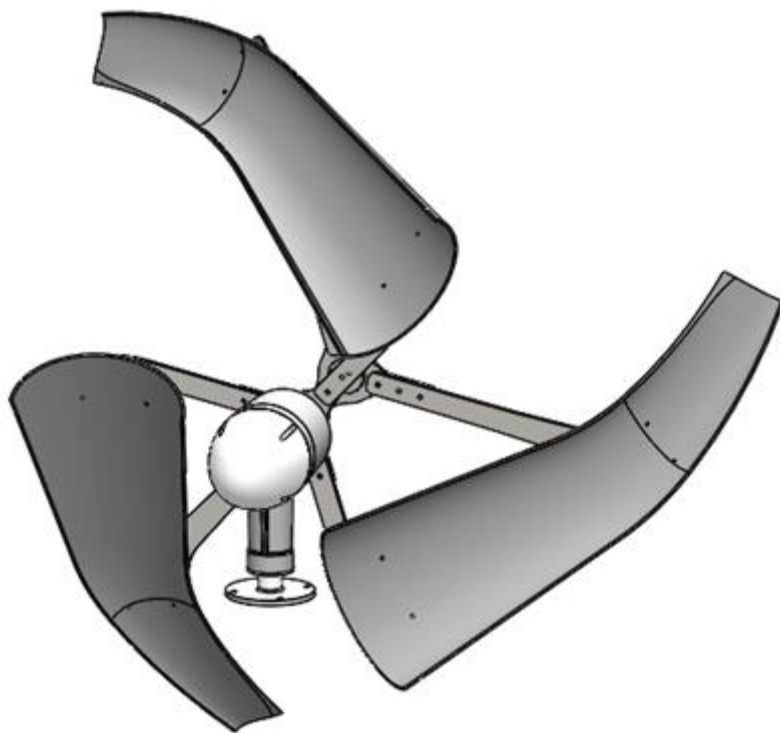




TECHNICAL SPECIFICATIONS & INSTALLATION MANUAL

NHEOWIND 3D04

Version 2.2



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1. PRESENTATION

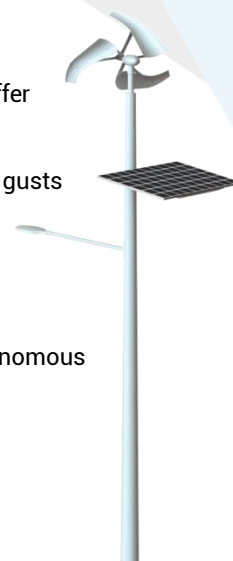
Nheowind 3D04 is a proximity wind turbines.

Equipped with a 3D buckle technology, nheolis® production of energy solutions offer different originals benefits:

- Highly productive : they start up with very weak wind and resist to huge gusts (as far as 180 km/h)
- Silent : working, they're less noisy than the wind itself
- Economical : they allow to reduce energy consumption and bills

Its compactness allows it to be integrated on urban poles to power autonomous applications such as:

- Lamp
- video surveillance mast
- pollution sensor
- Weather Channel
- Billboard



2. GENERAL SPECIFICATIONS

Specifications	Value	Unit
Wind turbine mass	32	kg
Rotor diameter	1,5	m
Blade projected surface	0,6	m²
Blade numbers	3	-
Pod surface	0,04	m²
Rated power (12 m/s)	300	W
Maximal power (20 m/s)	400	W
Wind turbine class (IEC 61400-2)	S	-
Reference wind speed (IEC 61400-2) *	26	m/s

* The wind speed reference allow to define the wind turbine class following the IEC 61400-2 international standard. It is not the maximal speed (Ve50) but it is designed to withstand climates for which the extreme 10 min average wind speed with a recurrence period of 50 years at turbine hub height is lower than or equal to Vref.

Before each sales and installation, the installer must be very careful at this point.

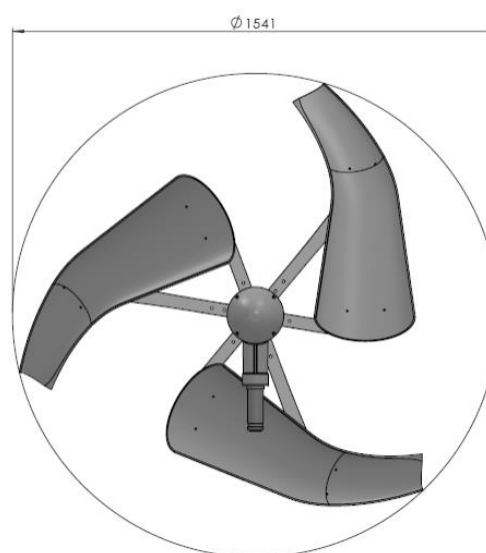
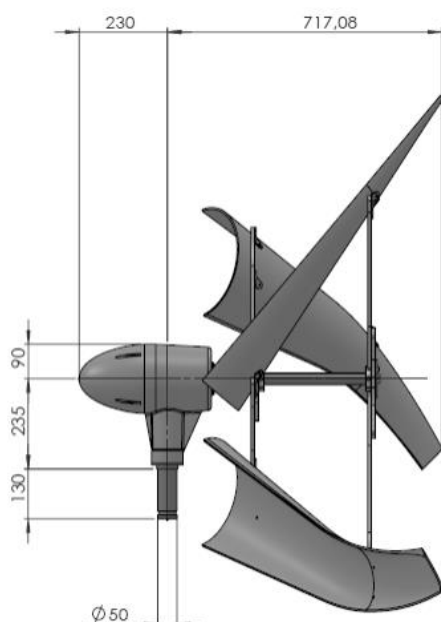
2.1. Frequency and drag

Wind speed	Rotation speed	Frequency	Drag on the rotor	Electrical power
[m.s ⁻¹]	[tr.min ⁻¹]	[Hz]	[N]	[W]
12	400	6,67	86	300
22	750	12,5	291	-
32	1100	18,33	623	-
45	1530	25,5	1235	-

2.2. Generator specification

Performance index name	Unit	Performance data	Performance index name	Unit	Performance data
Rated power	W	300	The voltage of 45rpm	VAC	18
Rated voltage	VAC	25	Winding temperature rise	K	105
Rated current	A	8.6	Generator weight	kg	16
Rated speed	RPM	250	Working temperature	°C-	-40~60
Rated efficiency	%	83.8	Minimum start torque	NM	0.7
Power factor	cos	0.875	Generator noise	DB	35
Protection grade	IP	54	Insulation class	F	

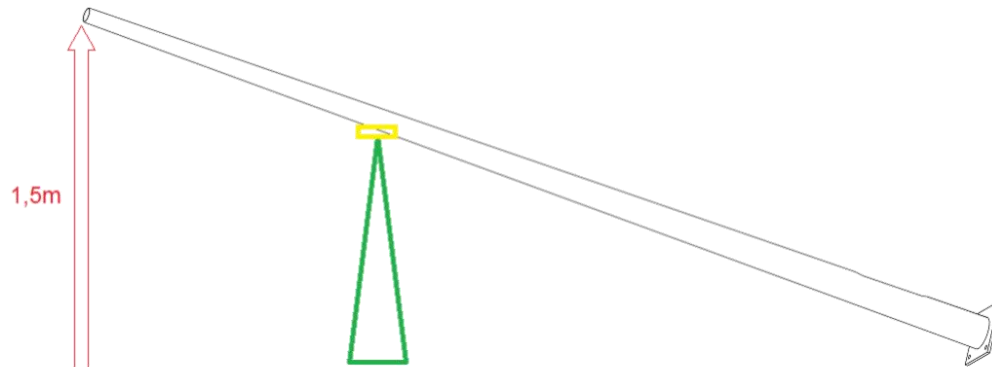
2.3. General size



3. INSTALLATION

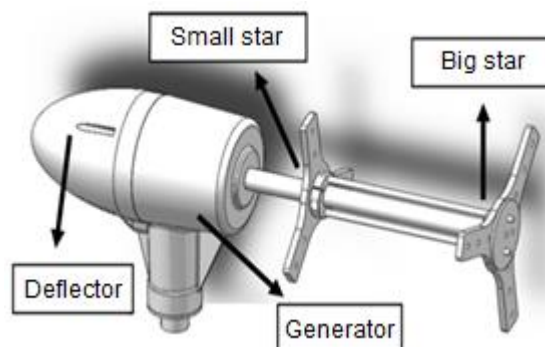
3.1. Mast preparation

1. The mast must be placed on the floor and tilted in order to set the above items. For this you should use a support (not supplied), such as a trestle (green in the scheme) with a protective foam to avoid damaging the mast (in yellow). The top of the mast has to be at 1.5m above the ground.

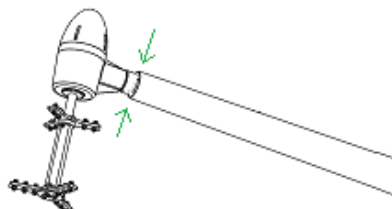


2. Unwrap the cable of the wind turbine (4G2.5)
3. Pass the cable through the mast.

3.2. Windturbine

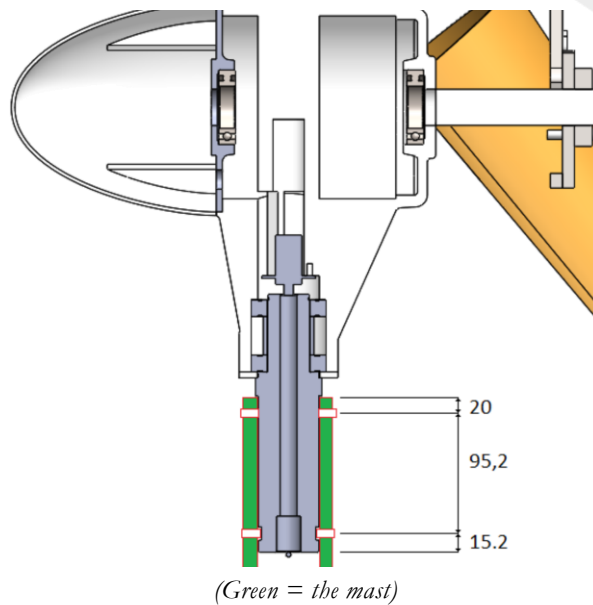


1. Plug the connector of the wind turbine with the mast cable connector.
2. Put the small wind mast on the top of the mast with the provided screws.



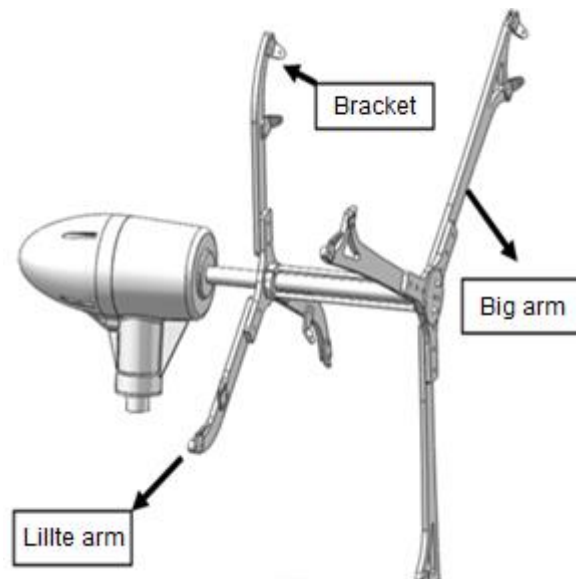
The wind turbine is hafting in the mast.

The mast must receive the foot of the wind turbine that have a diameter of Ø50mm on a length of 134mm.

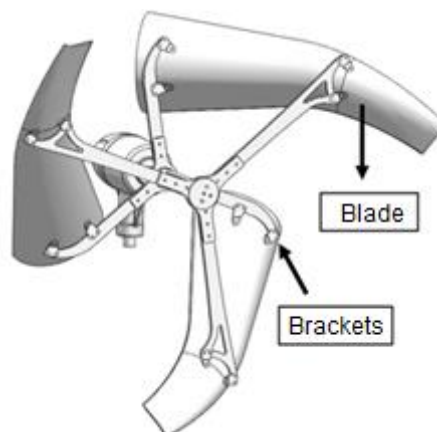


The foot of the wind turbine is blocked by two rows of 4 screws pressure M10 screwed in the mast. See the image above.

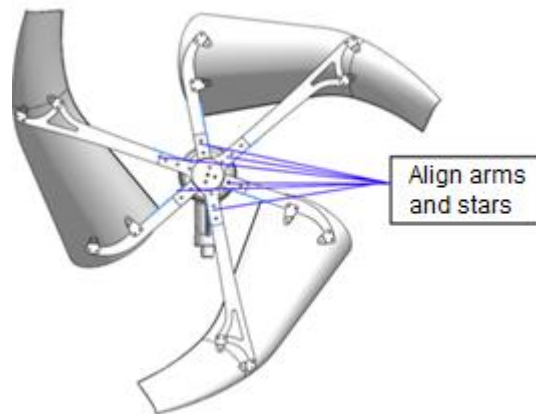
3. Fix the arms on the stars of the wind turbine with the screws, **but do not fully tighten the screws.**



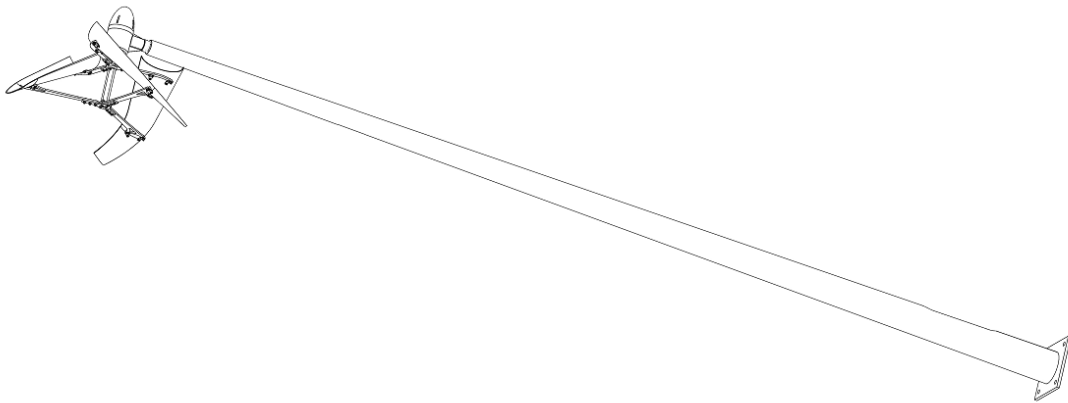
4. Fix the blades on the brackets with the screws, **but do not completely tighten the screws.**



5. Tighten the screws, making sure that the stars and the arms are well aligned. First tighten the screws of the arm-star link.



6. Check the tightening of all the screws, and that the nuts without nylstop are tight with the net brake.



4. MAINTENANCE

1. General condition of the nacelle of the wind turbine (detection of traces of greases that may come from the generator or the rotating collector).
2. Attaching the blades (hand-exerting one blade force one by one).



5. QUALITY CERTIFICATE

ISO9001 :2008

Date	Inspector	Observation
23/08/2017	AB	Ø

 IDSUD ENERGIES
MANUFACTURER: ZHANGZHOU NHEOLIS TECHNOLOGY CO.,LTD.
Model: <u>Nheowind 3D04</u>
Version: <u>V3.0</u>
Rated Power: <u>300W@12m/s</u>
Power form: <u>AC</u>
Rated Voltage: <u>25V</u>
SWT class: <u>Class S</u>
Reference wind speed: <u>28m/s</u>
Country of manufacture: <u>CN</u>
Serial number:
