Absorbed Power AGM Batteries

Balmain Battery Discount Store
16 Mansfield Street, Rozelle NSW 2039
(02) 9555 9444 – 0425 286 700

Applications:

As most boat owners know, on-board batteries can often be a headache. Either they don't last as long as you would like, or they do not have the "staying power" to run all the modern accessories, without "over discharging" the battery bank.

The power requirements on boats has increased over the last few years with the growing popularity of 240 volt inverters to run the "creature comforts" onboard, as well as new refrigerators, computers, auto-pilots, navigation systems etc.

The old technology "wet" marine batteries do not "cut the mustard" when it comes to these high current or deep discharge situations, which dramatically reduce the life of the standard battery.

We also have new rules from "The Blue Book" requiring sealed batteries. It's now very important to ensure, when deciding on new batteries, that you get the right type. That is, fully sealed batteries which do not allow contact with sea water in the event of an emergency. Sea water contact with normal "wet" marine batteries produces chlorine gas and a very dangerous situation.

There are a number of types of sealed batteries, but the best technology, value for money and performance comes from AGM (absorbed glass matt) batteries.

"AGM Marine batteries" are based on technology originally developed in the early 1980's for military use. They are "sealed and maintenance free" The internal lead plates are packed in micro-fibre mat. The electrolyte is captured within the mat, giving a lower resistance within the battery. This produces a much more efficient and faster battery function. Voids designed into the mat, give efficient retention of gas without pressure build-up within the battery during a charge cycle.

The **"Absorbed Power" AGM** range of batteries covers the majority of marine applications, The **12, 18**, **26** & **35amp hour** are ideal for the small outboard and jet ski applications. The **55**, **70** & **90** amp hour are used most often in the trailer-sized boats, mid-size pleasure cruiser and high performance speed boat categories. The **100**, **150** & **200amp hour** units are standard sizes for Larger Yachts, Cruisers and Commercial fleets.

AGM marine technology provides several major advances over earlier battery design. Their highly efficient Discharge/Recharge capabilities are matched by a Long Service Life. Instead of needing two different types of battery for house and starting requirements, the Absorbed

Power AGM provides excellent cold cranking amps for starting and electric winch operation, whilst offering fantastic deep discharge capabilities as well. So, one type of battery fits all of your boats needs.

AGM batteries also have a much longer shelf life. What this means to the boat owner is, the AGM battery will stay charged for a year or so, whilst sitting idle on a vessel that is not always being used. This is a huge advantage and cost saving. The process of self-discharge, which is common with wet batteries, causes the battery to fail when left for extended periods, due to the sulphate build up on the plates. Once a wet battery has been left for a long period to discharge, it usually needs to be replaced, costing you money.

AGM batteries are fully compatible with normal automotive charger technology (lead-acid regulated charging voltages). It is important to note, that sealed batteries require automatic chargers, so as not to over-charge them. This holds true for all battery types. The common smart chargers, solar and wind regulated chargers, engine driven voltage regulated alternators and 240 volt automatic chargers, are perfect for charging AGM batteries.

Where most batteries have a long re-charge cycle, the Absorbed Power AGM can recharge from flat in less than two hours, or 3 ½ hours at the preferred 30% of Ah rating.

This, combined with their very low internal resistance makes the AGM an ideal fit for Inverter and Total Loss (Racing Yachts, Fishing Equip etc) use.

Their excellent resistance to heat, vibration and sway combined with their rugged construction makes them an ideal engine room fit.

The fact that they can be mounted at any angle (normal, side, end, angular etc) makes them ideal for difficult-to-fit hull shapes.

When your vessel is in storage or un-attended for long periods (i.e. winter) the battery has an extremely low self discharge, ready to perform when you return.

What is your Battery System Capacity?

Your battery system should be designed to provide adequate power on demand. Its ability to do this depends on the amount of charge stored in your batteries (Amp/Hours) and the requirements of your boat's electrical accessories.

To work out an Amp/Hour budget, firstly list the amperage draw of each item of equipment you wish to operate (the Watts draw will usually be listed on the component, divide the watts draw by 12 to calculate amps used).

Now estimate how many hours per day you would usually use each component and then multiply each item’s calculated amps draw by estimated hours to come up with the total Amp/Hours for this item. Now add up all calculated Amp/Hour usages to assess total daily power requirement.

To calculate your useable Amp/Hour availability of your battery system, use 50% of an older style (wet batteries) battery's Amp/Hour rating (totaled for the number of batteries times their Amp/Hour rating) or about 75–80% of an Absorbed Power AGM battery rating. (Most batteries are rated at a 20 hour discharge rate).

Divide the total capacity of battery system (factored by 50% for wet or 75-80 for AGM) by your calculated daily load. This will give you the number of hours of useable power between charges. It is important to note that failure to recharge your system after this time limitation could damage your battery system, especially with wet batteries. Batteries left in low states of charge degrade much more quickly than properly charged batteries. A Fully Automatic (cut-off or float type) charger is the safest way to ensure proper charging and maximum battery life.

What are the advantages of AGM technology?

- Fully sealed and maintenance free - spill proof & leak proof
- Economical
- Long service life
- Multi-purpose use - great starting capacity & deep discharge service
- High discharge rate
- Installs upright or on side
- Firmly packed structure - provides greater resistance to shock and vibration
- Excellent CCA

We use & recommend CTEK battery chargers
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