AEROGEN

MARINE

WIND GENERATORS

Aerogen marine wind generators are ideal for charging lead acid and gel batteries when mains power is either not available or not suitable.

Once the wind generator is purchased, the power produced is free and can be used in wide variety of applications.

The models in this brochure cover the needs of weekend, cruising and live-aboard yachtsmen.

The **Aerogens** detailed in this brochure are 'Third Generation'. They feature the latest technology and benefit from the expertise and experience gained since 1982, manufacturing wind generators and supplying them world wide for land and sea use.

In choosing your **Aerogen**, the key parameters are Aerogen outputs, power requirements and wind speeds. Aerogen outputs are tabulated in table 2. Most equipment will detail power draw and therefore estimates can be made of power usage. In most parts of the world wind speeds average 8 -20 knots. Around the averages the wind is volatile and gales and calm periods occur with varying frequencies depending on the season. Data is available from meteorological authorities world-wide.

Application	Power Use Weekly Amp Hours 12 volt dc	Aerogen Choice	Power Generated Amp Hours Weekly 12 volt dc @ 12 Knots
Weekend Yachting	20-75	Aero2gen	85
Cruising Yachting	70-300	Aero4gen	300
Live aboard Yachting	300-650	Aero6gen	670

Table 1 * In winter in these locations wind speeds can average over 25 know with frequent gales

Powerful Performance

The optimum wind speed is between 5 and 20 knots. Aerogens are designed to operate efficiently in this range, starting to charge at 5 knots. Equally they take advantage of higher wind speeds to produce higher outputs continuously and safely.

Quiet: Safe: Low Speed Efficient Propellers

LVM computer designed aerofoil section blades are used to maximise the generators output at comparatively low wind speeds therefore ensuring enhanced safety, comfort and bearing wear.

High Efficiency Brushless Alternators

- High efficiency hand wound 3 phase brushless alternators.
- Neodymium Iron Boron permanent magnet rotor, sleeved and epoxy potted.

Compact: Light.. Robust: and Maintenance Free

Aerogens are lighter and smaller than some units with similar or even lower performances.

- They are sturdy and robust.
- Incorporate heavy-duty bearings, slip-rings and brushes.
- Corrosion resistant marinized materials are used throughout.

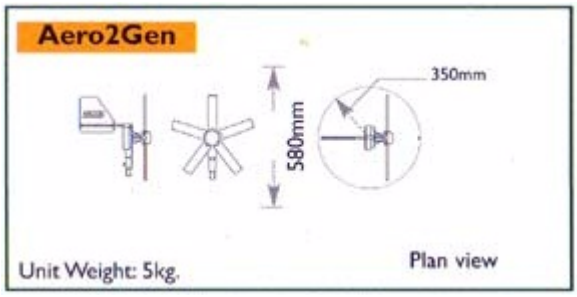
All **Aerogens** provide years of maintenance free use, and are available in both 12 and 24 volt.

Amps Output @ 12-14v Against Wind Speed (knots)

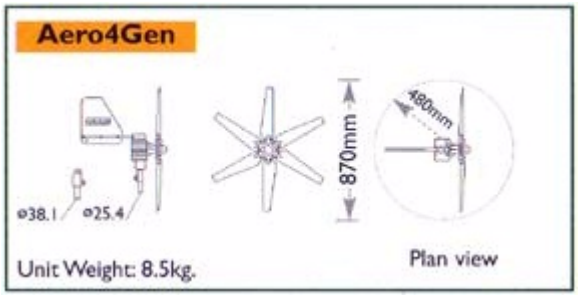
Watts	Amps	Aero2gen	Aero4gen	Aero6gen	Wind Speed (Knots)
360	30	-	-	45	
240	20	-	60	30	
180	15	-	40	23	
120	10		28	20	
96	8	-	25	17	
72	6	-	20	15	
60	5	-	19	14	
48	4	40	17	12	
36	3	33	15	11	
24	2	25	13	10	
12	1	19	10	7.5	
6	0.5	12	8	6.5	

1 knot = 0.514 m/s 1 m/s = 1.93 knots

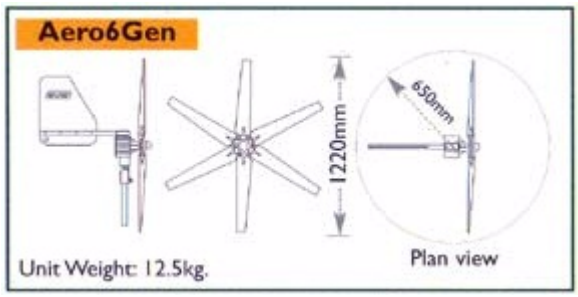
AEROGEN SPECIFICATIONS



Aero2gen- The ideal small wind generator for weekend yachtsmen, small yachts and low power land applications. Weighing only 5 kilos the design can ensure that batteries are maintained and fully charged for each visit and make a contribution whilst sailing. The **Aero2gen** produces 0.5 amps at 12 knots and 1.0 amp at 19 knots. It can produce 1.5 amps continuously at 22 knots, It operates safely but not continuously in gales and can produce a maximum of 4 amps intermittently. The **Aero2gen** is thermally protected, (Mounting for 1" tube only).



Aero4gen- Produces more power for the cruising yachtsmen and static and mobile caravans. It can provide sufficient power for cruising yachts with significant electrical equipment, even refrigeration. The **Aero4gen** produces 2 amps at 13 knots and 6amps at 20 knots. It operates safely and continuously in storms and can produce a maximum 19 amps continuously in 60 knot winds. The **Aero4gen** is self limiting. (Mounting for 1" or 1.5 " tube).

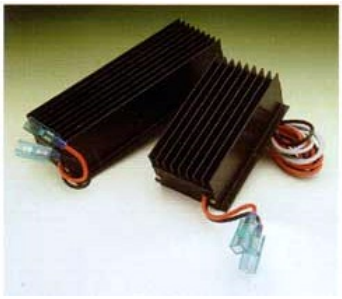


Aero6gen- The powerful **Aero6gen** is the ideal unit for the live aboard yachtsmen and applications with high power usage, The **Aero6gen** produces 4 amps at 12 knots and 10 amps at 20 knots. The **Aero6gen** is optimised to maintain continuous high outputs in higher wind speeds. It operates safely and continuously in 45 knot winds, producing 30 amps. Above 45 knots it requires a certain degree of manual control and is therefore not suitable for unattended applications. (Mounting for 1.5" tube).

The performances of all Aerogens have been established by independent testing.

Battery Charging and Protection- Voltage Regulators (TB Units)

Voltage regulators and diode units are available for single, twin and triple independent battery protection. When the batteries reach full charge the power produced by the generator is diverted to a wire wound resistor and dissipated as heat thus ensuring the generator is "on load" at all times.



Twin Battery Regulators (TB Units) are unaffected by other charging sources i.e. engine alternators and shore power therefore it is recommended that they are used in marine applications and makes them ideal for separate charging of engine and domestic batteries.

They incorporate:

- Voltage monitoring/PMW circuit.
- Power Mosfet.
- Schottky Diodes.

To regulate three independent batteries add a diode unit (DU Unit). Typical wiring diagrams can be found on our web site.

Easy Installation- Mounting Kits

A range of marine grade 316 stainless steel mounting kits are available from LVM for simple and rapid installation:

	Aero2gen	Aero4gen	Aero6gen
LVM	K1	-	K4
LVM	K2	K2	K5
LVM	K3	K4	-

LVM K1 - Bracket fixing to pushpit and 0.5 metre of 1". o.d. tube.

LVM K2 - 1.2m of 1" o.d. tube: 1" stanchion mount: universal plate to fix 1" mounting tube to 1" pushpit tube.

LVM K3 - Offset 1.2m of 1" o.d. tube: 1" stanchion mount: universal plate to fix 1" mounting tube to 1" pushpit tube. (Offsets Aero2gen completely) **NOTE THIS KIT IS ONLY SUITABLE FOR THE AER02GEN.**

LVM K4 - 1.45 m of 1.5" o.d. tube: 1.5" stanchion mount: universal plate to fix l.5" mounting tube to 1" pushpit tube.

LVM K5 - 2.9 m x 1.5" o.d. tube; 1.5" stanchion mount: universal plate to fix 1.5" mounting tube to 1" pushpit tube: 4mm wire stays and fixings.

Universal Mounting Plates

LVM 163 - To fix 1" o.d. tube to 1" o.d. tube.

LVM 168 - To fix 1" o.d. tube to 1.5" o.d. tube.

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