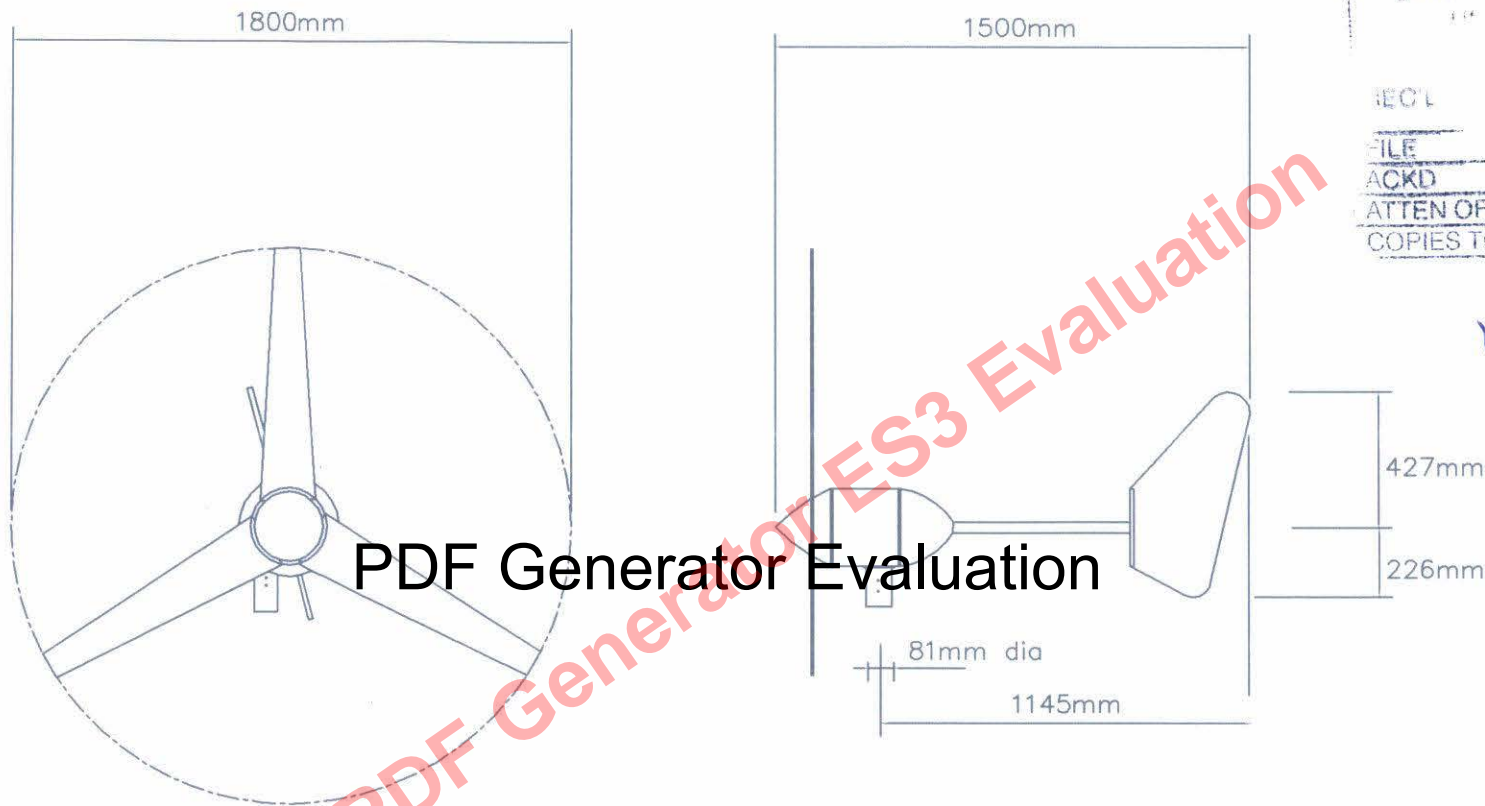


APPENDIX 2 - WIND GENERATOR - Page 1

All dimensions in mm unless otherwise stated.

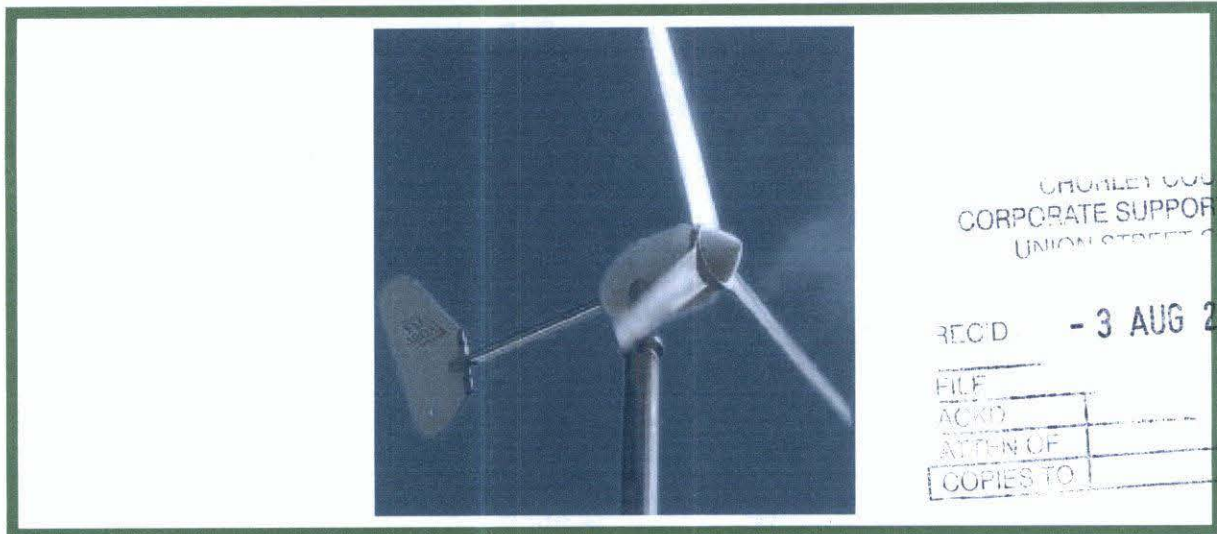


PDF Generator Evaluation

FM 1803-2 FURLMATIC WIND CHARGER

PROPOSED WINDCHARGER FOR STOATS HALL FISH FARM

Info FM 1803-2 FURLMATIC WIND CHARGER conforms to the microgeneration certification scheme and the criteria laid down in the 'CLASP' The North West Improvement & Efficiency Partnership (NWIEP). The wind generator is to be mounted at 7.5m above ground, providing over 6.0m ground clearance to blade. Complies fully with EEC Directive BS EN 89/336/EEC



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Rutland FM1803-2 Wind Charger

The Rutland FM1803-2 Furlmatic land based windcharger is a powerful battery charging turbine that is perfect for off-grid homes, farm and equestrian buildings, telecom sites, security camera systems, poultry sheds and many more situations where power is needed in a remote spot.

PDF Generator Evaluation

Product Info :

The Rutland FM1803-2 windcharger is a 1.8m diameter turbine is specifically designed for use on land, is very powerful for its size and has a proven track record of performance and reliability.

- Ideal for larger scale off grid energy requirements
- Harness the wind to provide electricity at a remote site
- Cost effective off grid power solution
- Proven performance and reliability even in extreme conditions
- Super smooth 3 blade turbine design

Do you need electrical power at a remote site but the cost of grid installation and on going bills is putting you off?

Ever wondered if you can harness the wind blowing around you into some useful power?

Marlec's FM1803-2 Furlmatic Windcharger makes generating power at remote sites possible and at an affordable cost too.

- Generate your own electricity and reducing your dependence on grid supplies

- The FM1803 will withstand harsh weather – from winter storms to scorching hot desert conditions
- A steady source of electrical power no matter how far away you are from grid power
- Have the satisfaction of seeing your own wind turbine generate electricity and with no on-going electricity bills!
- A power solution that doesn't require expensive grid installation or ongoing costs – could that open up the scope of installation of your own products?

The FM1803-2 Furlmatic can be used "stand-alone" or in conjunction with solar panels and/or a diesel generator to create your own complete power system. You can use the power at low voltage, 12V or 24V, or connect an inverter to the battery bank to deliver 230V grid type power enabling you to run many typical household appliances.

The possibilities are endless, even if you have grid power an FM1803-2 can reduce your dependence on the grid and unlike grid-connect wind turbines this system ensures that if there's a power cut you will still have independent power for some essentials.

Excellent Performance & Reliability

3 bladed design is super smooth and the aerofoil blades have been adapted and improved to achieve energy conversion factors at around the theoretical limit across a wide range of wind speeds.

PDF Generator Evaluation

- 1.8m diameter turbine of 3 glass re-inforced aerofoil blades
- Finely balanced, aerodynamic aerofoil blades are injection moulded. This makes them lightweight, durable and very smooth running
- Our 3 blade design turbine is very quiet in operation, you will hear only a soft swishing sound when it's windy
- Our turbine blades are very efficient at converting the wind into power you can use
- Built in slip ring and low-wear brushes
- Gives the unit complete 360° free rotation on the mounting pole whilst avoiding twisted cables
- Brushless alternator requires no maintenance
- Sealed-for-life bearings for a long service life

It's a convenient, reliable and cost effective solution to your off grid power needs and with our proven track record in a variety of applications from the cold harsh environment of Antarctica to the Sahara Desert you can be sure the FM1803-2 is built to withstand gale force winds

Rutland FM1803 Features

- AC Power Transmission Feature allows the wind turbine to be located at an optimal position to capture the wind whilst not

compromising on power transmission losses over long distances or over inflating cable costs

- Unique and purpose designed Rutland low friction flywheel generator is incorporated into the FM1803-2 design
- The FM1803 keeps spinning and generating when other wind generators stall between gusts of wind - overall this delivers more Ampere hours of power per day especially in low to average windspeeds
- The alternator's windings and magnets are encapsulated in glass fibre so are sealed from the elements and the harshest weather conditions
- Charges at wind speeds as low as 3m/s (6-7mph) - just a gentle breeze, this means more time is spent generating power giving you a faster return on your investment
- Generates 36 Watts @ 5m/s (11mph) 414 Watts @ 11m/s and up to 750 Watts peak
- Furlmatic automatic "furling" tail system activates at 15m/s (33 mph/53 kph) to automatically slow and protect the turbine in high winds. This moves the turbine at an angle to the prevailing wind, allowing the turbine to slow down, while continuing to produce power. Reduces stress on the wind generator and tower in high winds
- No radiated interference - complies fully with EEC Directive BS EN 89/336/EMC

PDF Generator Evaluation

MPC1 Controller

Electronic MPC1 Controller is included with the turbine. It's key features and functions are:

- It optimises turbine power output by matching power ratios with windspeed
- It converts the turbine's AC power to DC, so you can locate the turbine where windflow is best - yet use the power a distance away
- MPC1 Controller provides overcharge protection which shuts down the turbine when the batteries are full saving on unnecessary wear
- It has a digital display of battery volts, power output and modes of operation and is available in 12 volt or 24 volt versions

FM1803 Mounting

There are several tower options for the Rutland FM1803 Wind Turbine including a pole tower and a cheaper lattice tower. Please contact us for details.

Designed to mount on an 81mm internal diameter tube. Outside diameter 91mm for top 20cm section which may then increase to a suitable larger diameter depending on the tower height and design