



**XW - 80:**

CLASS II

CLASS III

CLASS IV

**X-WIND POWER**  
eXceptional returns



# The X-Wind Difference

**X-WIND POWER**  
eXceptional returns

For the first time, a vertical axis wind energy generator that provides a genuine alternative to conventional wind turbines. The X-Wind 80 is designed to provide exceptional returns for farmers, communities and industrial users. The XW-80 is installed individually or in clusters.

## Why X-Wind?

### Easier planning:

Exceptionally Quiet operation.

*Only 152m to 35dB (A), 10m/s wind speed.*

*NB: Quieter than a tree in same wind speeds.*

Minimal visual impact.

*Low solidity and pale colouring.*

### Compact, for small and hard to access sites:

Containerised delivery.

*Two lorries. One complete 80kW turbine.*

Small installed footprint.

*Less than 1/3 area of equivalent traditional turbine.*

### Exceptional returns on investment:

Industry leading energy production.

*Between 200kWh to 350kWh per Annum:*

*Aero Cp of 47.7%, Cp to grid 38.4%*

Low set up capital cost.

### Highly reliable:

Only one moving part.

5 Years between maintenance visits.

Lifetime warranties available.

### Diverse Customers:

Road Corridors

Rail Infrastructure

Telecommunication Infrastructure

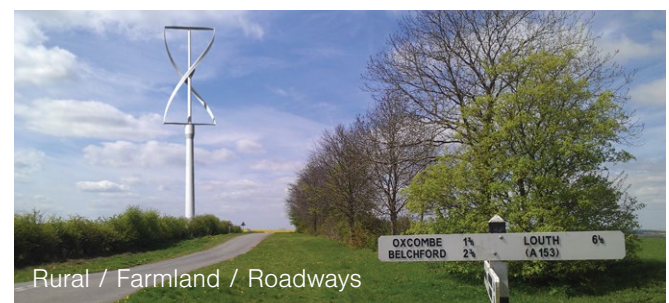
Industrial and Retail Parks

Rural Farms

Country Estates

Community Energy Schemes

Ports and Marinas

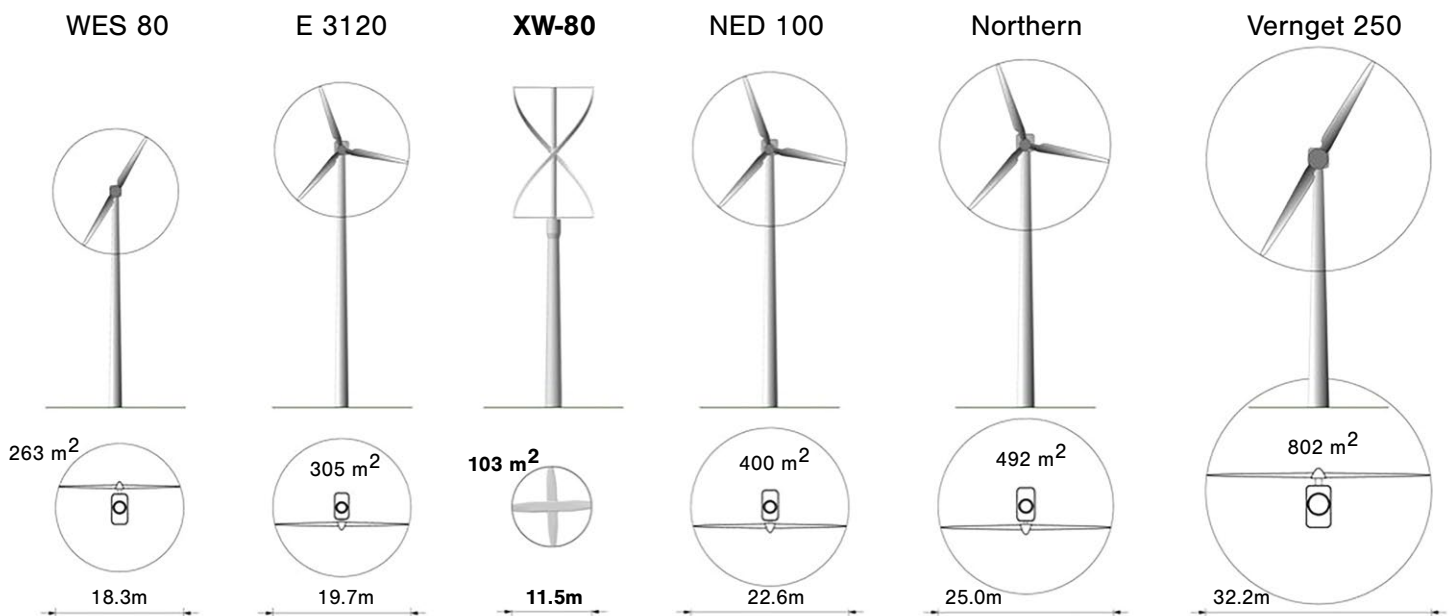


Call or email X-Wind today for more information: [sales@x-windpower.com](mailto:sales@x-windpower.com) or 01304 806000

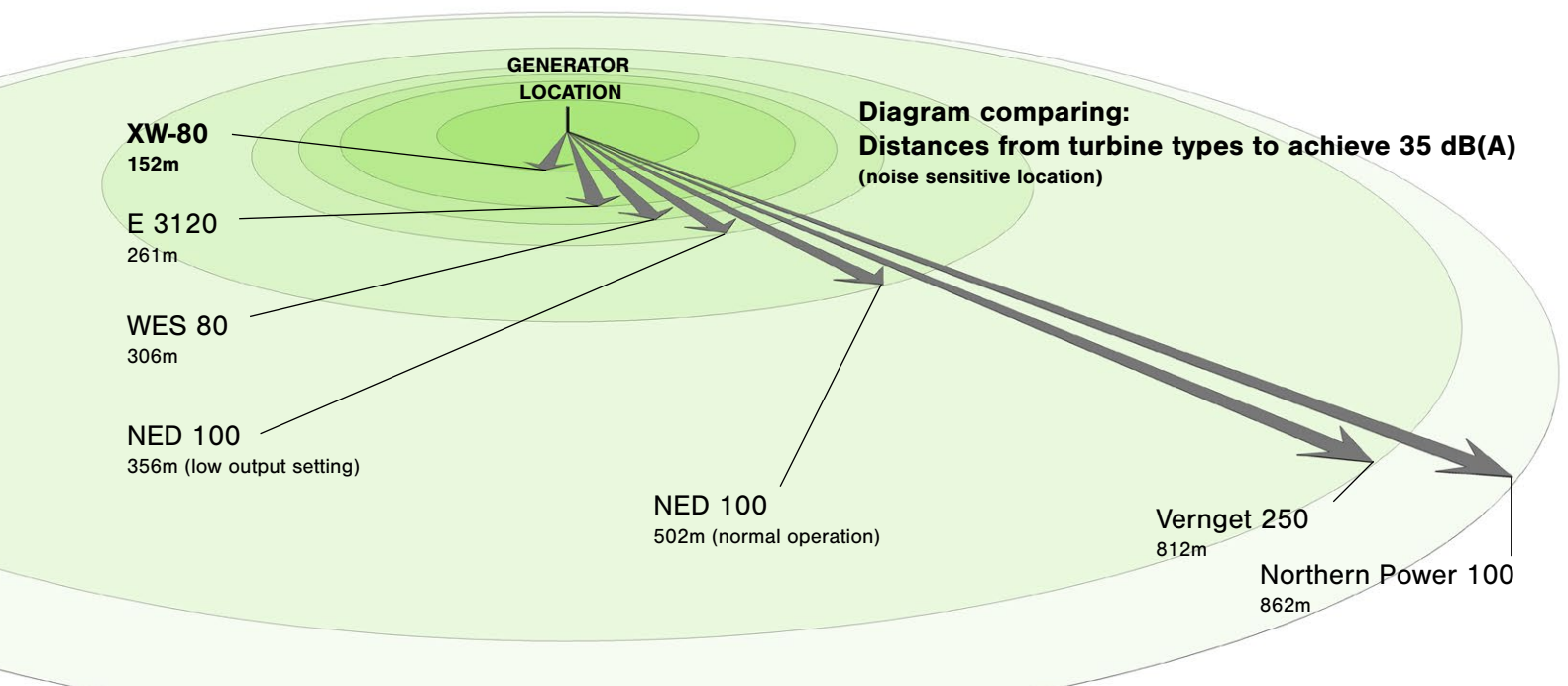
# Noise and Footprint

Planning permission is easier: X-Wind's patented aerofoil profile allow a lower operational speed dramatically reducing noise; the geometry creates a highly aesthetic generator with low solidity reducing visual impact; its footprint is 1/3 of equivalent conventional turbines.

## Footprint Comparison



## Noise Comparison



# Specification

X-Wind Power, UK manufacturer of distributed and community wind energy generators. The XW-80 provides fast paybacks and stabilises electricity bills. It reduces grid energy consumption and provides solutions to planning challenges which occur using conventional turbines.

## Specification

[Class II]

[Class III]

[Class IV]

Rated power [11m/s]	83kW aero : 66kW grid	100kW aero : 80kW grid	120kW aero : 96kW grid
---------------------	-----------------------	------------------------	------------------------

Peak power [13-18m/s]	135kW aero : 100kW grid
-----------------------	-------------------------

Rotor size	Ø11.5m x 19m high	Ø11.5m x 23m high	Ø11.5m x 38m high
------------	-------------------	-------------------	-------------------

Swept area	218m <sup>2</sup>	264m <sup>2</sup>	437m <sup>2</sup>
------------	-------------------	-------------------	-------------------

Mast heights	30m	22m	11m
--------------	-----	-----	-----

Survival	60m/s [135 mph]	53m/s [119 mph]	42m/s [94 mph]
----------	-----------------	-----------------	----------------

Design life	20 years
-------------	----------

Operating range	Cut-in / out 3.5 - 25 m/s
-----------------	---------------------------

Maintenance interval	5 years, continual monitoring
----------------------	-------------------------------

Assembly	2 deliveries, 2 day install
----------	-----------------------------

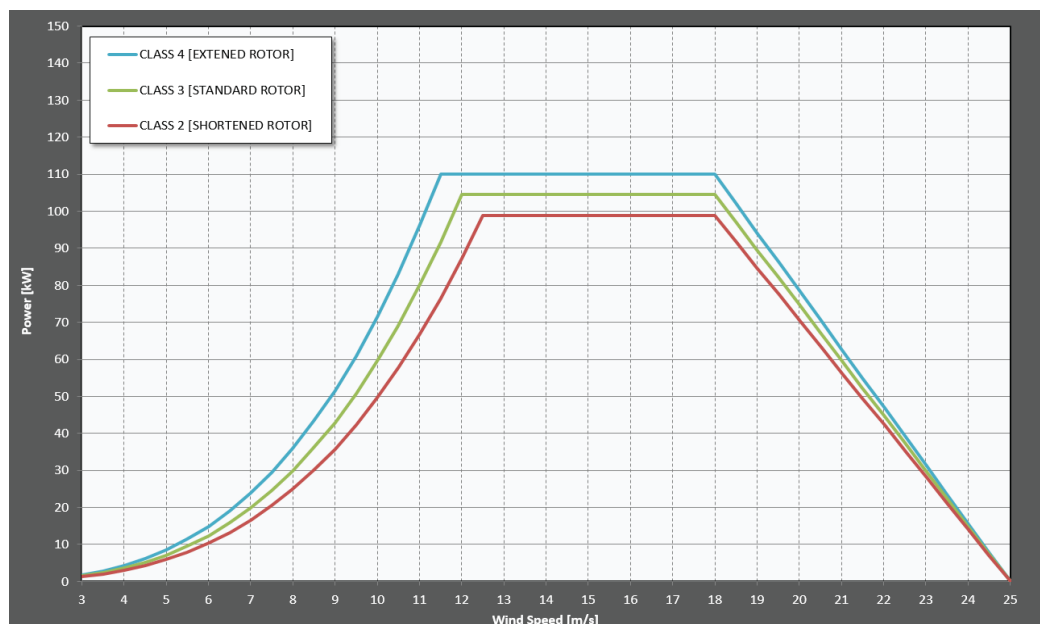
Acoustics [as IEC 61400/11]	Sound Power (dB [A])
-----------------------------	----------------------

Wind Speed [m/s]	6	7	8	9	10
dB [A]	83.4	84.3	85.9	87.7	89.6

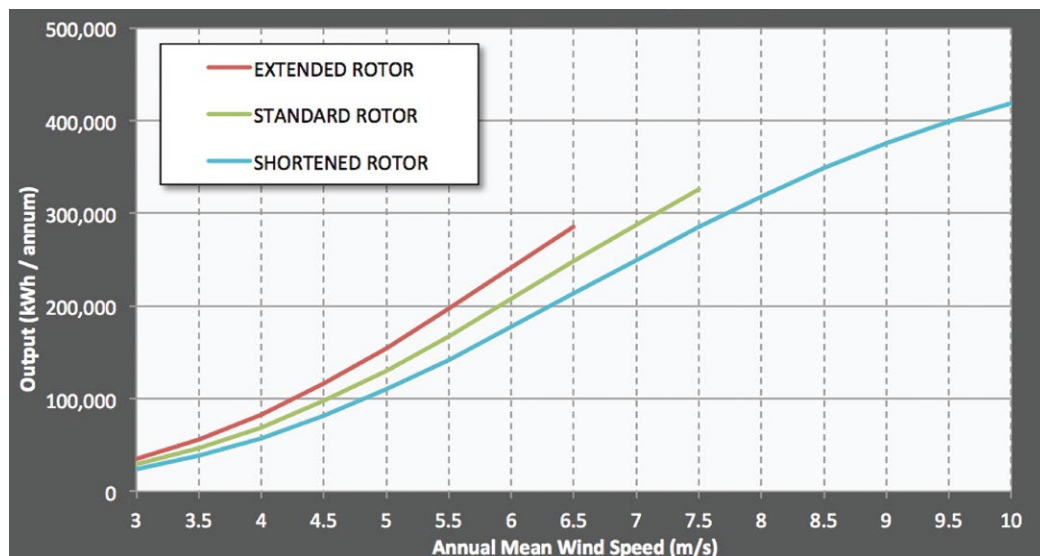
Additional Options	Telecommunication Antennae Capable : Street Lightning Mounting : CCTV Mounting : Flood Light Mounting
--------------------	--

# Power Curves

## X-Wind 80kW Grid Power Curves



## X-Wind 80kW Annual Energy Output



## X-Wind 80kW Product Family Comparison

X-Wind 80 Product Family			
AMWS m/s	Extended "Class 4" Rotor kWh per annum	Standard "Class 3" Rotor kWh per annum	Shortened "Class 2" Rotor kWh per annum
4.0	82,638		
4.5	115,956		
5.0	154,581		
5.5	196,967		
6.0	241,327	207,412	
6.5	285,948	247,920	
7.0		287,894	250,021
7.5		326,134	285,267
8.0			318,410
8.5			348,724

## Warranties & Operation

Operation is autonomous. The X-Wind 80 is fully equipped with the most reliable systems to operate entirely autonomously without any external intervention, regardless of the weather or wind conditions.

The XW-80 has an inbuilt SCADA system to provide all day and all year reporting back to X-Winds control centre and then to you as the customer and owner (this report would also be sent to your O&M provider).

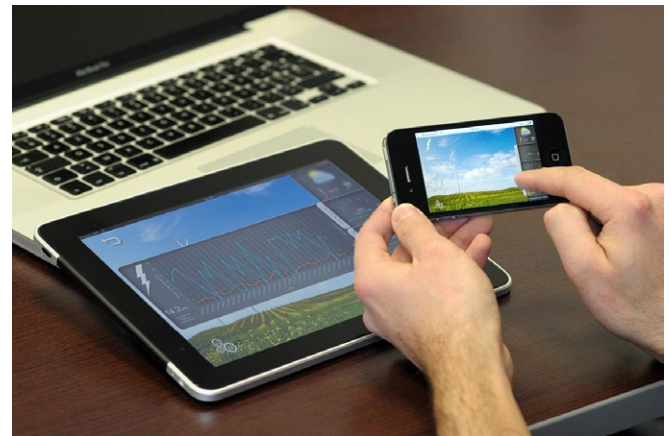
The SCADA system reports any faults. In the vast majority of cases generator restart will occur remotely without any need for a visit.

Inspections occur in the 1st year and then every 5 years (on average, higher duty sites have shorter inspection periods, while lower duty sites longer ones).

The number of moving parts is so small there is very little maintenance required. Those parts requiring maintenance are fully monitored and planned replacement or upgrade occurs as necessary.

X-Wind warranty not only parts but also noise and the power curve. Depending on the service plan required X-Wind is able to offer lifetime warranties for the product.

Via X-Winds SCADA reporting system, you as customer are able to log-on and have instant access to your generators performance data.



X-Wind SCADA Customer Interface



Utilising expertise and design methods from aerospace, formula 1 and large scale wind, with only one moving part, the remotely monitored X-Wind family provides exceptional levels of availability and reliability, designed to operate for 5 years between maintenance intervals.

## Key Standards

LV Directive 73/23/EC

EMC Directive 89/336/EC

Machinery Directive 2006/42/EC  
IEC 61400-1 (Ed. 3. 2010): Wind Turbines

BS EN 60335-1 (1994): Safety of household appliances

Inverter per VDE 0126-1-1; G59;  
UL1741

G59/3 Grid connection requirements

## X-Wind Team Leaders

Michael, CEO: 15 years experience in the development of high performance products, motor-sport, automotive, aerospace and large wind. He led the engineering team who brought to market two of the largest on-shore and off-shore wind turbines.

Stephen, CCO: In depth involvement in the development of the small and medium wind industries since 2006. Highly experienced with VAWT and HAWT architecture.

Paul, Director of Engineering: 20 years experience as an engineering director responsible for renewables, defence, aerospace and automotive projects.

Ian, Head of Electronics and Controls: 20+ years experience in engineering including electrical and R&D. Previously involved in the aerospace industry and specialises in electrical engineering and engineering management.

Dean, Head of Composites: 20+ years in motor-sport and F1.



The X-Wind Team





$\lambda$ -WIND POWER  
e $\lambda$ ceptional returns