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## Features

### Blades

- Precision, computer designed low inertia Blades
- Advanced aerospace grade, uni-directional Carbon Fiber
- "Stealth-Acoustic" blade technology is very quiet and invisible to radar and no TV/radio interference
- Helicopter leading edge tape on blades
- 7 times stiffer than steel, means no flutter, low noise, more energy
- Smoother and far quieter than wood, plastic, injection molded or fiberglass reinforced blades
- Can be optimized for Low or High Wind environments
- Upward furling design does not hide from the wind
- Produces full power even beyond 60mph winds
- 2 year warranty on the Alternator
- Extended warranty up to 7 years available
- Torque Key with unique locking nut system

### Generator, Body and Tail

- Aluminum body with stainless steel upward furling hardware
- Stainless steel hub plates, tail boom and hardware
- Rare Earth Neodymium Iron Boron Permanent Magnets
- USCG approved tinned Copper wire for marine use
- Self-governing Rotor Design
- Sealed Unit with UV stabilized titanium dioxide, linear polyurethane aircraft coating that protects the unit - from rain, snow, ice, sun, sand and dust, wind and corrosion
- Ideal for Marine and severe climate uses

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## TURBINE SPECS & PRICING

[Printer Friendly Version](#)

Lakota S (standard) \$2,645  
Lakota SC (severe climate)\$2,795  
Dealers may sell for less.  
Includes Rectifier/Controller

Charging 1 Ampere at 24 Volt at 9 mph  
- Nominal 12, 24, 48 Volt  
- Lightweight 35lbs. (<16kg)

- Rotor Diameter: 82.3 in (2.090 m)
- Swept Area: 36.9 ft<sup>2</sup> (3.43 m<sup>2</sup>)
- Start-up Wind Speed: 6 mph (2.7 m/s)
- Alternator: 3 Phase AC Brushless Permanent Magnet

SPECIAL LIMITED TIME OFFERS

\$100 cash back for pictures of your installation within 90 days of purchase

- 3 year Extended Warranty - total 5 yrs Gen & 7 yrs Blades - \$276

## TURBINE PERFORMANCE

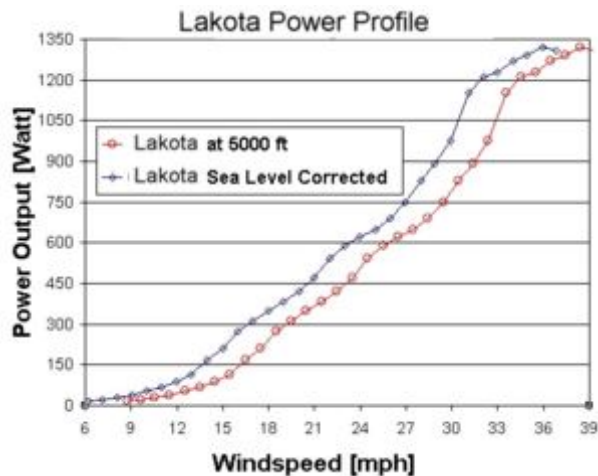
Power Output:

Sea Level: 900 Watt nominal at 28.8 mph

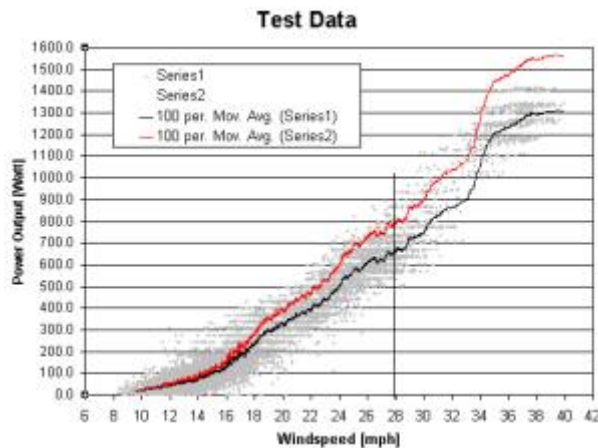
500 Watt nominal at 21.5 mph

Peak Power maintained (up to 1200-1500Watts) in all wind above 30mph

Users have reported over 1500Watts at 100Amps



Full Flight Envelop test data



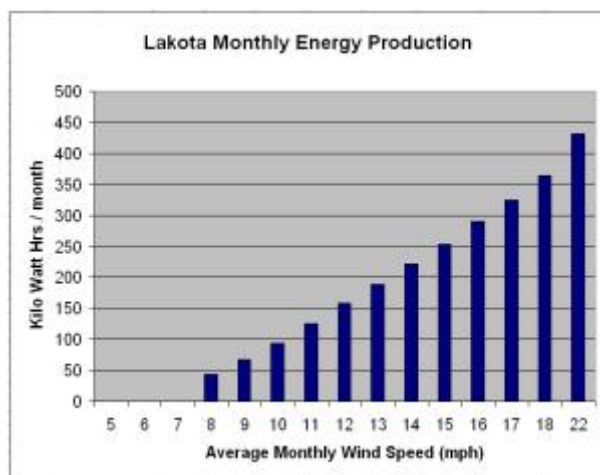
### Monthly Power Production

**Cautionary Note:** Comparison of test curves and power data is highly dependent on

location, tower height, turbulence, obstacles, humidity and other factors. Please consult an expert before drawing conclusions or accepting manufacturer claims. A good independent reference is [Mike Klemen's Test Site](#) in North Dakota.

These charts shows the superior performance of the Lakota blade technology. (see also Blades technology below) With a smaller diameter, light weight and very stiff blade technology and much lighter system Lakota out performs higher rated competitors in medium to high wind conditions. That's because Lakota does not hide from the wind but maintains its full performance throughout its entire flight envelop. Competitor systems tend to turn off or turn away from the wind and reduce their output. Above 30mph LAKOTA continues to produce peak power in excess of 1500W and some users report up to 1800W at 100amps without damage to either electrical or mechanical components. Rain, snow, sleet or storms the Lakota SC turbine is made to take it all and continue to put out the power.

In addition, since the blades are very light they can take advantage of wind gusts that heavier blades can't because their inertia is too high to react before the gust is over. Over time this amounts to considerable extra energy extracted from the same column of air.



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## TURBINE TECHNOLOGY

### Power Generation:

The Lakota turbine uses an 8 pole, 36 slot, 3 phase alternator with 10 winding leads. This allows 4 separate field adjustable settings to be made that will optimize it's output and match it's performance to low, medium, high or severe wind regimes. Consult your authorized Lakota dealer for details.

The Lakota generator has a high power to weight ratio. It uses a single stator, rare-earth neodymium iron boron permanent magnet in a cast aluminum casing with stainless steel fittings. The upward furling mechanism ensures the Lakota will not "Hide" from high winds but continue to put out up to two times it's rated power without damage to its electrical or mechanical components. It's precision components are designed for long life. We recommend at least a 60-100 amp DC circuit breaker be used with all installations.

Lakota turbines are sealed units and require only annual inspection. No lubrication or overhaul maintenance schedule is required during the life of the generator. (approx. 15-20 years). Marine or desert installations may need more attention to surface corrosion

and leading-edge tape on the blades. Helicopter grade leading-edge tape is replaceable if abraded by fine debris or sand. Lakota field units have survived 120mph storms while other units nearby have self-destructed. Vehicle mounted test units continue to output maximum power at over 70mph with no damaging effects.

#### Blades:

Lakota's aerospace grade uni-directional carbon fiber blades are not to be confused with carbon matrix or carbon reinforced plastic blades. Unlike plastic with powdered carbon blades that bend and flutter, the carbon fibers in the Lakota blades are 7 times stiffer than common steel, and carry the loads from tip to root. This allows the Lakota to harness far more energy annually than comparable similar wind turbine generators. In addition, the increased output substantially lowers the overall cost of energy despite a slightly higher initial purchase price.

#### Coatings:

The Lakota SC has a special UV stabilized titanium dioxide, linear polyurethane aircraft coating that protect the unit from rain, snow, ice, sun, sand and dust, wind and corrosion.

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