows, many are considering the transition from traditional 12V lead acid batteries to advanced lithium-ion batteries.This shift is not merely a trend but a significant upgrade that offers various benefits. In this article, we will explore the compatibility, requirements, and advantages of replacing your ...

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The Ah specification of a lead-acid battery comes from how many Ah"s it can deliver over a 20 hour discharge cycle. That is from 13.7V (fully charged) to 10.7V (fully discharged). For longevity, you should never discharge a lead-acid battery below its 50% capacity (11.7V). This will leave you with an operating time of about one and ...

Starting Batteries - Used to start and run engines they can deliver a very large current so a very short time, discharging by about 2-5%. If deep cycled these batteries quickly degenerate and will fail after 30-150 cycles but should last for a very long time when used correctly.

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