

## Rutland Winchargers power on...

**Quietly** – our fully integrated product designs result in quiet operation so you can live aboard without disturbance from noisy blades.

**Reliably** – with over 100,000 units sold worldwide our turbines have been proven time and again on land and sea. Our UK based factory manufactures under ISO9002 operating standards and our testing parameters are rigorous.

**Effortlessly** – just a gentle breeze is all it takes to start delivering charge into your batteries. The Rutland 1200 highly efficient blades and low inertia generator capture the free and abundant energy in the wind.

**Environmentally Friendly** – be at one with the sea and use the natural resources of the wind and sun to fulfil your energy needs without costing the earth.

Distributed by:



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# NEW Rutland 1200 Windcharger

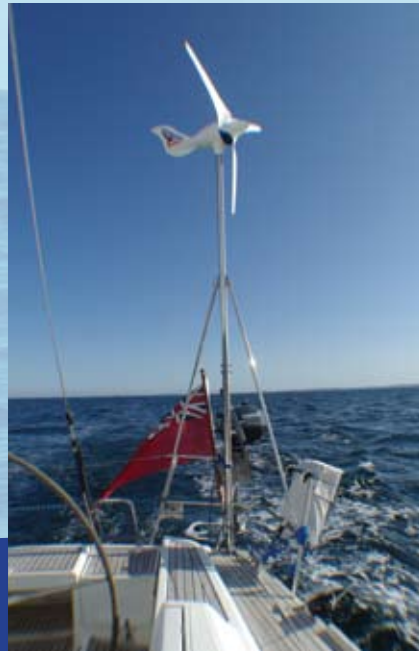
for marine & land uses  
*Renewable Energy Solutions You Can Trust*



## Going long distance cruising?

Choose a Rutland for:

- Quiet operation lets you sleep!
- Direct savings on fuel
- Reduced engine running time and maintenance
- Assurance of power for essentials such as navigation, refrigeration etc... and so you can enjoy electrical comforts on-board with confidence.



# Rutland 1200

Available in 12V and 24V

The Rutland 1200 is our new generation of turbine designed for users seeking higher generating capacity on board yachts and in off-grid locations.

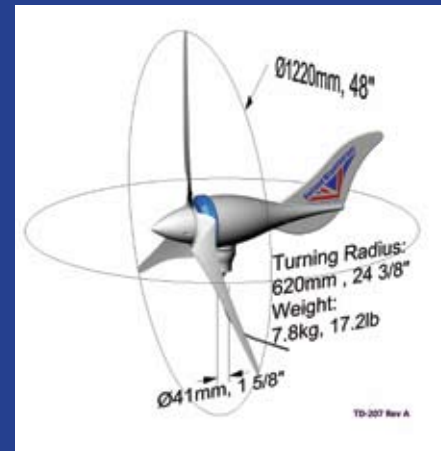
The Rutland 1200 elegantly combines a number of high tech features focused on quiet operation, low windspeed performance and high power delivery up to 500W.



## Why Rutland?

- Our low wind speed start up is unrivalled. The highly efficient blade and generator designs deliver charge into your batteries long before many other turbines are picking up. Overall that's more power to you!
- We innovate, leading the way in our industry on aerodynamic, electronics and low friction generator designs to deliver modern, durable wind turbines that have continued to stand the test of time.
- We keep it simple and user friendly for our tens of thousands of users worldwide. Eg our blades have a positive one-way-only fit so there's no need for the user to align with other components.

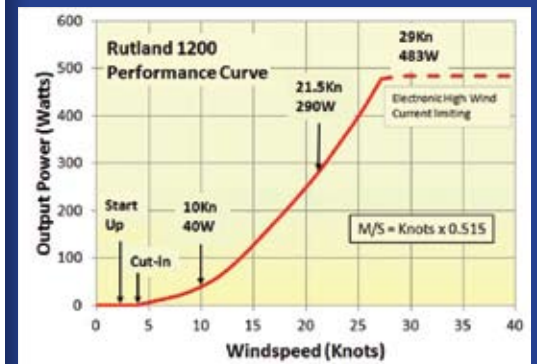
## Dimensions



## Shipping Specifications:

1 carton: 900x390x185mm 36x15x7"  
Gross Weight: 11.25kg 25lbs.

## Performance





## Design Features

- Unique **Tri-namic Profile** Blades  
The most advanced Marlec designed Tri-namic Blade brings together **low wind speed start up** with high **wind speed power performance** and **almost silent running across all wind speeds.**
- 3 Phase AC power delivered from the turbine to the controller minimises voltage drop on long cable runs
- The low friction generator responds rapidly to windspeed changes and its inertia drives the turbine on between gusts to capture more energy
- Power optimising **Maximum Power Point Tracking** (MPPT) boosts the turbine's output
- Marine grade stainless steel and aluminium are combined with modern, durable but lightweight materials to give a high quality build and finish.

## Specifications

### Rutland 1200 Controller

- Hybrid control to combine Rutland 1200 wind turbine with up to 20A of solar panels
- Dual charging capability to 2 separate battery banks
- MPPT on both wind turbine and solar panel inputs to maximise both energy sources. Enables connection of high voltage solar panels.
- Pulse Width Modulation charge control for multi-stage charging ensures fully charged and maintained batteries.
- Automatic turbine speed reduction as batteries reach capacity, resumes as batteries deplete.
- Manual shutdown switches for wind and solar inputs
- LED charge and battery condition indicators as standard.
- Remote digital display optional. Connect with RJ232.



Dims: 258x164x68mm 1.3kg  
10x6 $\frac{1}{8}$ x2 $\frac{3}{4}$  2.9lbs

## Getting Your Rutland Up and Running

The Rutland 1200 includes the controller needed for battery charging up to 2 separate battery banks. It is a purpose designed wind and solar energy hybrid controller accepting inputs from the Rutland 1200 and up to 20A of solar panels.

Select the model required, 12V or 24V. The regulator should be located within a 1.5m cable run of the battery bank.

An optional remote digital display is available.

**Marine Mounting Pole** – a Rutland Marine Mounting Pole and separately supplied Stays Kit give a professional finish to your installation OR make your own to suit your own based on tube specified at 41mm internal and 48mm external diameters.

**Cables & Connectors** – select between 2.5mm and 4mm 3 core cable. Permanent battery connections are recommended.

**Batteries** – deep cycle gel or AGM types are recommended with renewable energy systems. A good quality range is available from Marlec.

