

DATA SHEET

WIND PALM

18A -24A -30A

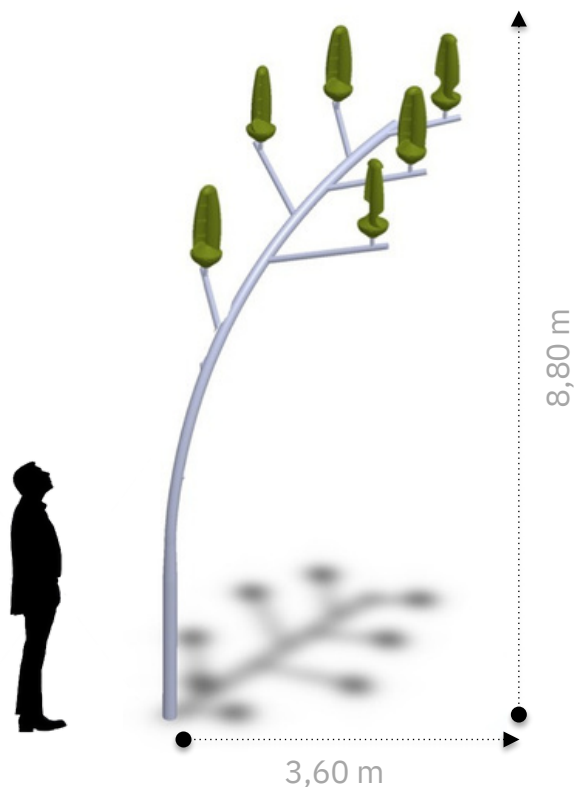
By



# THE WIND PALM

The WIND PALM is a complementary electrical production platform, shaped like a palm tree. This innovation captures all types of wind in urban or natural environments, whether turbulent or laminar, strong or light with a 360 degrees ability.

The WIND PALM is composed of 3 to 5 modules (or trunkcs). Each of them carrying 6 micro turbines called Aeroleaf. The WIND PALM is an interesting alternative to the WindTree. Smallest, simplest, scalable keeping the same design and silent.

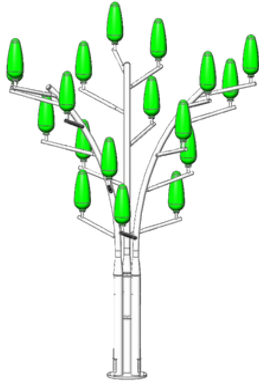


You can choose your WIND PALM with either 3, 4, or 5 modules like this and either 18, 24 or 30 Aeroleaf, producing between 5400 Watts and 9000 Watts.

This allows you to vary the size according to your electrical needs or budget.

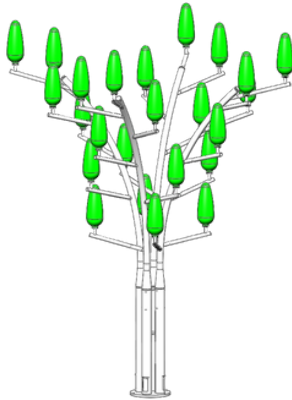
18, 24, or 30 Aeroleaf

3 possible configurations with  
3, 4, or 5 trunks



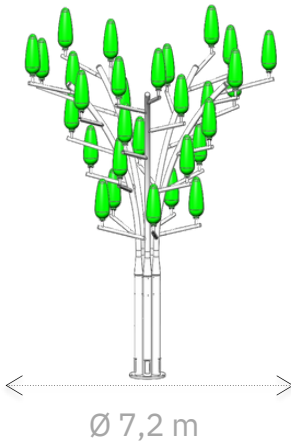
### WIND PALM 18 A

Max Power **5400 W** Nominal Power 2934 W  
Number of Aeroleaf **18** Power per Aeroleaf 300 W  
Weight 1450 Kg



### WIND PALM 24 A

Max Power **7200 W** Nominal Power 3912 W  
Number of Aeroleaf **24** Power per Aeroleaf 300 W  
Weight 1930 Kg



### WIND PALM 30 A

Max Power **9000 W** Nominal Power 4890 W  
Number of Aeroleaf **30** Power per Aeroleaf 300 W  
Weight 2410 Kg

Each Aeroleaf is made of a synchronous generator with permanent magnets.

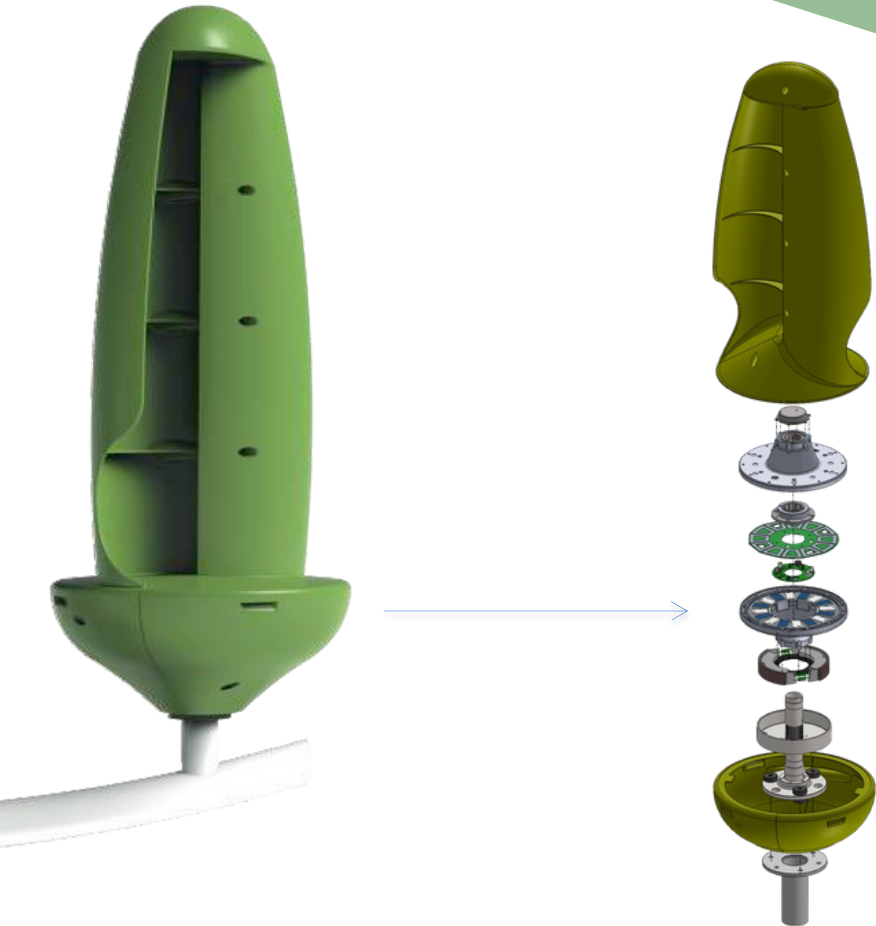
Simply initiated by the rotation of the blade, without any belts or gears, the magnets create a magnetic field, generating tension and alternating current (AC). To allow for the addition of each Aeroleaf power, it is switched to DC prior to the final AC generation.

Thanks to the electronic card developed by New World Wind, the production of the current is optimized with respect to wind speed. The microcontroller on each Aeroleaf guarantees a fine regulation of the system.

Each Aeroleaf is silent thanks to their shape and the level of air fanned. Besides, the Aeroleaf does not use any gear, which allows it to remain silent.

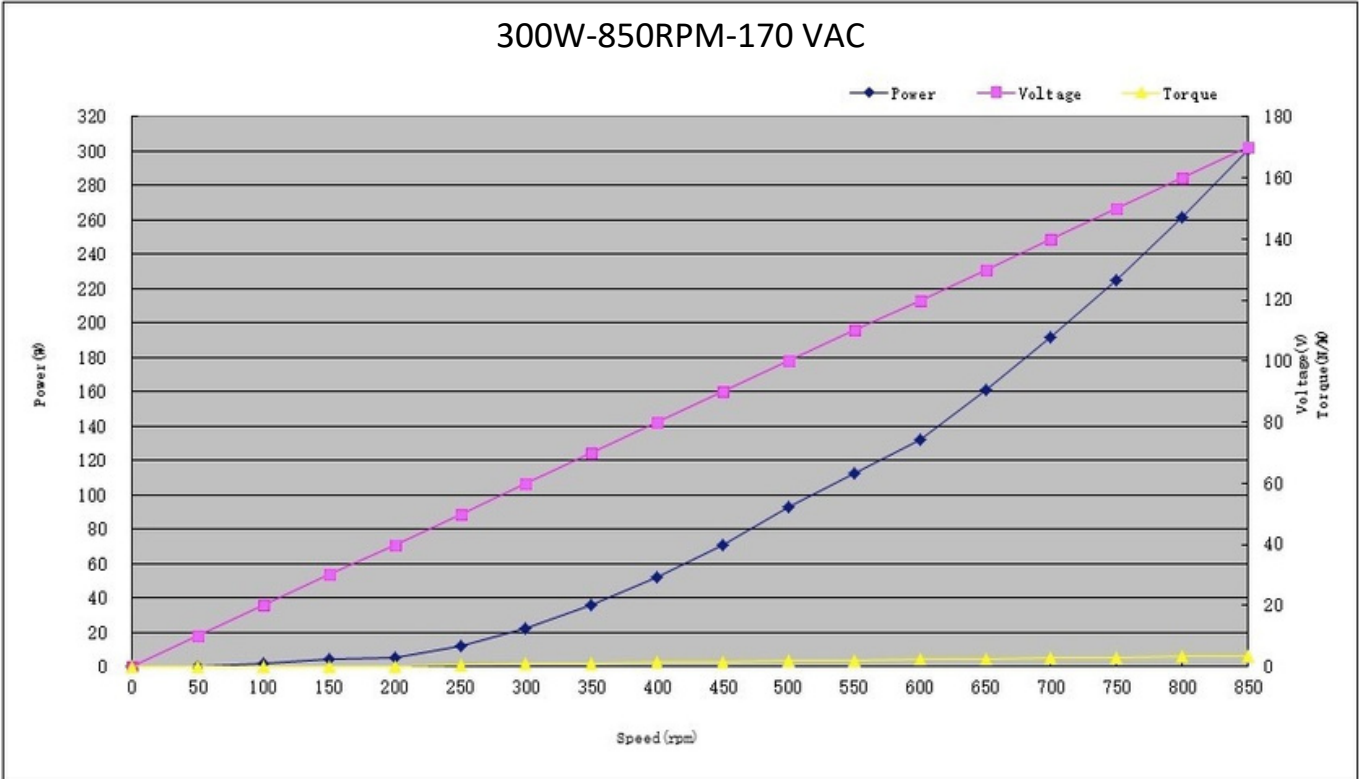
The Aeroleaf has an optimized aerodynamic shape to gather the smallest wind and air movement. The threshold is 2.5m/s. Conversely, if the wind is too strong, an electromagnetic brake will be triggered to maintain the spin of the Aeroleaf in its comfort zone and avoid any damage.

# Chart Aeroleaf



## NWW Micro Generator

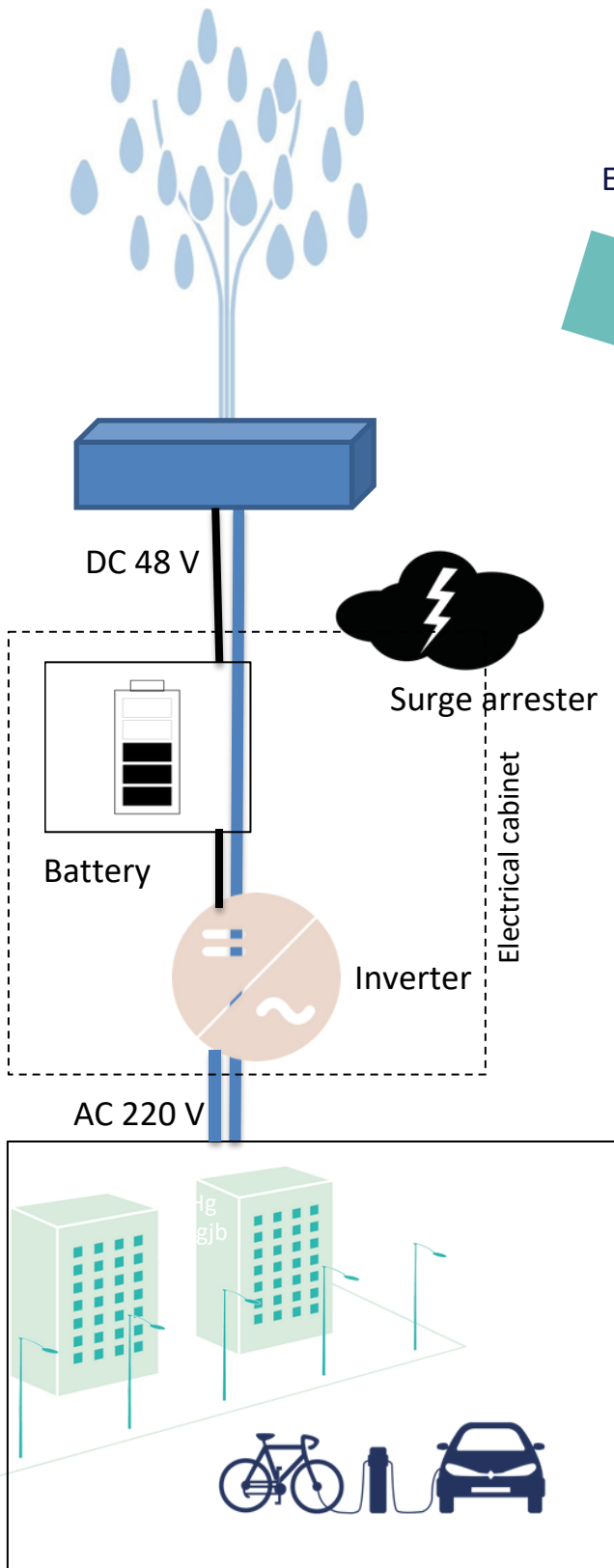
Proprietary technology with electronic regulation card embedded in each leaf for a maximum efficiency



Power curve per Aeroleaf  
Relation Voltage/Power/SpeedRPM

## ELECTRICAL INSTALLATION SCHEMATICS

New World Wind provides an electrical cabinet compliant with the electrical standards in France/Europe. We will comply to your country requirements.



The Electrical cabinet is made of:

- A battery, allowing to temporarily regulate the electricity production to limit peaks and solely for short time needs. It is not for storage.
- A specific inverter dedicated to self-consumption that connects directly to the customer's main switchboard (TGBT).
- All the security systems required for commissioning (fuse wire, switchgears, lightning conductor and isolation switch).

As such, the electrical cabinet is readily available for connection to local network.

The Wind Palm can be installed in various environments.

New World Wind can help you choose the most suitable configuration for your needs and services, by proportioning the number of leaves and petals according to your budget.

**The customer is responsible for the realization of the tree anchorage.**

**The interface between the anchor and the tree is via a reservation template provided by NewWorldWind.**

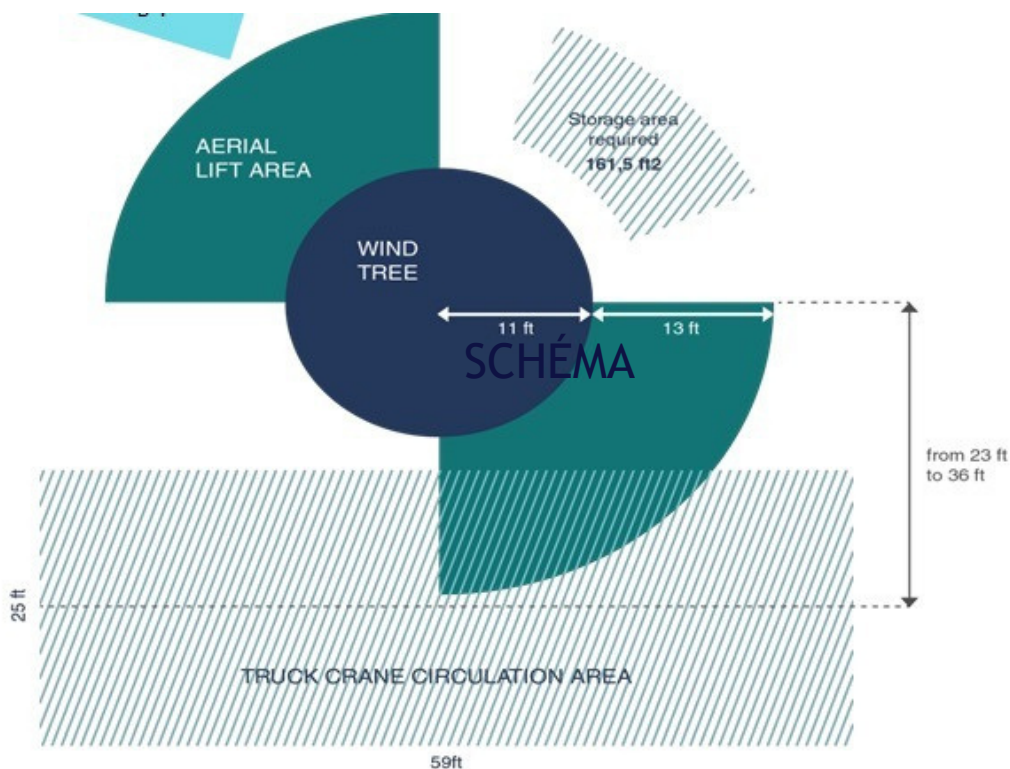
The following responsibilities are excluded from NewWorldWind scope and shall be managed by the Customer:

- Civil work of the Wind Palm foundation (solid concrete, including a junction box) based on the schemes provided by NewWorldWind,
- Installation of the cable sleeves between the Wind Palm and the electrical panel,
- Preparation of the area allocated to the electrical cabinet (if needed),
- Electrical connection to the Customer Low Voltage panel,
- Provision of a secured site and storage area during the installation

The Wind Palm doesn't require any administrative approval prior to conduct the work (French requirements, other countries to confirm), because it's a wind system of less 12 meters.

The site works will start upon confirmation the site readiness as per a document to be signed-off by the project owner.

The metallic structure and the Aeroleaves will be delivered and temporary stored on site. the site must be accessible to a crane truck 12 t and 2 telescopic platforms required for handling parts

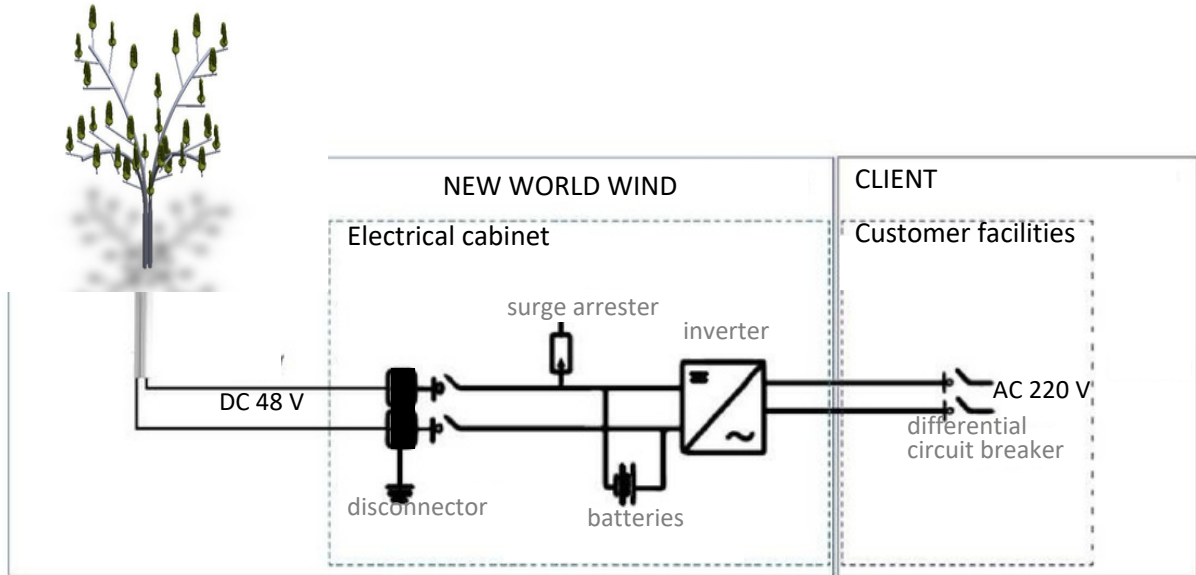


The client becomes responsible for the Wind Palm at delivery. The client becomes the owner of the Wind Palm at shipment at factory (ExWincoterm).

D1	D2D3	D4
Delivery	Installation	Electrical Connection



The Wind Palm is based on the concept of on-site generation and selfconsumption of the electricity in the connected building/area.



## SCHEMATIC OF ELECTRIC INSTALLATION

The Wind Palm is connected to the local grid through the New World Wind electrical cabinet. A dedicated space should be prepared for the cabinet, within a maximum distance of 20 meters. In addition to the Wind Palm and its electrical cabinet, NewWorldWind is also providing the electrical wires between the Wind Palm and the Cabinet.

The overall installation is compliant with the current European standards.

In case of specific di

fficulties, NewWorldWind can propose adaptations to make the installation possible (on site mate).

The electrical cables sleeves between the Wind Palm and the Electrical cabinet is explained in the civil engineering specifications. Similarly, any specific protection and wiring until the Electrical cabinet shall be prepared by the Customer to allow for the connection between the Electrical cabinet and the customer facilities.

# SUMMARY

## MECHANICAL SPECIFICATIONS

Height	8,80 m
Diameter	7,20 m
Aeroleaf height	0,97 m
Weight	1450 to 2460 kg
Number of Aeroleaf	18-24-36

## TURBINE SPECIFICATIONS

Starting speed	2,5 m/s (9km/h)
nominal wind speed	18 m/s (65km/h)
Maximum wind	43 m/s continuously, 50 m/s in gusts (180km/h)

## ELECTRICAL SPECIFICATIONS

Installed capacity	5400W to 9000 W
Maximum power per Aeroleaf	300W
Output voltage of the Inverter	110 V -230V (50 H z –60 Hz)

## SITE INSTALLATION

Installation Timeframe	2 to 3 Days
Storage Area	15m2
Max distance between the Wind Palm and the electrical Cabinet	20 m

## RESPONSIBILITIES

Civil Engineering	Client
Anchoring	Client
Electric sleeves	Client
Wind Palm and Aeroleaf installation	New World Wind
Control cabinet installation	NewWorld Wind
Connection from the Tree to customer facility	New World Wind
Connection to customer facility (last day of installation)	Client