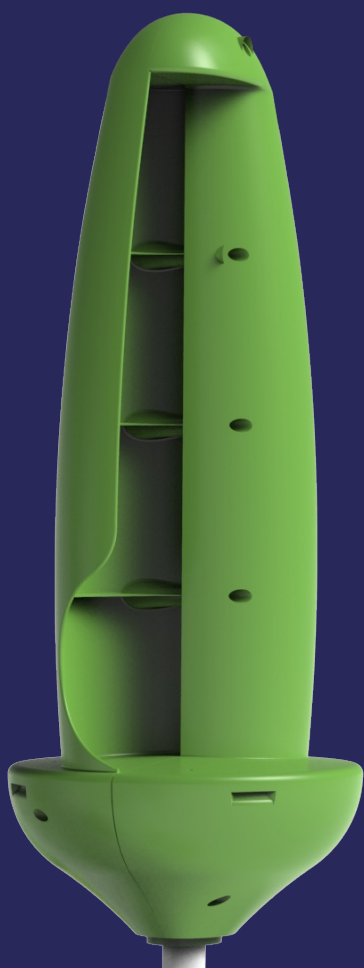


Technical  
data sheet

## AEROLEAF 300W



By

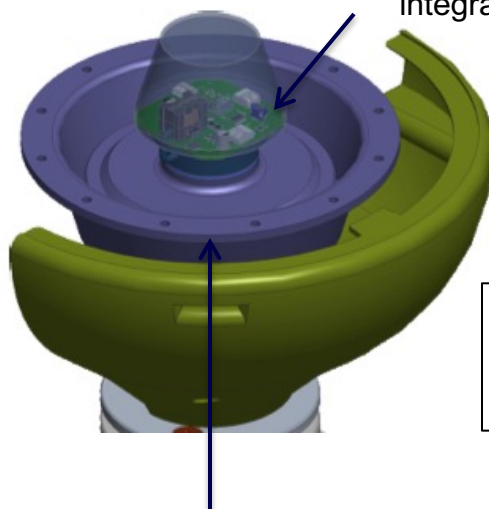


# The Aeroleaf General specifications

The Aeroleaf<sup>®</sup> is a patented micro wind turbine composed of a double blade with a vertical axis in a shape of a leaf and a synchronous micro-generator with permanent magnets.

Driven in rotation by the blade, without belts or gears, the magnets pass in front of the coils and thus generate an alternating current. This is immediately rectified in direct current to be able to sum the currents.

The Aeroleaf have an aerodynamic profile optimized to exploit the weakest winds (from 2.5 m/s of wind) as well as the strongest (up to 43 m/s continuously, 50 m/s in gusts).



Electronic regulation card with integrated microprocessor for maximum efficiency

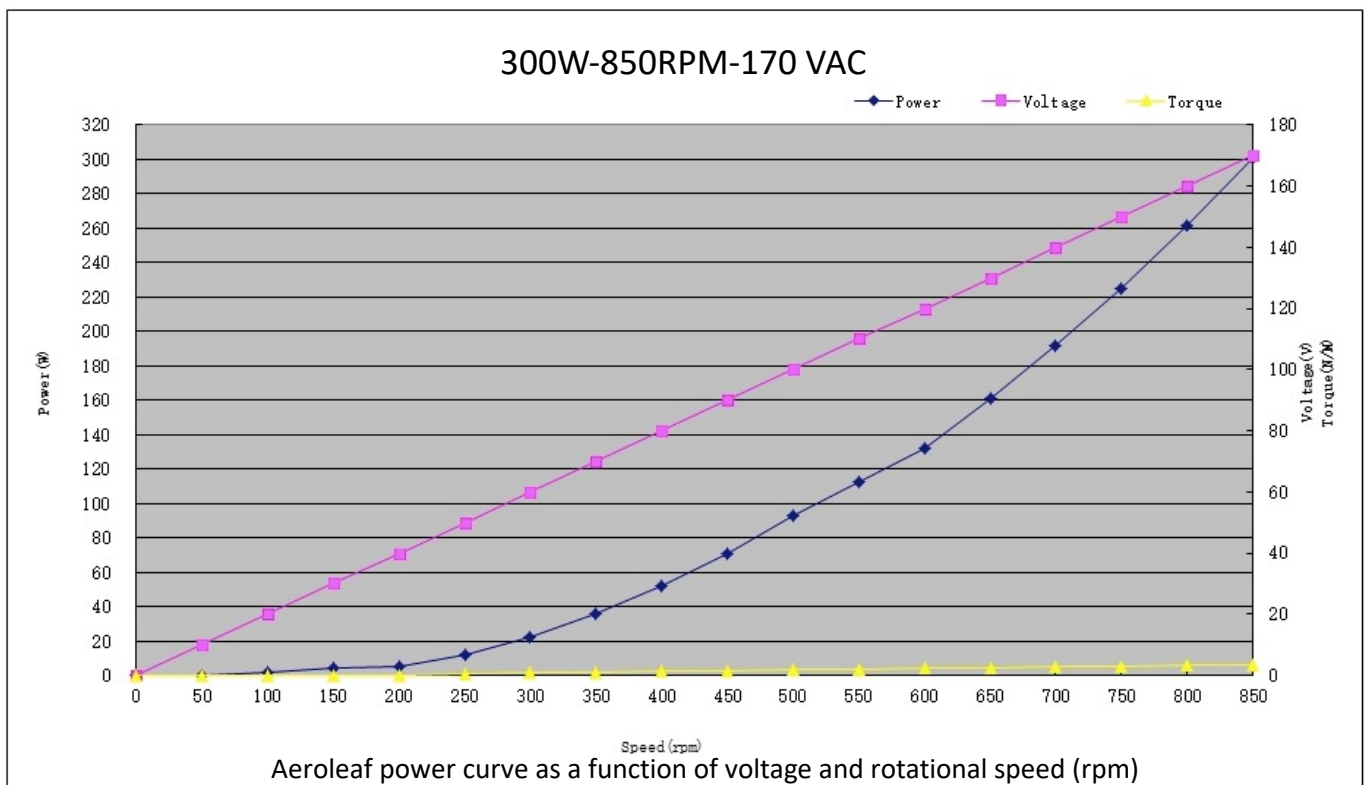
Max Power : **300 W**  
Voltage : **48 V**  
Max RPM : **850**

The micro generator developed by NWW is encapsulated in a casting to make it insensitive to the most aggressive environments: rain, sand, snow, pollution, salty air.

The Aeroleaf are sold individually from 12 pieces. They must be mounted in parallel and connected to its electrical cabinet which contains all the regulatory safety devices as well as a 4x12 V battery pack.

The sizing of the Electrical Cabinet depends on the number of Aeroleaf installed. T

he Aeroleaf thus form an electrical assembly that is easy to deploy as close as possible to uses, and particularly relevant for exploiting diffuse energies without additional structural cost.



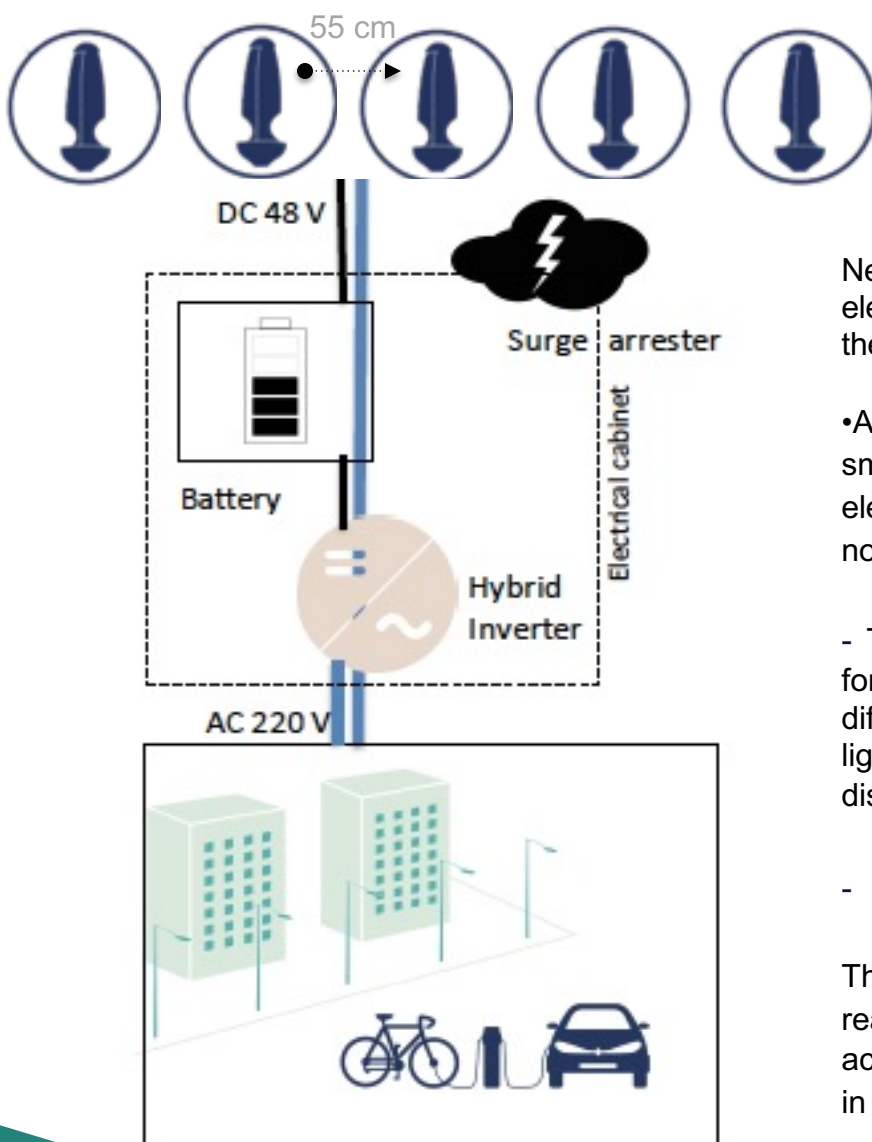
Every 10 milliseconds, the microprocessor calculates the voltage/current relationship to instruct the Aeroleaf to reach the best rotation speed compared to the ideal power extraction curve.

Thus, at every moment, the Aeroleaf extracts the maximum energy from the wind passing through it.

# Electrical Specifications

The electricity produced by each Aeroleaf is immediately rectified to direct current to be routed in parallel to the 48 V battery pack.

The sum of the currents is done in the inverter which restores the alternating current directly into the local network of the building or installation (TGBT).



New World Wind provides the electrical cabinet in proportion to the number of Aeroleaf chosen.

- A buffer battery pack that smoothes the production of electricity over short periods (it is not really a storage battery):

- The necessary safety devices for the connection (fuses, differential circuit breakers, lightning arrester, disconnecter).

- An Inverter

The electrical cabinet is thus ready to be connected in accordance with the regulations in force.

Aeroleaf are ideally placed on roofs and terraces, along roads, on masts, pylons, lampposts, as well as on any support capable of absorbing the forces and vibrations transmitted by the rotating leaf, and while respecting a center distance of 55 cm between each Aeroleaf.

It is up to the customer to ensure this before installation.

Aeroleaf can be installed by NWW teams or by the customer, subject to compliance with the recommendations established by NWW.

In any case, it is up to the customer to prepare:

- The supply of cables from the inverter to the technical room or TGBT of the building
- Cable routing to the TGBT
- Grounding the Aeroleaf (16 mm<sup>2</sup> ground cable) T
- The cables between the cabinet and the customer installation must be provided by the customer and connected by him before the intervention of New World Wind.
- Securing the site during the installation time.

The entire installation is carried out in accordance with the European directives in force.

In case of specific difficulties, New World Wind will propose adaptations (on estimate) to make the installation possible.

## MECHANICAL SPECIFICATIONS

Aeroleaf height + flange	1,05 m
Minimum distance between 2 Aeroleaf	0,55 m
Aeroleaf Weight	16,5 kg
Minimum number of Aeroleaf to purchase	12

## AEROLEAF SPECIFICATIONS

Starting speed	2,5 m/s (9 km/h)
Maximum wind resistance, continuous (in gusts)	43 m/s (155 km/h)

## ELECTRICAL SPECIFICATIONS

Installed power	300 W
Required voltage	48 V
Inverter output voltage	230 V

## Installation site

Installation time	Between 1 and several days	depending on the number of Aeroleaf and the complexity of the location
Maximum distance between the electrical cabinet and the furthest Aeroleaf		20 m

## Installation Responsibility

Preparing the passage of cables to the customer TGBT	Customer
Securing the site	Customer
Connection Cabinet / Local network	Customer
Installation of Aeroleaf (unless prior agreement)	NWW
Installation Electrical cabinet	NWW
Connection Aeroleaf / Cabinet	NWW