KLiUX energies

VERTICAL AXIS WIND TURBINE

SMALL WIND TECHNOLOGY FOR URBAN & INDUSTRIAL AREAS

Compatible with other renewable energy installations such as Solar PV.

It can be installed on:

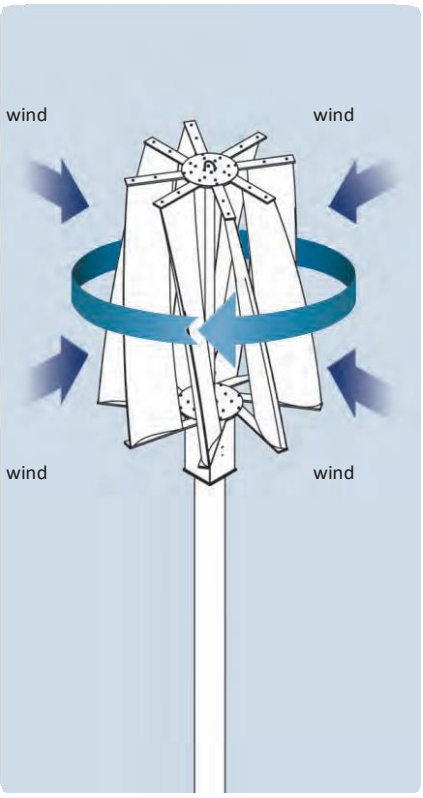
- Decks and Building roof tops
- Residential areas, parks and gardens
- Nautical Ports
- Golf Courses
- Single-family homes
- Industrial Parks
- Gas stations
- Natural Parks and Special Protection Areas

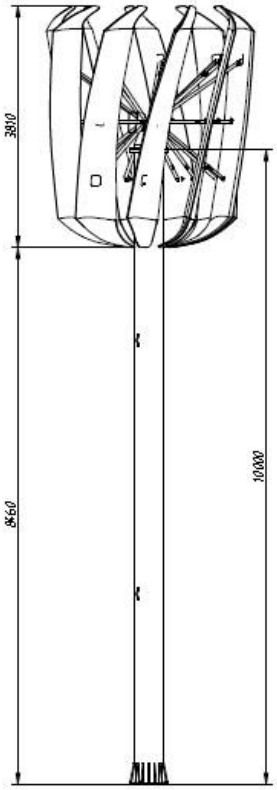
The only wind turbine for self-consumption that can be installed in urban environments.

Its unique design allows it to make the most of the wind without making noise or impacting wildlife. The energy produced can be used for self-consumption or to be distributed to the power grid.

Advantages of KLiUX vertical axis wind turbines

- It is always oriented to the wind
- Take advantage of all kinds of winds and air currents: directional, gusty, turbulent, ascending…
- It has a low starting torque starting to turn at 3.5 m/s (12.6 Km/h)
- It self-limits its maximum turning speed due to its exclusive and patented aerodynamic profile, with braking systems being unnecessary.
- It requires virtually no maintenance, given its simplified engine structure and mechanics.
- The noise is practically imperceptible which facilitates its integration into residential and urban environments. The sound pressure level at 10 meters away and with 6 m/s wind speed is 32.6 dBA, and 47.2 dBA with winds of 10 m/s.
- It can be installed at ground level, on a rooftop or on a platform in as little as 4 hours.

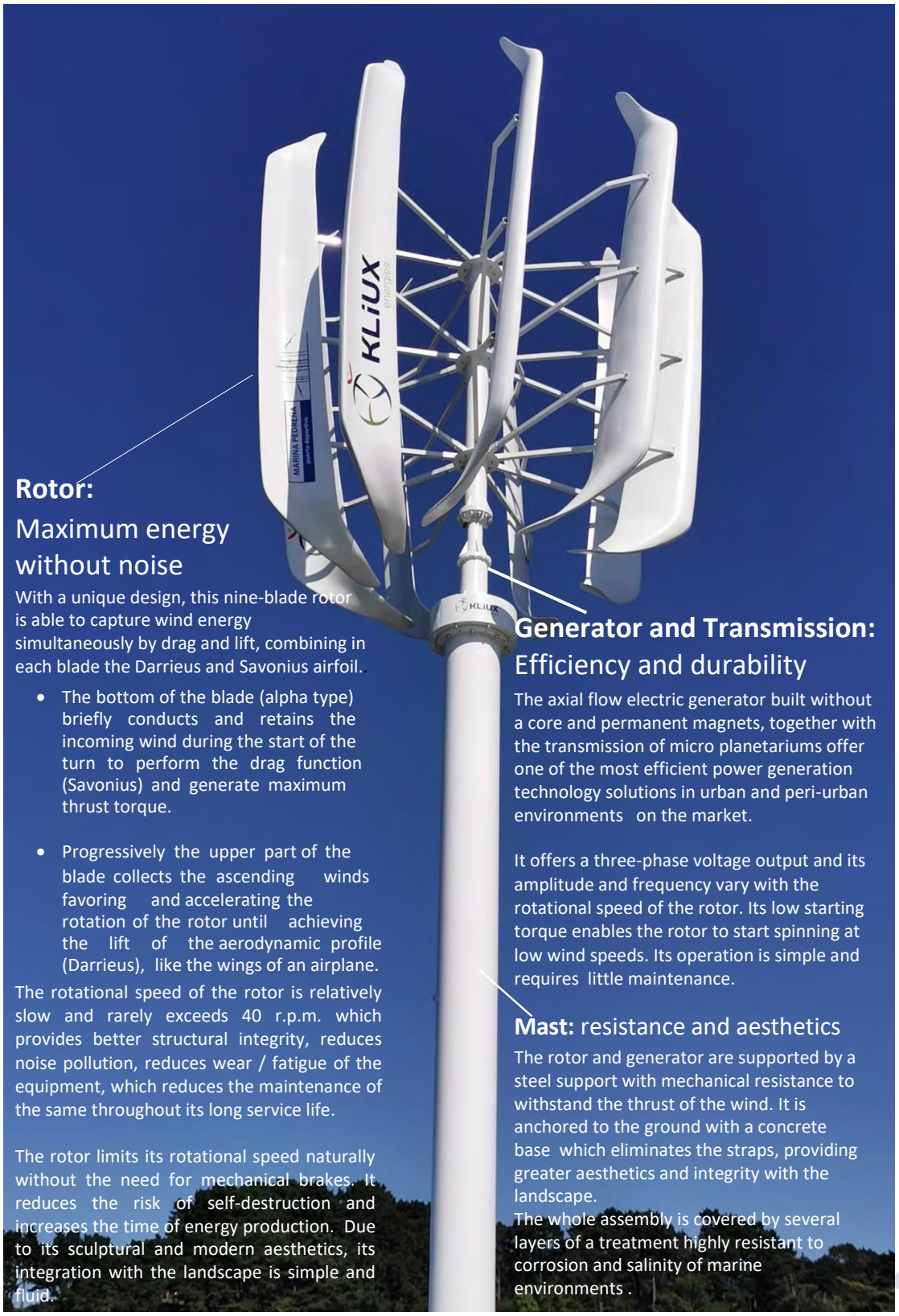




The applications of power generation systems close to the place of consumption are very extensive, whether access to the electricity grid already exists or if it is of an isolated location.

COMPONENTS

Vertical Axis Wind Turbine



Rotor:

Maximum energy without noise

With a unique design, this nine-blade rotor is able to capture wind energy simultaneously by drag and lift, combining in each blade the Darrieus and Savonius airfoil..

- The bottom of the blade (alpha type) briefly conducts and retains the incoming wind during the start of the turn to perform the drag function (Savonius) and generate maximum thrust torque.

- Progressively the upper part of the blade collects the ascending winds favoring and accelerating the rotation of the rotor until achieving the lift of the aerodynamic profile (Darrieus), like the wings of an airplane.

The rotational speed of the rotor is relatively slow and rarely exceeds 40 r.p.m. which provides better structural integrity, reduces noise pollution, reduces wear / fatigue of the equipment, which reduces the maintenance of the same throughout its long service life.

The rotor limits its rotational speed naturally without the need for mechanical brakes. It reduces the risk of self-destruction and increases the time of energy production. Due to its sculptural and modern aesthetics, its integration with the landscape is simple and fluid.

Generator and Transmission:

Efficiency and durability

The axial flow electric generator built without a core and permanent magnets, together with the transmission of micro planetariums offer one of the most efficient power generation technology solutions in urban and peri-urban environments on the market.

It offers a three-phase voltage output and its amplitude and frequency vary with the rotational speed of the rotor. Its low starting torque enables the rotor to start spinning at low wind speeds. Its operation is simple and requires little maintenance.

Mast: resistance and aesthetics

The rotor and generator are supported by a steel support with mechanical resistance to withstand the thrust of the wind. It is anchored to the ground with a concrete base which eliminates the straps, providing greater aesthetics and integrity with the landscape.

The whole assembly is covered by several layers of a treatment highly resistant to corrosion and salinity of marine environments .

Distributed Energy Solutions

KLiUX Energies International Inc.
444 West Lake Street, STE. 1700
Chicago IL. 60606 U.S.A.

Tel. +1312-985 7717

info@kliux.com www.kliux.com

KliuxEnergies

@KliuxEnergies

KLiUXenergies

www.instagram.com/kliuxenergies/