



Bi-Generator wind turbine system



Esposcar

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Summary

This device is a part of a collection of wind turbine systems that with 2 dc motors can generate 100 WATTS!!!

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Tags: [energy](#) [generator](#) [greenenergy](#) [windturbine](#)
[verticalwindturbine](#) [windgenerator](#)

We are presenting a new wind turbine device, that is easy to 3d print, it can be made handcraft once it is viewed it components and how they get assembled in a very easy and intuitive view, This system have several pending patents and the device presented here, is just one model more from others that are available in our next [crowdfunding campaign](#).

We will begin by placing all the elements required for building this wind turbine including links for where to buy at very competitive price the DC motors that will work as generators and the bearings.

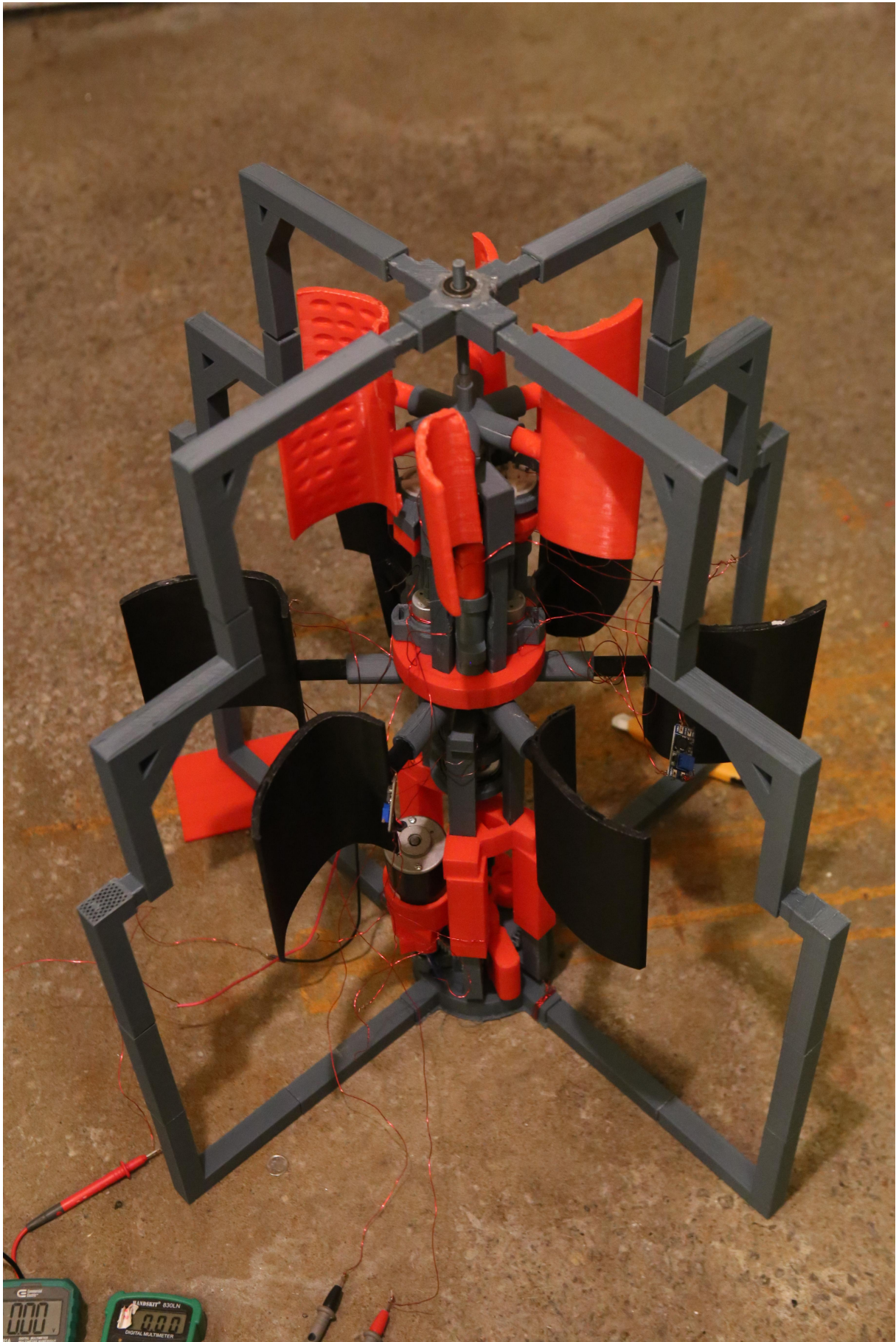
- The number of bearings that are needed for the device are 13 units (8x22x7) and can be found at very affordable prices at [AliExpress](#) & [Amazon](#).
- The DC motor used is a Hilitand 31ZY 24V/3.500RPM permanent magnet and there are 2 links where it can be found. Please have in

consideration that the total cost is reduced if you get several units instead of one at [AliExpress](#) & [Amazon](#).

This Bi-Generator VAWT have simple printable parts and it is very easy to assemble. In any case there is a bunch of 3d pics that helps visually step by step to assemble all the components of the device. In any case, there is a more detailed description step by step available at [instructables](#) of this device if you want to take a look.

It can be build at a much lower cost an array of this vertical wind turbines that are able to delivered from 20 watts to a maximum as 100 watts each VAWT depending of the amount of DC motors-generators & turbine blades type used (2 motors per VAWT for maximum wattage is required). If there is not much wind, the number of generators per unite can be reduced to one.

Evolution to a Multi-Stage/Multi-Generator Wind Turbine



This first project is a part of a further open turbo-machine system based in a pending patent that contains not only open turbo-machines but also

close turbo-machines (jet engines, gas turbine etc etc) and as the picture show, we have developed a 2 stage VAWT where the top stage spins over an already rotating bottom stage making the top stage to rotate by itself and adding the bottom stage rotation. We are now developing a third stage, but in any case we are making a crowdfunding to obtain funds to continue with this and other innovative (In our humble opinion) wind turbine devices.

We have other stl rewards that it is offered in the crowdfunding as well as physicall versions of them as the video below shows an horizontal version,

So if you like what you see subscribe to our [pre launch campaign](#) and attend us when we will go online!!!

The multi-generator device picture that you view above has been taken by a group of students from the Munich University of Applied Sciences for their project of construction class.

*A new stl files has been updated with the name of ExtendExtensor.stl that consist of a turbine extension unit that can be linked with other extension units, so the turbine diameter can be extended more in case there is few wind available and you are using the 2 generators in the device

VERY IMPORTANT UPDATES

It is important to mention that the type of filaments that must be used are different for each item of the device. For the none moving parts a PLA filament would do right and for the moving elements like gears or turbine blades the ideal filament goes from ABS, Nylon to poly-carbonate due to friction, wind etc.

- **A new stl files has been updated with the name of ExtendExtensor.stl that consist of a turbine extension unit that can be linked with other extension units, so the turbine diameter can be extended more in case there is few wind available and you are using the 2 generators in the device.**
- **Another important update has been done. There is a new stl file that is a shaft linker between the small gear and another smaller dc motor (uxcell RF-500TB-12560 DC5V-12V 2300RPM-5600RPM) to be used in case there is not a lot of wind available therefor allowing the turbines to spin much more easily. The stl files have the name,**

***UpdateUxcell RF-500TB-Holder**

***UpdateSmallGearUxcell RF-500TB-ShaftLinker**

***SmallGearGeneratorShaftLinkerPerfectFit** (There was an error in the diameter of the hole for the motor 31ZY shaft fit) It is fixed.

NEW GEARS RANGE 3x1

If there is few wind as might be in cities etc, it has been developed a gear system 3x1 so the rpm of the motors shaft will be lower therefore taking less load. This is ideal for regions where the wind do not blow strong. This gear range system is applied to both dc motor Uxcell RF-500TB-12560 DC5V-12V 2300RPM-5600RPM & Hilitand 31ZY

***SmallGearGeneratorRange3-1Linker**

***SmallGearRange3-1**

***BigGearRange3-1**

Model files



extendextensor.stl



updatesmallgearuxcell-rf-500tb-shaftlinker.stl



smallgeargeneratorrange3-1linker.stl



smallgeargenerator31zshaftlinkerperfectfit.stl



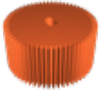
turbinebladeextensor.stl



smallgearrange3-1.stl



updateuxcell-rf-500tb-holder.stl



maingearrange3-1.stl



turbinebladehubstopper.stl



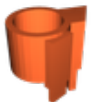
conventionalbigturbineblade.stl



topshafthubsupport.stl



bottomcolumnshaftssupport.stl



generatorholder.stl



maingearbottomshaft.stl



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basebearingsstructure.stl



maingear3.stl



hub.stl

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