

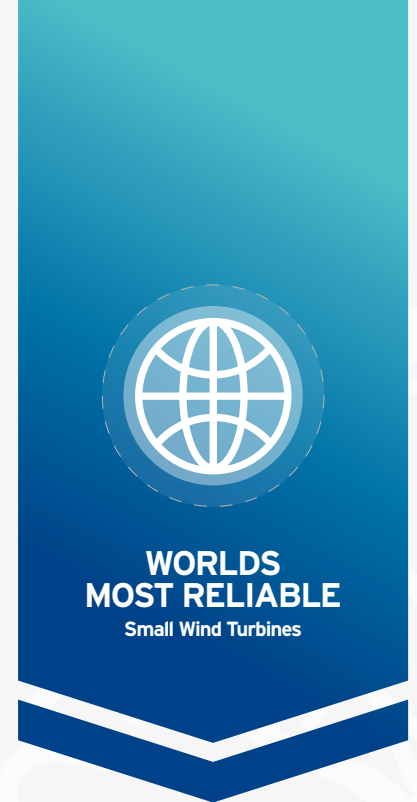


HIGH PERFORMANCE WIND TURBINES



**UNRIVALED
PERFORMANCE**





UNRIVALED WIND ENERGY SOLUTIONS

Why Choose A Kingspan Small Wind Turbine?

Kingspan Wind is a global market leaders in the design and manufacture of small wind energy. Our range of turbines are designed to last the course, having already surpassed over 25 years' of successful operation around the globe.

Born as the result of over 30 years' research, development and innovation, Kingspan Wind offers unrivalled wind power solutions the world over- with installations in over 70 countries and on every continent. You'll find us on rural domestic installations in the UK & Europe, remote islands in the Falklands, Off Shore oil platforms in the North Sea and a world-first application in Antarctica.

Our wind turbines are recognised for their outstanding performance, durability and unrivalled run time, and our product range includes the first and only ATEX approved turbine in the world.

We stand out from other small wind turbines due to a unique delta rotor design, which allows our turbines to regulate their speed. As the wind gets stronger, the blades pitch and cone ensuring our turbines maintain a high output even in the fiercest storms- unlike other turbines which need to be put on brake to protect themselves.



KW3

The KW3 is the smallest turbine in the Kingspan Wind range and is ideally suited for remote access sites, small domestic properties, telecoms and off-grid applications. Offering an unrivalled 25+ year track record, the KW3 is amongst the most sought after small wind turbine in the world.

KW6

Kingspan Wind KW6 is the most popular turbine in our range, regarded by many as the turbine of choice. Ideally suited for rural domestic, farmers, land owners and light industrial applications. It is fully certified under the Microgeneration Certification Scheme (MCS), and is therefore eligible for Feed-in Tariffs and Regional Incentives.

LOW TEMPERATURE CAPABILITY

Both KW3 and KW6 are available in Low temperature versions able to operate in temperatures of -40 Degrees.

PERFORMANCE

- › With over 50 million run hours, our turbines are recognised for unrivalled run time due to no requirement to stop in high winds. This ensures a faster payback and greater return on investment.

EXPERTISE

- › Over 30 years' research, development and innovation with installations in over 70 countries and on every continent- including the world's only ATEX approved turbine suitable for Off grid / Oil & Gas Platforms.

RELIABILITY

- › More than 25 years' operation around the globe. With the lowest servicing requirement in its category, including a 25-year product lifespan, our turbines are one of the world's most reliable.



ALASKA

3 x KW6 wind turbines installed to power a house and business in sub-zero temperatures.



ISLE OF EIGG HERITAGE TRUST Scotland

Isle of Eigg's electricity was powered by diesel generators until they installed 4 x KW6 - This is the first time in its history that Eigg has operated a power grid.



RAILWAY STATION RANNOCH MOOR Scotland

One of the longest operating turbine installations. Installed in 1993, at Scotland's highest railway station. The KW3 was installed to power platform lights.



TELECOM BASE STATION Namibia

The base station serves telecommunication power to around 1,500 people living in a village of Dorbadis and to farming communities over 30 km away. The hybrid energy solution ensures that the base station provides clean, green and continuous energy day and night.



FALKLAND ISLANDS South Atlantic Ocean

90% of rural electricity generated in the Falklands comes from KW3 and KW6 wind turbines.

25 YEARS
OPERATION
AROUND
THE GLOBE



OVER 5,000
INSTALLED IN OVER
70 COUNTRIES



OFFSHORE North Sea

Robust KW3 wind turbines provide reliable power to manned gas platforms in the North Sea.



VISITOR CENTER

Korea

2 KW6 units installed in 2007 as part of hybrid package along with Solar PV Panels. The system is used to power the visitor center.



GAS LABORATORY

Tokyo

2 x KW6 generating power for Tokyo Gas Laboratory in Yokohama.



TELECOM BASE STATION

Saudi Arabia

The installation of the wind turbine provided a cost effective alternative to a diesel generator that would have involved subsequent costly refuelling trips and regular maintenance.



PRINCESS ELISABETH RESEARCH STATION

Antarctica

9 x KW6LT generating power for research into climate change.



TELECOM BASE STATION

Rabi Island Fiji

As the only wind turbine on the island, the Kingspan Wind turbine is producing far more than the expected annual energy output thanks to the great wind regime on the site and the unique design of wind turbine.



REDUCE
YOUR ENERGY BILLS

ENERGY SOLUTIONS FOR ALL CUSTOMER TYPES

Agriculture

Telecoms

Public Sector

Local Communities

Commercial

Utilities Energy

Rural Dwellings

Hybrid Off-grid System

Unmanned Oil/Gas Platforms



**LOW
COST OF
OWNERSHIP**





KINGSPAN WIND
BUILT ON EXPERTISE

KEY BENEFITS

Unlike other turbines on the market, the Kingspan Wind turbines are not required to shut down in high winds. They offer **CONTINUED ENERGY GENERATION** in all wind speeds enabling you to achieve a **FASTER PAYBACK** and greater return on your investment.

Under the EU Energy Efficiency Directive, Kingspan Wind, and our partner network of suppliers and installers, can assist with the delivery of renewable energy developments, making a significant impact on any business's energy needs.

With Kingspan Wind, your business can:

- › Generate a High Energy Yield
- › Secure Your Energy Future
- › Reduce Your Energy Cost
- › Offset Carbon Emissions
- › Provide a Sustainable Business Platform

OUR TEAM CAN ASSIST WITH

- › Site Feasibility & System Design
- › Supply & Installation
- › Planning & Grid Support
- › Commissioning & Registration
- › Servicing Contracts
- › Data Monitoring
- › Feed-In Tariffs
- › CRC Energy Efficiency Scheme
- › ESOS - Energy Savings Opportunity Scheme
- › Off Grid Energy Generation



**40,000
TONNES OF
CARBON**
off-set
annually





SIMPLE DESIGN EXCEPTIONAL PERFORMANCE

**NO
REQUIREMENTS
TO STOP IN
HIGH WINDS**



ACCUMULATING
OVER 50 MILLION
RUN HOURS



GENERATE
9,000kWh - 30,000kWh
ANNUALLY*

*dependent on wind speed between 5m/s - 10m/s, refers to KW6



KINGSPAN WIND
BUILT ON EXPERTISE



SELF REGULATING

Delta rotor design ensures constant energy generation

MINIMAL VISUAL IMPACT

Available in three colours: White, Black or Grey - which can be specified for local planning requirements

NO GEAR BOX

Greater efficiency through fewer moving parts.

ANTI OVER-SPEED CONTROL

Our unique over-speed protection system ensures continuous energy generation - even in the fiercest storms. Designed to operate in any wind regime, and with no requirement to shut down in high winds, exceptional performance is maintained.



KEY FEATURES

- › 25 years Successful Operation Time
- › Self Regulating
- › No Gear Box
- › Anti Over Speed Control Down Wind Technology
- › Hydraulic Towers
- › Low Service Requirements
- › Single, Dual and Three Phase Compatible
- › Tested to International Standards IEC61400-2
- › Designed to Class 1 Wind Speeds
- › 5 Year Parts and Labour Warranty
- › Highest kWh Yield in the <10kWh*
- › First and Only ATEX approved small wind turbine in world
- › 25-year product lifespan (when serviced in line with our recommendations)

*Refers to MCS approved turbines above 5.2m/s



**UNIQUE
DESIGN**

TECHNICAL PRODUCT SPECIFICATIONS



SELF REGULATING



MINIMAL VISUAL IMPACT



NO GEAR BOX



ANTI OVER-SPEED CONTROL





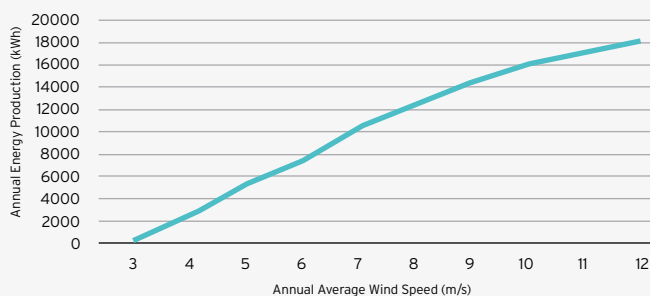
KINGSPAN WIND
BUILT ON EXPERTISE

KW3

PRODUCT SPECIFICATION

Peak Power	3.2kW
Reference Annual Energy @ 5m/s	4700kWh
Applications	Telecoms, Offshore Oil & Gas Platforms, Remote Islands, Domestic
Solutions	Grid Tied, Battery Charge, 24V, 48V, 300V
Grid Options	Single / Split (Dual) / Three Phase
Architecture	Downwind, 3 Bladed, Self Regulating
Rotor	3.9m Diameter (maximum 300 RPM)
Blade Material	Glass Thermoplastic Composite
Generator	Brushless Direct Drive Permanent Magnet
Tower Height Options	6.5m / 11m Taperfit Monopole - Hydraulic
Tower Specification	Class 1 Rated / Galvanised Steel
Foundation Options	Pad / Root / Rock Anchor
Cut In Speed	3.5m/s
Cut Out Speed	None - Continuous Operation
Survival Wind Speed	Designed to Class 1 (70m/s)
Warranty	5 Year Parts & Labour
Cold Climate Options	Available on Request
Colour Options	White (RAL9003) Black (RAL9005)

KW3 ANNUAL ENERGY PRODUCTION*



* The AEP (Annual Energy Production) Curve demonstrates the energy the KW3 will generate on sites with a given average wind speed at hub height. The ability to calculate kWh/year allows for clear estimations of financial viability to be calculated.

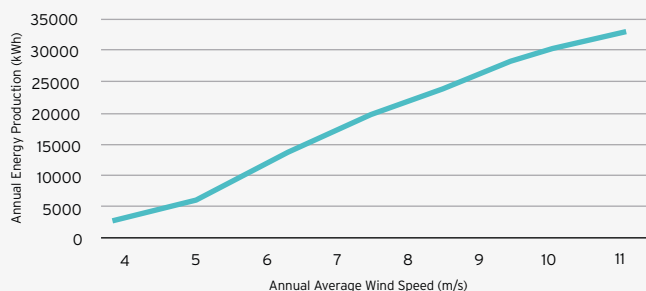
KW6

PRODUCT SPECIFICATION

Peak Power	6kW*
Reference Annual Energy @ 5m/s	8949kWh
Applications	Rural Domestic, Small Holdings, Commercial, Telecoms, Public Sector, Remote Islands
Solutions	Grid Tied, Battery Charge, 48V, 300V, Direct Heating
Grid Options	Single / Split (Dual) / Three Phase
Architecture	Downwind, 3 Bladed, Self Regulating
Rotor	5.6m Diameter (maximum 200 RPM)
Blade Material	Glass Thermoplastic Composite
Generator	Brushless Direct Drive Permanent Magnet
Tower Options	9m / 11m / 15m / 20m Taperfit Monopole - Hydraulic
Tower Specification	Class 1 Rated / Galvanised Steel
Foundation Options	Pad / Root / Rock Anchor
Cut In Speed	3.5m/s
Cut Out Speed	None - Continuous Operation
Survival Wind Speed	Designed to Class 1 (70m/s)
Warranty	5 Year Parts & Labour
Cold Climate Options	Available on Request
Colour Options	White (RAL9003) Black (RAL9005) Grey (RAL7000)

* Rated 1 min average 5.2kW

KW6 ANNUAL ENERGY PRODUCTION





Global Head Office

Wardhead Park, Stewarton
Ayrshire, Scotland KA3 5LH

Tel. +44(0) 1560 486 570
Email: wind@kingspan.com

www.kingspanwind.com

