



Winglette

WIND POWER FOR YOU...

Electricity

For you...

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—Charge Controllers—



Model W03



PICTURE GALLERY

Testimonials.

In the end, it is what our customers say that really matters. Here are the comments of some of them:

Johnny Hanekom, Keetmanshoop, Namibia: The two (2) machines that I've bought, exceed all my expectatoinas as far as power generation is concerned. I am really

A charge controller is an essential part of your *Winglette* wind generator system. Its **purpose** is to keep your battery bank **properly fed and safe** for the long run. Your charge controller has the basic function of blocking reverse current and preventing battery over charging.

Blocking Reverse Current.

Your *Winglette* wind generator, is fitted with a permanent magnet alternator, that generates three phase Alternating Current (AC). The controller rectifies this AC current to Direct Current (DC), suitable to charge your battery bank. During times, when the wind is not sufficient to produce a charge current, the rectifying **diodes in the controller, block any reverse current** that might leak from the batteries, back to the wind generator.

Preventing Over Charging.

When a battery bank, when charged, reaches its full capacity, it can no longer store the charging current with which it is presented. If charging continue after the point of full load charge, the water in the battery acid separates into hydrogen and oxygen and start causing what look like the acid it boiling. This results in loss of battery fluid and a **rapid degrading of the the battery life**. The gasses the are released are very corrosive and can even explode. The controller has the purpose of preventing this situation.

Preventing over charging is only a matter of reducing the power flow to the batteries, when it has reached it full capacity. For 2Volt cells, this normally occures at a value of 2.4Volt; for a 36Volt system at 43.5Volts; and for a 48Volt system at 58Volt. The controller will at this point reduces the current flow to the batteries, but diverts excess energy to a special load that absorbs the excess power. Your **Winglette wind generator may under no circumstances, be allowed to run freely**. Free running of the rotor might cause permanent damage to the blades in very high wind speeds.

pleased with their performance, and I am planning to buy the third unit.

Johnny van der Linde, Groblershoop:

We are retired on our farm outside Groblershoop, and have always experienced a shortage of electricity from the solar panels we had. With our Winglette wind generator now installed, we are seeking ways to utilize the abundance of power that's available now!

Nico Grobler, East Coast, Mozambique:

We have a holiday home near Vilancuro, and are well pleased with our Winglette. Being a pilot for the South Africa Air ways, I just love the Winglette's modern technology and good look!

When the battery voltage drops back to a lower value, predetermined by the controller, it will reactivate full charging of power to the battery bank. This is called voltage regulation. In essence, the controller is looking at the battery voltage, and regulates charging current accordingly.

Check with you battery supplier, what their requirements for voltage regulations are. If one sticks to these prescribed requirements, you can be assured of good functional batteries, that will serve you well for the full life span, that they were designed for.

Display and Metering.

The controller include a **variety of possible displays**. The most basic is a series of LED lights to indicate to you the charged level of the batteries. This is very handy to know at any stage, how full or how empty you battery bank is.

You can also have an **Ammeter** build into the controller, which will at any time , indicate the charge current from your **Winglette** wind generator. You can also buy the **Power monitor**, which is a digital device that indicates, battery voltage, charging current, watts charged, and keeps records of charging history for the past 24 hours.

Please contact us for pricing and detail.

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