



Key Solution Benefits:

- Flexible speed frequency
- Robust construction features low maintenance needs
- Minimal noise emissions
- Design is optimized for low wind speeds
- Reliable under extreme weather conditions
- Eco and animal friendly



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 systems make them the best choice for a wide variety of different applications. The turbine design catches wind from all directions creating smooth powerful torque to spin the electric generator. Mounted up to 148 feet high, in winds as low as 5.5 mph the Helix system creates electricity to power your home, community or business.

HOW IT WORKS:

As the wind blows the vertical blades catch wind from all directions. The turbine generator is connected directly to your community or business, and as electricity is generated your home or battery pack is powered. If the wind isn't blowing you are 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 and even making you money.

HELIX D15000:

If your location fits the conditions below then the Helix D15000 will most likely work for you:

- Local zoning that permits wind turbine installation at 114 feet or higher.
- A site with adequate wind (greater than 5.5 mph) and an installed height of at least 114 feet.
- Turbulent or gusty wind or wind that frequently changes direction.

OUR PROMISE:

Helix Wind selected Waterline Alternative Energies as the New England distributor and installer. Waterline Alternative Energies is committed to green energy solutions and service excellence.

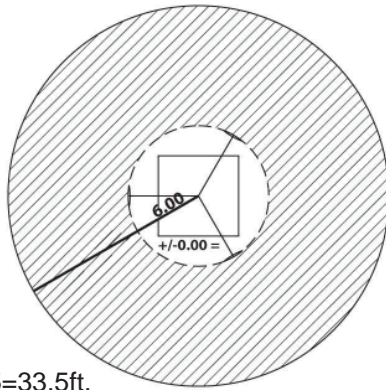
For more information regarding the Helix D15000 System including rebates contact:

Call: (888) 474-1140 • email: waesales@waterlineind.com • www.waterlinecompanies.com

Waterline Alternative Energies is a proud member of:

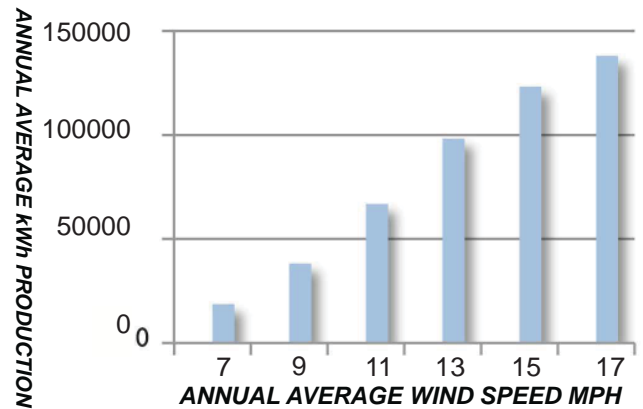


SPACING REQUIREMENTS

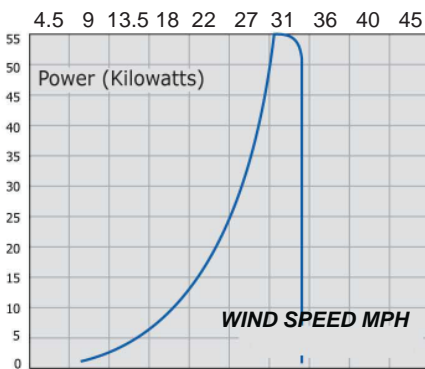


$$A=H=134\text{ft} \times 0.25=33.5\text{ft.}$$

ANNUAL ENERGY PRODUCTION

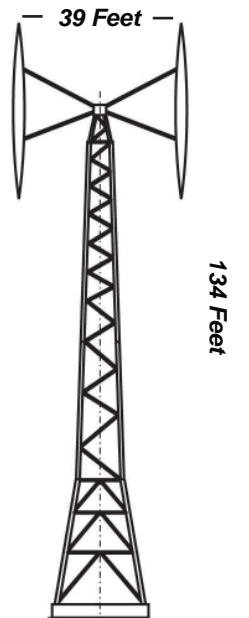


POWER CURVE



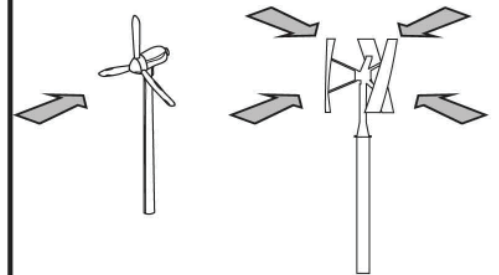
VAWT output rates 50 kW at 27 miles per hour

SAMPLE INSTALLATION



VAWT ADVANTAGES

Horizontal Turbine (HAWT):
Must have smooth laminar wind flow from a single direction



Vertical Turbine (VAWT):
Can function in wind from any direction and in turbulence or gusty winds.

TECHNICAL SPECIFICATIONS FOR MODEL D15000

Rated Capacity	50 kW
Cut-in Speed	4.5 mph, power producing at 5.6 mph
Turbine Type	Vertical Axis Darrieus Rotor
Rotor Diameter	39 Feet
Rotor Construction	Epoxy glass resin blades
Material	Rugged aluminum and steel construction for any environment
Blade Height	41.01 Feet
Brake System	Disc Brake and short circuit
Rotor Speed Control	Variable via Microprocessor
Grid Connection	On/off Grid Options
Generator	Siemens asynchronous generator
Recommended Installation Height	Roof top 2 feet above roof line; Free standing (consult with WAE for installation instructions)
Sound	Virtually silent operation
Yaw Control	No yaw control required. Utilizes turbulent omni-directional air instantly.
Patent	Unique patent pending design
Warranty	5 years limited. Extended warranty options available upon request.
Wildlife	Completely safe for our friends the birds and bats.

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