



KestrelL1000

Twin Axial Flux Discoid Technology

The KestrelL1000 is fitted with the latest design fully aerodynamic high performance three-blade rotor

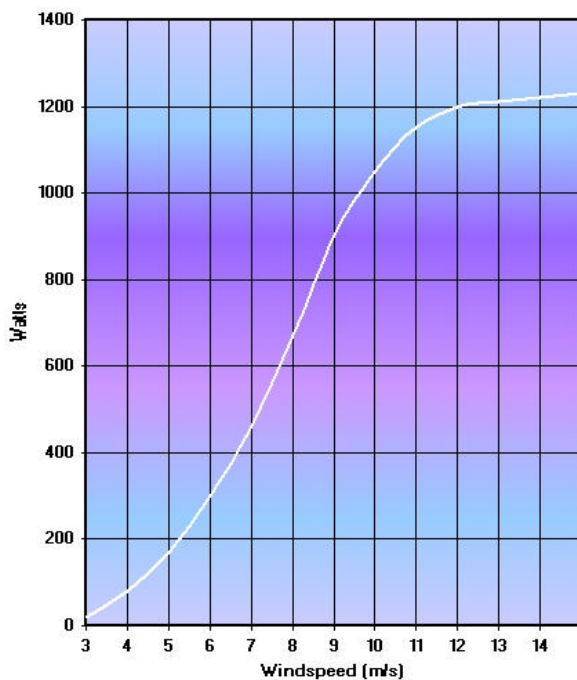
The all-new KestrelL1000 exemplifies the beauty of sophisticated aerodynamic design. The efficient three blade rotor drives a 48 pole axial flux permanent magnet brushless alternator.

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.

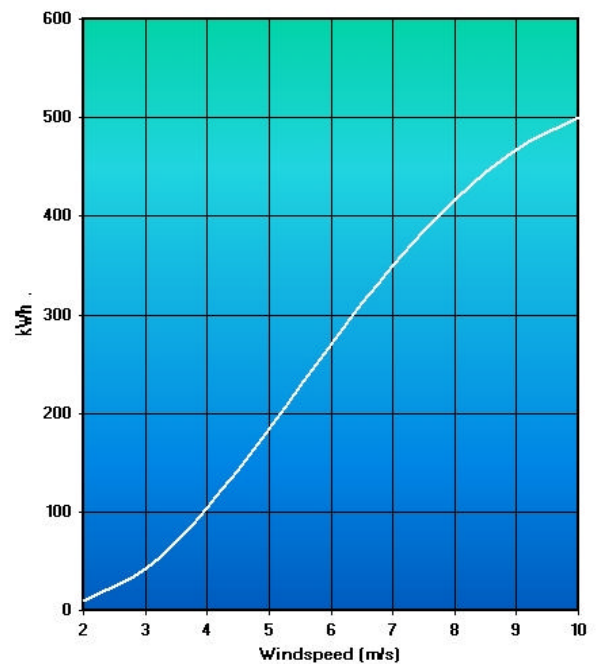
The KestrelL1000 produces full power in any excess wind speed by simply spilling the wind.



Kestrel 1000 INSTANTANEOUS POWER



Kestrel 1000 MONTHLY ENERGY HARVEST



The KestrelL1000 can produce a maximum power of 1200 Watt. This is more than 50 Amp of charging current into a 24V battery system. The Monthly Energy Graph shows what a KestrelL1000 can harvest from different annual average windspeeds. Actual results can vary with factors such as wind distribution, topology, tower height and altitude.

Kestrel1000 Wind Turbine Generator

Data Schedule

Rated Output	1000W	Rated Power 9.5m/s
Maximum Power	1200W	Dynamically limited at 750rpm
Rated Rotational Speed	650rpm	Turbine rpm for Rated Output of 1kW
Cut in Windspeed	2.8m/s	Windspeed for Charging Output
Rotor Swing Diameter	3.0m	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	750rpm	Passive Blade Pitching
Tower Top Mass	60kg	Total turbine mass
Protection	IP55	Protected from Moisture and Dust
Generator Type	PM	Polyphase Brushless Permanent Magnet
Output Voltage	DC	Manufactured for 12, 24, 48, 110Vdc
Utility Intertie	YES	Using an approved Inverter
Resistance Heating	YES	Micro Systems, Incubators etc.
Water Pumping	YES	Optional Pump Controller
Estimated Monthly Energy	100kWh	Capacity Factor (CF) of 14% and 5m/s
Warranty	1 Year	Conditional Warranty
Routine Maintenance	Visual	Periodic Visual Inspection

Regulator

The Kestrel1000 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 is simple - two wires IN from the turbine and two wires OUT to the battery



The Kestrel1000 Dump Regulator fully complies with EMC requirements for use in telecommunication instalations.