

power on . . .

Effortlessly . . .

Just a gentle breeze is all it takes to start the aerodynamically styled Rutland spinning and it's soon delivering charge into your battery. The low inertia turbine spins and swivels to capture the free and abundant energy in the wind, often accumulating more ampere hours per day than larger turbines so you can take advantage of our compact designs.

Environmentally Friendly . . .

Wind & solar energy don't just save money on charging costs but benefit the environment too. With a strong sense of nature around boating and camping you have the satisfaction of using a natural resource from a progressive technology, fulfilling your energy needs without harming the environment.



EEC directive 89/336/EEC compliant ensures no radiated interference

Specifications are subject to change without notification.

... I have been extremely satisfied with the performance of the unit which has transformed life on board my yacht . . .
Mr G Ashton

... now that we are living aboard how pleased we are with the Rutland 914. We have the fridge, C90W chartplotter . . .
Gavin & Mandy

I am so impressed by the response received that it feels as though I have stepped back 50 years in time to when British engineering was great . . .
Mr J Sandom

... I thought this kind of after sales service worthy of note throughout the sailing community.
Peter O'Keeffe

... the unit is working well and has meant that since installation I have not needed to start the engine for battery charging . . .
Mr J Banner

Manufactured by Marlec in the UK



Marlec Engineering Co Ltd
Rutland House, Trevithick Road,
Corby, NN17 5XY

Tel: +44 (0)1536 201588 Fax: +44 (0)1536 400211
sales@marlec.co.uk www.marlec.co.uk



Rutland Windchargers

Quietly . . .

Rutlands have a deserved reputation for quiet operation so you can live aboard without disturbance from noisy running blades. We match the design our blades and generator to optimise efficiency so you can expect silent but powerful performance. Our charge regulators include a shut down switch so you can be in control.

Reliably . . .

We design, develop and manufacture the Rutlands in our UK based factory where our systems and procedures are quality assured under ISO9002. Our testing parameters are rigorous and computer controlled and we record the performance of every turbine produced. The longevity of our products has been proven time and again since 1979 in applications on land and sea around the world. Here at Marlec we continuously develop and improve our turbines in response to customer feedback.

**Rutland
Windchargers**
Marine & Leisure Models
Renewable Energy Solutions You Can Trust



Going long distance cruising?

Choose a Rutland for:

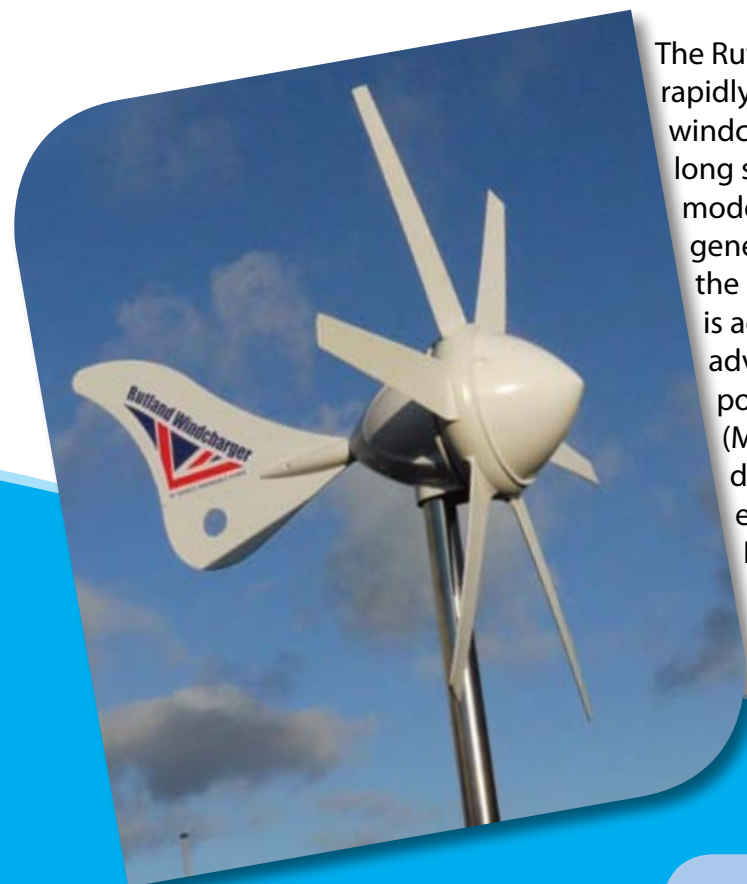
- Quiet operation lets you sleep!
- Direct savings on fuel
- Reduced engine running time and maintenance
- Assurance of power for essentials such as navigation, refrigeration etc... and so you can enjoy electrical comforts on-board with confidence.



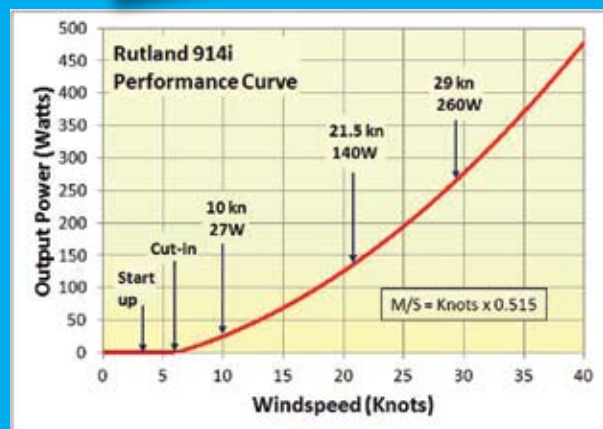
Why Rutland?

- 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.

Rutland 914i Available in 12V and 24V versions



The Rutland 914i has rapidly become our leading windcharger, following the long success of the 913 model. Its 30% increased generating capacity, from the same diameter turbine, is achieved through advanced maximum power point tracking (MPPT) electronics delivering even more energy from the wind. Ideal for liveaboard and weekend yachting, boats from 10m.



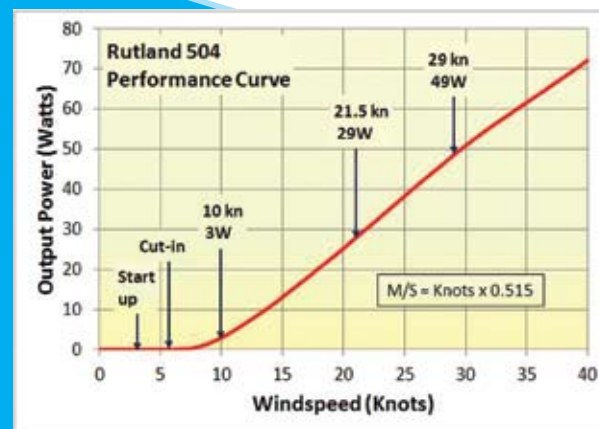
Shipping Specifications:
1 carton: 37x30x45cm (15x12x18in)
Net Weight: 11.58kg 25.5lbs Gross Weight: 13.1kg 29lbs



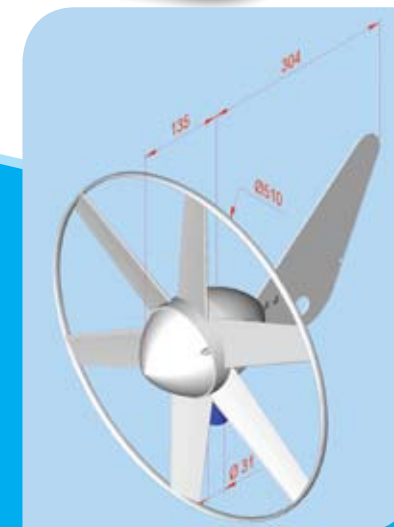
Rutland 504 Available in 12V



The Rutland 504 model's safety turbine makes it ideal for trickle charging on board where space is at a premium. Weekend yachts up to 10m and mobile users such as caravanners will appreciate its compact size and weight for ease of handling and portability. Typically suited for batteries up to 150Ah capacity.



Shipping Specifications:
1 carton: 55x55x26cm (22x22x10in)
Net Weight: 3.5kg 7.7lbs Gross Weight: 6kg 13lbs



Getting Your Rutland Up and Running

Choose the right Rutland Windcharger for you and then select:

A **Rutland Marine Mounting Pole** and separately supplied **Stays Kit** give a professional finish to your installation OR make your own to suit using the tube sizes specified:

Rutland 914i – 41mm internal diameter, maximum external 48mm

Rutland 504 – 31.7mm internal diameter, maximum external 38mm

Charge Regulator – Choose one of the latest technology PWM (pulse width modulation) regulators available for single or dual battery charging. Both types undertake multistage charging and include temperature compensation to maximise the battery capacity. As the batteries achieve full charge these regulators automatically and progressively brake the blades minimising unnecessary wear on the wind turbine. An input position for solar panels up to maximum capacity of 160W (@25°C) is included. Shutdown switch to isolate wind and solar charging from the battery is built in. The regulator should be located within a 1.5m cable run of the battery bank.



HRSi Regulator
Single battery regulator with LED indicators

HRDi Charge Controller
Dual battery regulator with digital display.

HRDi Remote Display
Simply plugs into HRDi with 5m data cable supplied for convenient viewing of LCD.

Cables & Connectors – select 2.5mm 2 core cable for runs of up to 20m between turbine and regulator. 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.

Solar Panels provide a secondary charge source so you benefit from charging whatever the weather. They are simple to connect in parallel with the Rutland using our charge regulators.