



# HELIXWIND® MODEL S322



## OUR PHILOSOPHY

Freedom is at the heart of our values – energy independence and autonomy – a freedom fueled by a resource that never runs out. The wind.

Often the simplest and most elegant solutions are the best. We believe that energy self sufficiency is better than the current antagonistic legacy system in decline. However progressive change requires courage, creative and positive innovation and unerring focus on performance. This is the soul of the Helix system.

## WHY HELIX WORKS

Inexpensive, reliable, simple, the hallmarks of the Helix system make it the best choice for low wind speed residential and commercial applications. The Savonius turbine based design catches wind from all directions creating smooth powerful torque to spin the electric generator. Mounted up to 35 feet high, in winds as low as 10 mph the Helix system creates electricity to power your home or business.

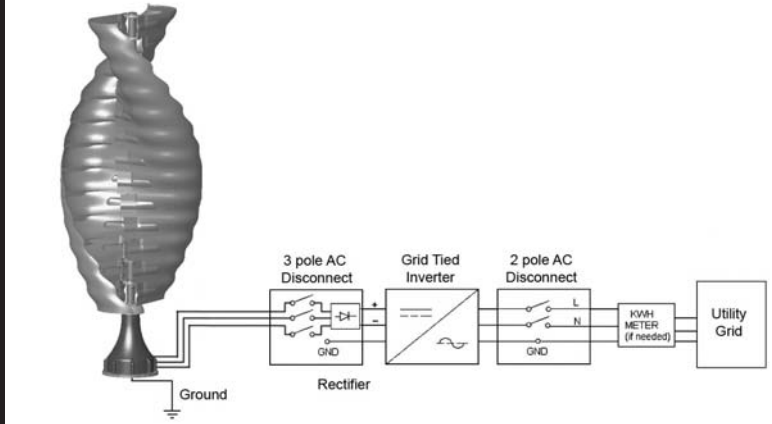
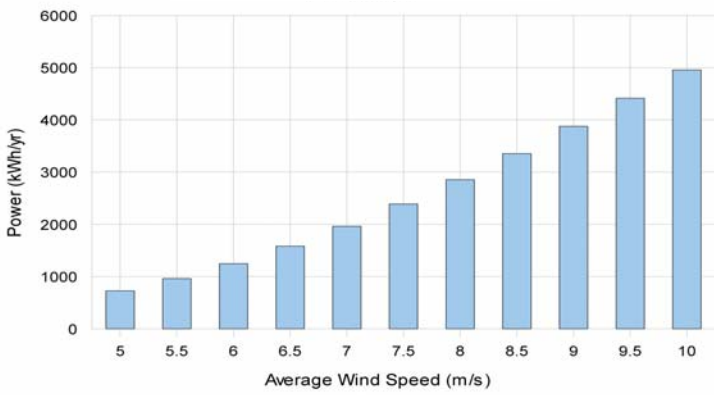
## HOW IT WORKS:

As the wind blows the long helical blade scoops catch wind from all directions forcing it through the turbine. The turbine generator is connected directly to your home and as electricity is generated your home is powered. If the wind isn't blowing your home is powered by the energy grid as usual. If the wind is blowing strongly then your energy produced can exceed your energy consumed and, depending on your local utility, your meter can spin backwards rolling back your energy bill.

## IS HELIX RIGHT FOR ME?

The S322 is designed for home or commercial applications, and works under conditions that were previously prohibitive. If your location fits the conditions below then the S322 will most likely work for you:

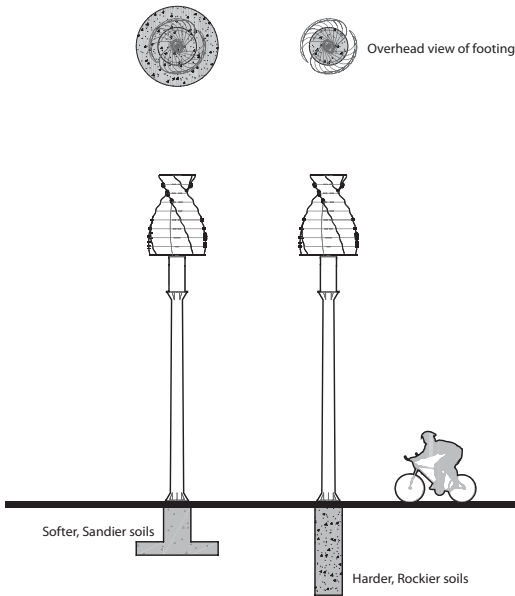
- Local zoning that permits small wind turbine installation.
- A site with adequate wind (greater than 14mph) and an installed height of at least 15 feet.
- An existing interconnection agreement with your local utility (to check the net energy meeting regulations in your state refer to this website: <http://www.awea.org/smallwind/states.html>)
- Turbulent or gusty wind or wind that frequently changes direction.



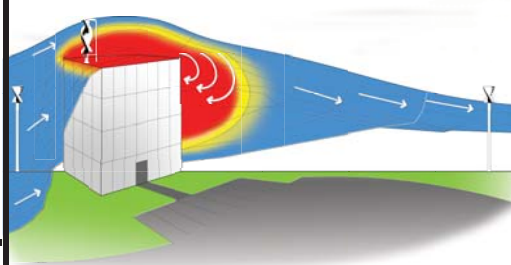
FOUNDATIONS FOR SURFACE MOUNTED SYSTEMS\*

URBAN SITING

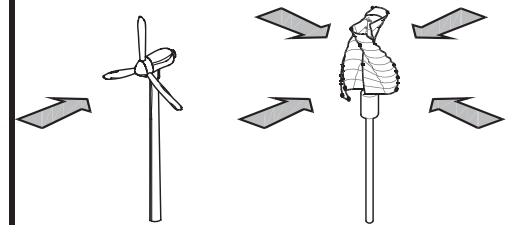
VAWT ADVANTAGES



Urban structures create turbulence and gusts which are ideal for VAWT applications.



Blue Smooth laminar wind flow  
 Yellow Turbulence boundary  
 Red High wind turbulence



**Horizontal Turbine**  
 Must have smooth laminar wind flow from a single direction.

**Vertical Turbine**  
 - Functions in wind from any direction.  
 - Functions in Turbulent or gusty winds.

\* See foundation booklet for different soil types, in the 'fact sheets' section of: [HTTP://www.helixwind.com](http://www.helixwind.com)

TECHNICAL SPECIFICATIONS

Rated Capacity - 2.5 kW

Peak Power - 2.82 kW

Rotor Dimensions - 8.7' h x 4' w (2.64 m x 1.2 m)

Overall Height - 10.8' (3.3m)

Swept Area - 3.19 m<sup>2</sup>

Rotor Construction - Ultra tough Aluminum Alloy

Type - Vertical axis helical Savonius rotor

Cut-in Speed - 8 mph

Braking - No braking needed for normal operation. Manual override for maintenance.

Grid Connection - 110VAC - 240VAC, 50-60Hz Grid Tied Inverter.

Weight - 310 lb (140 kg)

Design Life - 30 years

Tower - recommend 15' ft depending on obstructions

Warranty - 5 year Limited Warranty

Generator - 2.5 kw high efficiency Permanent Magnet Generator

Battery charge systems available

- Unique patent pending design.
- Rugged aluminum and steel construction for any environment.
- Modular, 3D blade for easy assembly and toughness.
- Helical turbine for smooth power production.
- Ultra reliable Low RPM Permanent magnet generator.
- Design gives silent operation at less than 5 decibels above background noise.
- Completely safe for our friends the birds and bats.
- Utilizes turbulent omni-directional air instantly, no yaw control required.