



One Set of 3 "WINDMAX" Brand, High Efficiency, Light Weight, Load Balanced, Reinforced Fiberglass Commercial Wind Turbine Rotor Blades, 13.1 Feet (4 meters) diameter.

To be used in conjunction with the 2000 to 3000w generators

Tip Speed Ratio (TSR) for WINDMAX blades is designed to operate at optimal TSR with small, normal and big generator loads so that maximum wind power is always captured. TSR of WINDMAX blades is 8 at small to normal generator loads, which has the better TSR than wood carved blades. TSR of 8 is the optimal TSR for high efficiency and durable Fiberglass blades, wind generator blades will do the best at the TSR of 8. Higher TSR will result in noisy operation and rapid erosion of the blade edges.

How to match the rotor blades to the generator

A small rotor with a big generator will not generate the full power, while a small generator with a big rotor will generate full power at low winds. But the large rotor will require a strong tower and require better control in high winds, the generator will also need to run at lower RPM.

According to Hugh Piggott's book, "The usual compromise is to choose a generator which reaches full output in a wind speed around ten meters per second (10 m/s)." "If the generator and the rotor are well matched, this will occur at the design tip speed ratio, and the maximum will be extracted from the wind."

Improved Blade Design:

- Much better finish and craftsmanship due to our expertise and experience with producing wind turbine blades
- Much longer service life due to higher quality material and UV protection Coating.
- Much higher efficiency due to optimal TSR and advanced airfoil design.

Highest efficiency in transferring wind power to the mechanical power, commercially deployed by wind turbine manufacturers worldwide.

WindMax means highest quality and highest performance !!!

WindMax Blade Features:

- **Advanced Blade Pitch design** to Enable aerodynamic efficiency and reduce loads to the drive train, thereby reducing maintenance cost and providing longer wind turbine life.
- **Optimized pitch angle** to ensure superior low wind speed performance and minimized noise level.
- **Advanced, new airfoil design** increased the aerodynamic efficiency of wind turbine blades and substantially increased energy output from wind turbines.
- **Durable reinforced fiberglass material**, low price per kWh and maximum operational reliability.
- **Excellent aerodynamic rotor performance** with high energy coefficient, low start-up/cut-in speed and low noise.
- **No more wood carving !** save time and money, zero maintenance, last much longer than wood blades.
- **Streamlined light weight blade design** to achieve maximum energy output and efficiency.
- **Optimized aerodynamic design** to offer the best performance with minimized load.
- **3-blade rotor design** provides the best balance of high rotation speed, load balancing and simplicity.
- **Load balanced with perfectly sanded smooth surface.**

The Power Coefficient (Cp) for Windmax blade is 0.49, which is among the highest of all blades, CP value of wood blade is in the range of 0.25~0.35, which is much lower than this blade.

The power coefficient (Cp) tells you how efficiently a turbine converts the energy in the wind to electricity, the theoretical maximum of CP is 0.593, actual rotors convert less than this limit (approximately 0.3 – 0.5).

Tip Speed Ratio (TSR) for WINDMAX blades is designed to operate at optimal TSR under low, normal wind and high wind conditions so that maximum wind power is captured under any wind speed.

Tip Speed Ratio (TSR) is the ratio between the linear speed of the tip of the blade with respect to the wind speed. Typical tip speed ratios are 1 thru 10. The performance of a blade's airfoil (shape) is a function of the TSR.

Tip Speed Ratio (tsr) = (tip speed of blade) / (wind speed).

Technical Specifications:

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- **Blade Material:** reinforced fiberglass composite, the most widely used material for commercial wind turbine.
 - **UV protection and water resistant:** long lasting Built-in UV protection and water resistant coatings.
 - **Blade Diameter:** 13.1 Feet.
 - **Rated Wind Speed:** 22.4 mph (10 m/s)
 - **Start-up Wind Speed:** 3 m/s or 6.7 mph
 - **The Power Coefficient (CP) is 0.49, which is much higher than wood blade's CP fo 0.25~0.35.**
 - **Tip Speed Ratio (TSR): 8 (constant) at small to normal generator loads.**
 - **Weight:** 12 lbs per blades

"Windmax" turbine blades is the market leader in worldwide small wind turbine market, "Windmax" blades provides top quality, excellent performance, and long lasting service life.

Consumer Beware: We found that some of our competitors have tried to copy our blade design ! these poorly made blade copies from our competitors have lower quality, more defects, lower performance and shorter service life. These defective blade copies are made of poor quality fiber glass material that last much less time than our blades.

Some competitors have also made false claims about the performance and quality of their blades.

Buyers beware of these FRAUDULENT, UNETHICAL Competitor Scams !