



Kestrel800

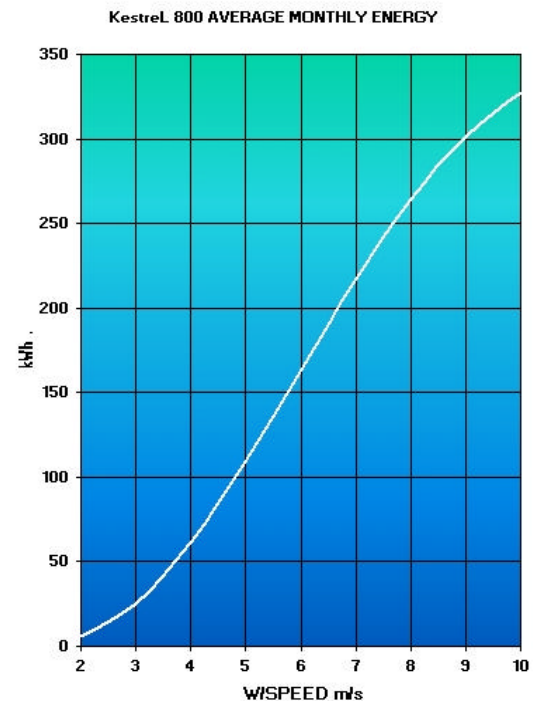
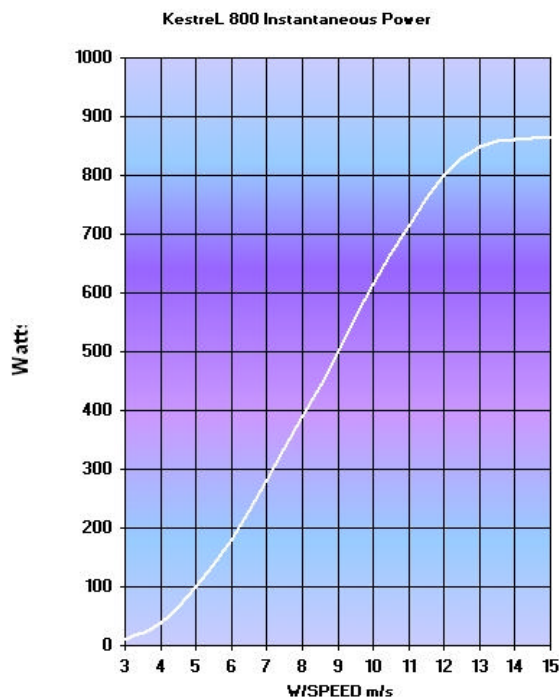
Featuring Advanced Axial Flux Discoid Technology

The Kestrel800 is fitted with a fully aerodynamic high performance three-blade rotor

The all-new Kestrel800 exemplifies the beauty of sophisticated aerodynamic design. The efficient three blade rotor drives a 48 pole axial flux permanent magnet brushless alternator.

At rated rpm, the passive pitch control operates. The blades start to rotate on their axis and maximum power is maintained. Control is therefore by alternator rpm and not by windspeed.

The Kestrel800 produces full power in any excess wind speed by simply spilling the wind.



The Kestrel800 can produce a maximum power of 850 Watt. This is more than 60 Amp of charging current into a 12V battery system. The Monthly Energy Graph shows what a Kestrel800 can harvest from different annual average windspeeds. Actual results can vary with factors such as wind distribution, topology, tower height and altitude.

Kestrel800 Wind Turbine Generator

Data Schedule

Rated Output	800W	Rated Power 12m/s
Maximum Power	850W	Dynamically limited
Rated Rotational Speed	1000rpm	Turbine rpm for Rated Output
Cut in Windspeed	2.8m/s	Windspeed for Charging Output
Rotor Swing Diameter	2.2m	Diameter of Swept Area
Number of Blades	3	Optimised Upwind 3 Blade Design
Blade Type	Aerofoil	Full Aerodynamic Blade
Lateral Thrust	400N	Horizontal Force Vector
Turbine Stop		Optional Shorting Switch
Speed Control	1100rpm	Passive Blade Pitching
Tower Top Mass	25kg	Total turbine mass
Protection	IP55	Protected from Moisture and Dust
Generator Type	PM 5ph	Polyphase Brushless Permanent Magnet
Output Voltage	DC	Manufactured for 12, 24, 36, 48Vdc
Utility Intertie	YES	Using an approved Inverter
Resistance Heating	YES	Micro Systems, Incubators etc.
Water Pumping	YES	Optional Pump Controller
Estimated Monthly Energy	70kWh	Capacity Factor (CF) of 16% and 5m/s
Warranty	2 Years	Conditional Warranty
Routine Maintenance	Visual	Periodic Visual Inspection

Regulator Options

Shunt Regulator: The Kestrel800 Shunt Regulator maintains a constant charging voltage at all times. An internal jumper programmes the output voltage.

A shunt regulator is dynamic in operation and absorbs all of the unwanted energy during charging. No switching between the battery and load resistor occurs and the unit will float a battery and supply the load at all times.

Dump Regulator: The Kestrel800 Dump Regulator disconnects from the battery at final voltage. An internal jumper programmes the output voltage.

A dump regulator transfers the turbine output from the battery to a resistor when the user terminal voltage is achieved. The regulator exhibits zero transfer switching time with no disturbance. In addition a user programmable timer facilitates a delay of 30s, 1min or 2min that eliminates on/off cycling.

Wiring for both types of regulators is simple - two wires IN from the turbine and two wires OUT to the battery.



Kestrel Regulators
comply with EMC
requirements