

Wind power isn't just a "stick a propeller on a surplus generator for free power" technology as it is portrayed elsewhere in the public domain. To the rescue, Dan B and Dan F have put together a very well balanced book on the subject of home brewed wind power that puts the reader in touch with the reality and provides the basis for a reasonable.

I just think it will be interesting to see how these numbers will compare to the real world numbers that I get out of my turbines when they are finally flying. Ok, it seems that the math for estimating the power output goes something like this. First you can figure out the total power available in the wind using the first formula below. Also, doubling the wind speed will increase the power output by a factor of 8. So, you can greatly increase the power output by making the blades really big and getting the wind turbine as high as possible, since the wind increases substantially with height above ground. All the indented stuff below is taken from a discussion at <http://www.windpowermagazine.com>. He explains all of this by saying "Power in the area swept by the wind turbine rotor: $P = \frac{1}{2} \rho A v^3$ So, we need to include some additional terms to get a practical equation for a wind turbine. This value is called the Betz limit and was discovered in 1919. This is basically the efficiency limit of the wind turbine blades. So from this discussion we are now able to figure out roughly what our power output will be if we build everything right on this wind turbine. It is important to point out though that you have to make sure to account for the loss of efficiency in the bearings and alternator, as well as the blades, which is where C_p , N_g , and N_b come from. You must be able to calculate RPMs over a range of wind speeds in order to build the alternator appropriately, so this is very important. The tip speed ratio TSR in the equation below is simply the ratio of the speed that the tip of the wind turbine blade is travelling divided by the wind speed. I believe this graph was produced from a real world test of their alternator performance, probably mounting it to a drill press or something. Comparing the numbers we computed above, you can see that the numbers are a bit different but not too badly off. This approach would give us numbers within the realm of what the wind turbine will produce. I think the values drop off in this real world test primarily because the alternator becomes less efficient at higher RPMs. I guess you lose more power to friction in the bearings as well. Anyway, that is enough math building the turbines is much more fun. Posted on www.windpowermagazine.com

Chapter 2 : [PDF/ePub Download] homebrew wind power eBook

Thanks for your interest in our book "Homebrew Wind Power"! We became overwhelmed with posting new content on a variety of platforms, so we have discontinued the Wordpress blog for our book.

Paul Gipe Homebrew Wind Power--A Review Finally, a detailed-some would argue exhaustive-treatment of how to build your own backyard wind turbine. I get a lot of books shipped to me. Most go on the shelf unopened. But there was something about this book. First, it was big. Having written a few books myself, I know big books are one serious commitment of time and temperament. Second, there was something whimsical about it, something that said "fun". The Dans, as they call themselves, made wind fun again. There are numerous historical quotes, a bit of poetry-yes poetry-and not a little bit of poking fun at their own mistakes. I even got out my magic marker when I became fascinated by their description of horsepower. They also have a very useful sidebar on using a multimeter volt-ohm meter. Their sidebars on rigging terminology, wire rope clips, and "organic towers" were useful as well. I am a sucker for glossaries, and the Dans have a good one. They won kudos again with their inclusion of the Griphoist as a means for safely raising and lowering hinged towers. Every author has their own take. Nevertheless, I do have some quibbles. One is the title. I am glad they included a prominent sidebar on Hugh Piggott. This is a fun book. If you plan to build your own, this is the one to have. Note that the Dans have taken on some internet scams promoting an Ebook.

Chapter 3 : Wind Power Generators -- Windmills

Homebrew Wind Power has 13 ratings and 2 reviews. Harnessing the wind can be a tricky business, but in this ground-breaking book the authors provide step.

Getting Started Ok, so I am finally starting a blog in order to document my homebrew wind turbine project. I have been working on this project for a couple months nowâ€”off and on, but am finally starting to document it. So here I am getting started. At this point I have made some progress and have some good pictures, so I think it is a good time to get started. Anyway, I am building a 10 foot diameter horizontal axis wind turbine. I have been interested in alternative energy for many years ago and first started thinking about building homebrew wind turbines when I stumbled upon the www. These guys are really interesting. They all live off the grid outside of Fort Collins and they generate all their own power by building homebrew wind turbines from scratch. I mean really from scratchâ€”they weld the frame, wind the copper, cast the stator in resin, etc. It is pretty damn amazing. They have become so good at it that they teach people in seminars all over the country. I first ran into them at the sustainable living festival in I found out that they give 2 day workshops at the fair, so I signed up for both days in I realized that they really had put an incredible amount of time and thought into designing a very efficient, reliable, and affordable wind turbine that could be built by just about anyone. I was really impressed and knew at that point that I had to try to build one myself, in my own shop. So, I got started right away and manage to find a few hours here and there, between work and family life to work on it. I started by buying most of the raw materials that you need to build two 10 foot wind turbines. This cost of steel and copper is pretty high so I imagine the you could have build one of these for far less just a few years ago. This is still incredibly cheap though for a wind turbine. This is pretty impressive really. Anyway, this is enough for tonight.

Chapter 4 : Homebrew Wind Power : Dan Fink :

Harnessing the wind can be a tricky business, but in this ground-breaking book the authors provide step-by-step, illustrated instructions for building a wind generator in a home workshop and then installing it in an off-grid home electrical system.

Chapter 5 : Download PDF EPUB Homebrew Wind Power - PDF and ePub Download Free

Click Download or Read Online button to get homebrew wind power book now. This site is like a library, Use search box in the widget to get ebook that you want. This site is like a library, Use search box in the widget to get ebook that you want.

Chapter 6 : Download Homebrew Wind Power PDF â€” PDF Search Engine

Homebrew Wind Power--A Review Finally, a detailed-some would argue exhaustive-treatment of how to build your own backyard wind turbine. The authors, do-it-yourselfers who actually know what they're doing, are the powers behind blog.quintoapp.com

Chapter 7 : blog.quintoapp.com - NdFeB Magnets, Magnet Wire, Books, Weird Science, Needful Things

The design is an excellent follow-on to Hugh Piggot's work on homebrew wind power. It is my opinion that the 2 Dans (and the Colorado crew) have evolved Hugh's work to another practical level such that any North American handyman can produce his own source of reliable clean wind energy.

Chapter 8 : Homebrew Wind Turbine

DOWNLOAD PDF HOMEBREW WIND POWER BOOK

Two excellent resource books I recommend are A Wind Turbine Recipe Book by Hugh Piggott and Homebrew Wind Power by Dan Bartmann and Dan Fink. Constructing the lattice tower was a time-consuming effort.

Chapter 9 : WIND-WORKS: Homebrew Wind Power--A Review

The majority of the Homebrew Wind Power book explains how to build the 10 foot diameter horizontal axis wind turbine that I am building. Below you can see a picture of the one I helped build at the Sustainable Living Festival last year.