

CHALLENGE

Wind Energy Design Competition



CONTEMPORARY WIND TURBINES



MOBILE WIND TEST TUNNEL



STUDENT CONTEST WINNER
FERNANDO GONZALEZ
WESTBURY CHRISTIAN SCHOOL

\$25,000 CASH PRIZE

To the first person who can design and provide a 12" wind turbine model which looks like the contemporary wind turbines (see upper left) and will provide at least 50% of the generated power which a 12" diameter 2021 High School Student Contest winner provided. The test conditions will be 20 mph wind speed and 200 rpm.

This contest is open to high school students, college students, amateurs, and industry professionals.

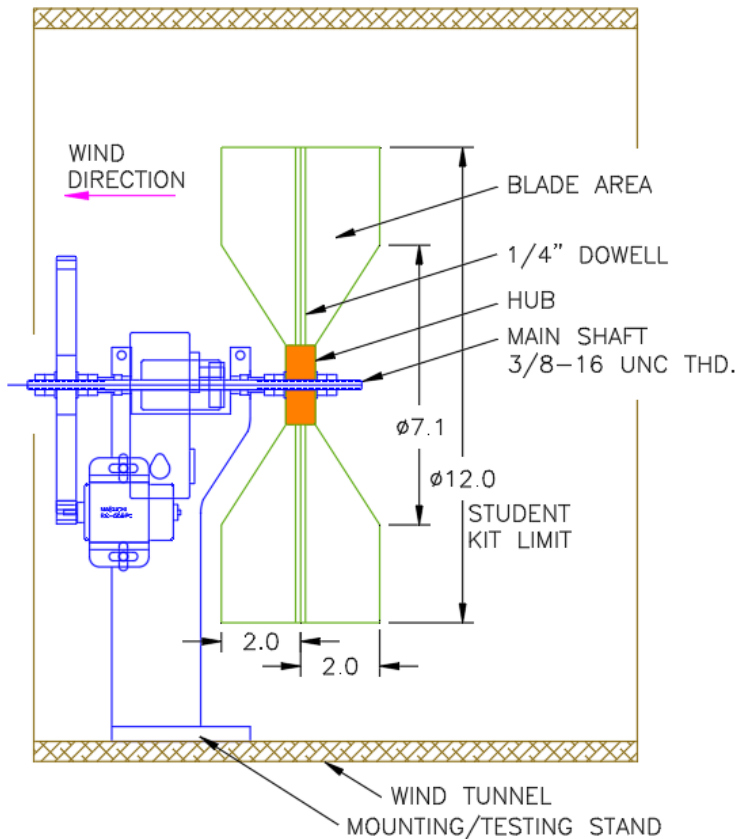
All you have to do is send your blades. They will be tested in the Oklahoma Christian University wind tunnel with the student blades and a video and report will be sent to you. You are welcome to witness the testing.

Contact info@baughengrs.com for more information or questions

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CHALLENGE DESIGN REQUIREMENTS:

1. The design must remain within a 12" diameter and the area as shown to the left.
2. Blades must be balanced, and able to withstand the test conditions.
3. You can, but do not have to be present for the testing.

ACTUAL TESTING:

1. The test will be done onsite with a wind speed of 20 mph and a blade speed of 200 rpm.
2. Wind tunnel instrumentation will determine the power generated by your wind turbine.
3. Other wind speeds and RPMs may be tested for graphing.

Notes:

1. Any blade submitted for testing will be retained by the project for future comparative testing.
2. In years of testing, multi-blade large surface area student designed wind turbine blades have substantially outperformed any design which even remotely looked like what is in the field.
3. As blades which look like what is in the field typically provide so little power they will usually not even start the generator, a switch is provided which will temporarily provide battery power to get them started to allow testing.