



# Batteries and Renewable Energy

**A battery is a storage reservoir of electricity – available for use whenever and wherever you need it. Recharge your battery using RENEWABLE ENERGY sources – such as Solar Panels and Wind Turbines.**

Batteries, Solar Panels and Wind Turbines working together are an ideal partnership for people with remote power needs. Talk to us about how you can make use of the sun and wind to get the most out of your battery in the wide outdoors.



## RECYCLING

With the environment in mind, we operate a Lead Recycling Programme. Very little in a battery is wasted – we can recycle your old battery. Call us to find out more.



**CPC BATTERY SERVICES** has been in business for nearly 30 years and has a wealth of knowledge and experience just waiting for you to tap into – FREE.

**CALL THE EXPERTS – WE WILL HELP WITH YOUR POWER NEEDS.**

Chancerygate Business Centre,  
214 Red Lion Road,  
Surbiton,  
Surrey KT6 7RA

Phone: +44 (0)20 8397 1813  
Fax: +44 (0)20 8397 1799  
E-mail: [sales@cpcbatteries.co.uk](mailto:sales@cpcbatteries.co.uk)  
[www.cpcbatteries.co.uk](http://www.cpcbatteries.co.uk)



# FULLY CHARGED!



**Battery Power is essential, whether you're Boating, Jet Skiing, Caravanning, Camping, on the Canal or enjoying a round of Golf. Selecting the right Battery is vital for trouble-free leisure time.**

**CPC BATTERY SERVICES** is the specialist; talk to us for free advice on all your Battery Power requirements. We have a huge selection of Batteries and Chargers, with the very latest in Battery technology available – including hybrid technology, spiral cell and solar-compatible batteries.



cut off space - trim 3mm from right edge

There is a bewildering array of different batteries available – some guidance is needed to help you select the RIGHT battery for the job. Batteries fall into three main categories:

Phone: +44 (0)20 8898 6972  
 Fax: +44 (0)20 8755 0139  
 E-mail: sales@cpcbatteries.co.uk  
 www.cpcbatteries.co.uk



## What Do You Need?



**Starter batteries:** Specifically designed to supply a burst of power to get your engine going – just like the battery in your car.



**Cyclic batteries:** Engineered to provide a constant power supply over an extended period. Applications could include anything from powering your GPS systems, Navigation Lights, Laptops and TV – to carrying you and all your equipment on a golf buggy.



**Dual Purpose batteries:** A battery which combines the ability to start your engine as well as power your equipment – often referred to as Leisure Batteries and supplied with dual terminals. They are NOT designed for heavy starting or heavy cyclic use.

If you have heavy starting as well as heavy cyclic needs, you should consider separate batteries for each function. It is VERY important to select the right TYPE of battery for your application to ensure maximum, trouble-free performance.

## Types of Battery Construction

### Flooded Lead Acid – Vented

These batteries are available as starter, cyclic and dual-purpose batteries. They can be topped up by removing vent caps – they usually have handles and often have charge level indicators. The electrolyte is free-flowing within the battery.

### Flooded Lead Acid – Sealed

These batteries are available as starter, cyclic and dual-purpose batteries – but are sealed and can't be topped up. They have specially designed lids that allow the small amount of gas generated by charge and discharge cycles to condense into liquid which remains in the battery, eliminating the need to top up. Ideal for enclosed spaces.

### Absorbed Glass Mat (AGM) – Sealed

These batteries may be used for starting, light, moderate and deep cyclic use and some types make ideal dual-purpose batteries. The electrolyte is totally absorbed in the active material within the battery – if the container is damaged there is no acid leakage (an excellent safety feature). Also ideal for enclosed spaces.

### GEL (gel) – Sealed

Similar construction to AGM – except the battery electrolyte is in a gelled form. No acid leakage if damaged. They are mostly used for deep cyclic applications, as the main source of power. They are NOT starter batteries.

**To get the most out of your BATTERY, the right CHARGER is essential. Talk to us about the best charger for your needs**

## Battery Power Selector

### How much power do you need to run your equipment?

The following is an easy guide to help assess your power requirements.  
 Watts ÷ Volts = Amps needed x Hours used = Battery Capacity needed (+50% to be sure)

Equipment	Watts (W)	÷ Volt (V)	= Current (A)mps	x Time Used (H)ours	= Battery Capacity (Ah)
Lights	120	÷ 12	= 10 amps	x 3 hours	= 30 Ah
TV	100	÷ 12	= 8.3 amps	x 3 hours	= 24.9 Ah
Bilge Pump	120	÷ 12	= 10 amps	x 1 hour	= 10 Ah
<b>TOTAL</b>					<b>= 64.9 Ah</b>

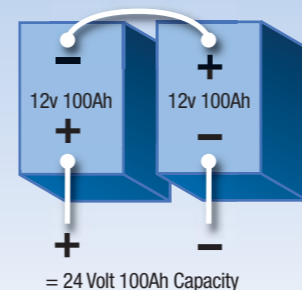
Add in a safety margin of 50% = 64.9 x 50% (32.45Ah) = 97.35Ah capacity battery. The ideal battery would be 100 to 110Ah capacity.

Repeat for each piece of equipment and add together to get the total capacity required. NOTE – It is good practice never to allow your battery to become totally discharged.

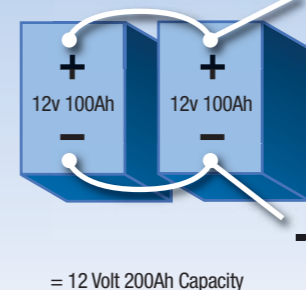
### How to increase system power

Two or more batteries can be connected to boost your system's voltage and/or capacity. Below are three methods to obtain additional voltage and/or capacity:

To increase voltage, connect batteries in series.



To increase amp hour capacity, connect batteries in parallel.



To increase voltage and amp hour capacity connect batteries in series/parallel.

