

A revolution in wind!

Just a few years ago, we introduced a new concept in battery charging wind turbines. In only four years, over 18,000 **AIRs** have been installed in 150 countries.

When it comes to conventional thinking of wind turbine design and installation, the **AIR** breaks all the rules. With an **AIR**, you don't have to spend a fortune on lengthy wind data collection, heavy-duty towers, costly installation and scheduled maintenance.

Simple to use:

- ✈ Automatic regulation and operation
- ✈ As convenient as a solar panel
- ✈ Can be installed in a few hours
- ✈ Only two moving parts
- ✈ Requires no maintenance
- ✈ Only 13 lbs!



An **Air 403** pairs with a PV system to supply a consistent supply of power for battery charging.

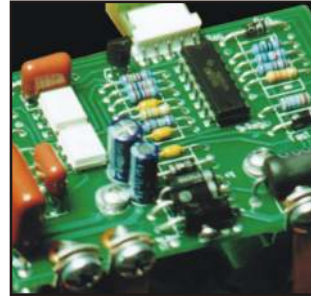
All new **AIR 403**

Now, the **AIR 403** has more power, greater efficiency, high reliability and quieter operation all in the same size turbine.

PERFORMANCE –

An airfoil so advanced it approaches the theoretical limits of efficiency.

Combined with the new airfoil, the **403's** alternator uses new arced magnets and windings that increase rated power by 30% and 50% in low winds.



CONTROL –

Unlike any other wind turbine design, the exclusive Autobrake™ regulator automatically slows the blades to a silent spin when the batteries are charged!

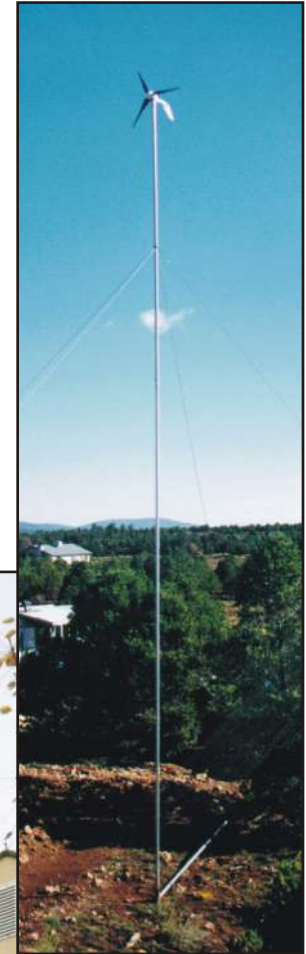
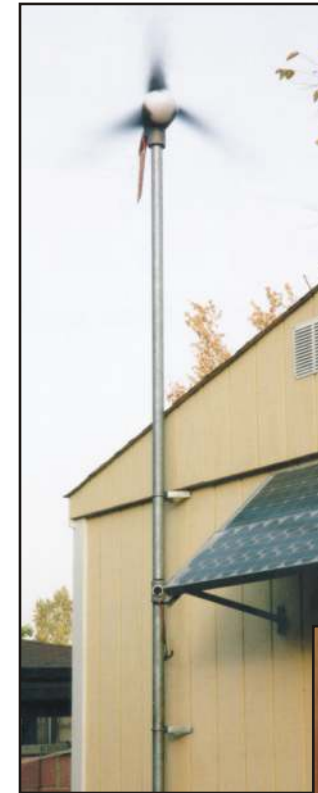
REFINEMENT –

The new body now incorporates a large heat sink that efficiently flows heat into the wind for cooler operation and increased output. A new casting process refines the fit and finish. The improved design doubles tip-to-tower clearance for greater reliability in high winds.



Tower Kits

The flexible design of the **AIR** allows it to be installed just about anywhere. These new low cost tower kits add a new meaning to simple installation.



Call your dealer or Southwest Windpower for complete information on towers and accessories.

EZ-Wire™ II Charge Controller

The H40 and H80 comes standard with the intelligent EZ-Wire II, available in 24, 36 and 48 Volt models. The dedicated wind-only EZ-Wire II is a SCR-based shunt-type controller housed in a single unit.



Features

- ▶ Individually rectified phases.
- ▶ Battery/turbine shunt isolation during regulation.
- ▶ Bright LED lights indicate regulation operation and Power ON.
- ▶ Quiet diversion-powered fan.
- ▶ Large heat sink for efficient temperature dissipation.
- ▶ Easy access block connectors for turbine and battery wires.
- ▶ Compatible with any programmable inverter

For special applications, the original EZ-Wire (hybrid) is available in 12, 24, 32 and 48 volt models.

Patented Angle Governor

Exclusive to the **Whisper**, the side furling Angle Governor protects the turbine in high winds by turning the alternator and blades out of the wind, reducing its exposure. Unlike other wind turbines that lose as much as 80% of their output when furling, the Angle Governor allows the **Whisper** to achieve maximum output in any wind.



Marine Models

The new Whisper H40 and H80 Marine models are especially suited for applications near or on the ocean where the corrosive wet and salty environment prevent the use of traditional wind turbines. By coating key components and replacing traditional seals and wires with marine grade materials, the Whisper Marine is a reliable source of power in the harshest locations.



Marine Additional Features

- ▶ Proprietary aerospace coating is applied to castings, rotor can and tower inserts for superior protection. *This coating withstood over 6000 hours of salt spray in a test performed by an independent laboratory*
- ▶ Stator is protected with a top-quality MIL-1 naval approved varnish
- ▶ Brush card gasket seals slip rings from moisture
- ▶ Corrosion resistant electro less nickel-plating on shaft and spindle
- ▶ Stainless steel hardware throughout
- ▶ Anodized & tin plated EZ-Wire

Applications

- ▶ Telecommunications systems
- ▶ Cathodic protection
- ▶ Remote monitoring and signaling
- ▶ Remote home and cabins
- ▶ Water pumping
- ▶ Grid tied systems

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Renewable Energy Made Simple

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WIND POWER



quiet

affordable

reliable

Whisper H-40 Wind Turbine

For Moderate To High Winds!

Designed for outstanding performance in medium to high wind, (12 mph average and above), the Whisper H40 is the **economical** solution. With a smaller blade and swept area, the rugged H40 is the option for sustained high winds. In a 12 mph average wind (5.4 m/s) the H40 delivers 100 kW/h per month to your batteries.

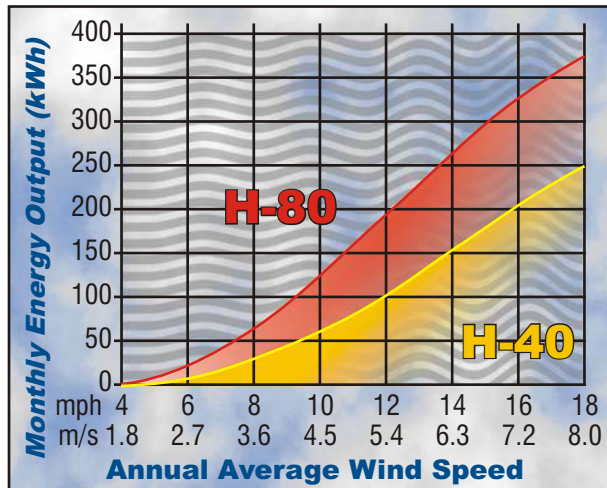
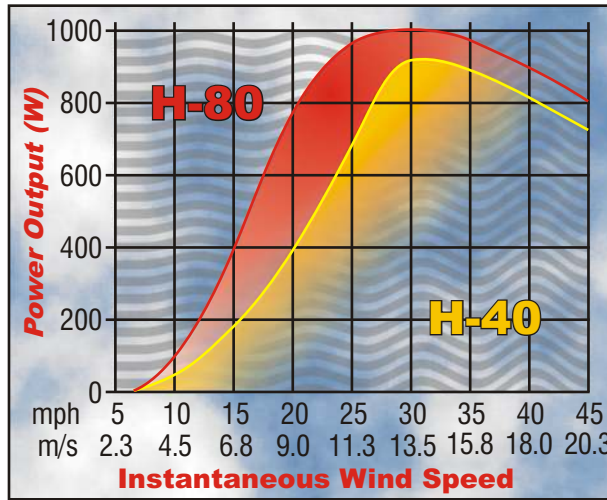


CE

Specifications - H40

Rotor diameter:	7' (2.1 meters)
Weight:	47 lbs (21 kg)
Pipe Mount:	2.5" Schedule 40
Start-up wind speed:	7.5 mph (3.4 m/s)
Voltage:	24, 36, 48V - EZ-Wire II 12V - wind/PV EZ-Wire
Peak Power:	900 watts @ 28 mph (12.5 m/s)

Performance Curves



Rayleigh Distribution Curve k=2

Features - H40 & H80

- ↗ Permanent magnet brushless alternator
- ↗ CE Compliant
- ↗ Cast aluminum housing
- ↗ 2 year warranty
- ↗ Three blade design
- ↗ Blade material: Injection-molded fiber reinforced



Utilizing longer blades combined with a larger alternator, the H80 generates more power in lighter winds.

Whisper H-80 Wind Turbine

For Low To Moderate Winds!

To get the most out of low to moderate wind speeds (up to 12 mph), the Whisper H80 is the turbine of choice. Featuring a ten-foot (3 m) rotor diameter, the H80 will deliver **twice the power** in marginal wind areas than the H40. In a 12 mph average wind (5.4 m/s), expect 200 kW/h per month to your batteries.



A high voltage model is available for long wire runs up to 2 miles, and an AC direct drive Water Pumping model connects directly to an electric water pump without the need for batteries.



CE

Specifications - H80

Rotor diameter:	10' (3.0 meters)
Weight:	65 lbs (30 kg)
Pipe Mount:	2.5" Schedule 40
Start-up wind speed:	7.0 mph (3.1 m/s)
Voltage:	24, 36, 48V - EZ-Wire II 12V - wind /pv EZ-Wire high voltage 100-240V available
Peak Power:	1000 watts @ 26 mph (11.6 m/s)