QR6
VERTICAL AXIS WIND TURBINE

The 7.5kW Qr6 Helical Vertical Axis Wind Turbine delivers in power generation whilst also retaining its intrinsic beauty with a sleek and elegant design.

The blades, spokes and torque tube are manufactured in advanced composite materials, including carbon fibre for weight reduction, stiffness, and longevity.

The turbine is supported by a powerful industrial programmable logic controller which can easily be configured to comply with grid codes around the world.

Elegant Iconic Design

Quiet in motion

Compact footprint

Inbuilt safety features

Suitable for multi directional wind

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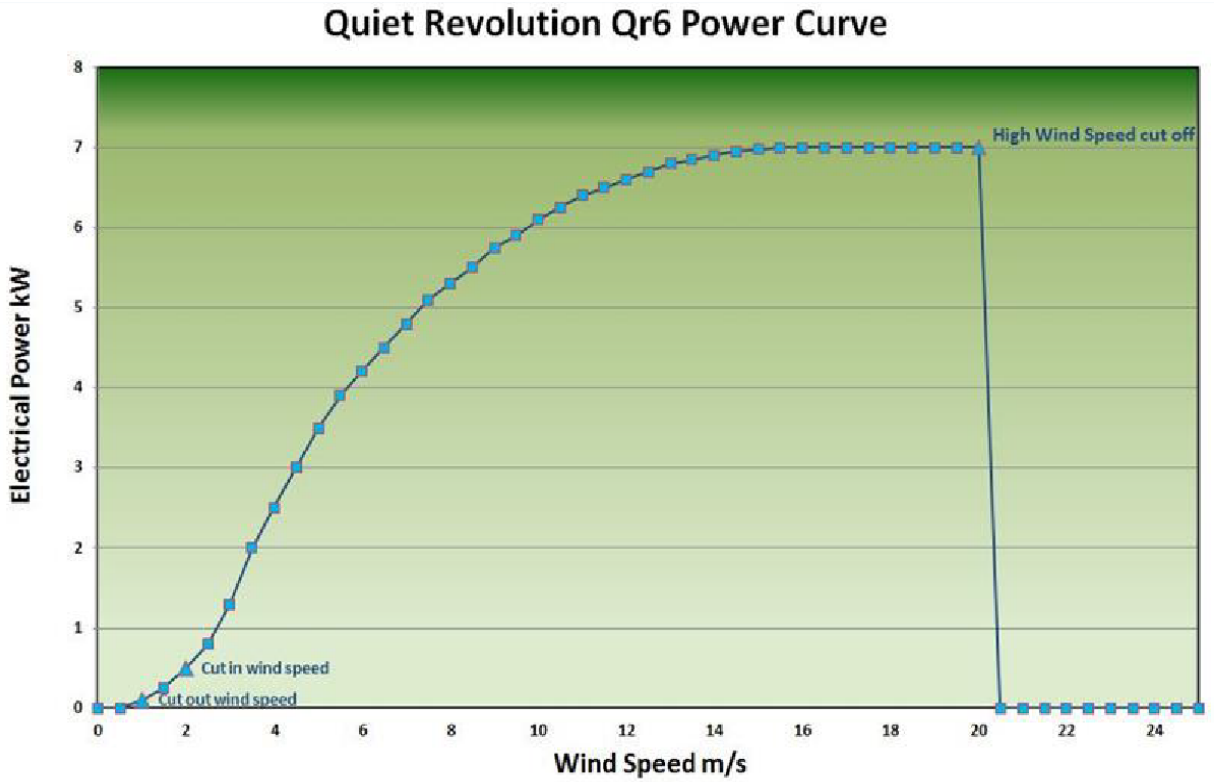
The Power Curve below is the easiest way to understand power production, the curved shape is non-linear due to the Qr6 turbine optimization, resulting in excellent wind power conversion to power generation in realistic wind speeds commonly encountered by the Qr6 turbine in its normal mode of operation.

The Qr6 Turbine has a “cut in” speed of 3 m/s (6.7 mph), “cut out” uses an algorithm which looks at average power exported and when this drops below zero for more than 15 seconds the turbine “cuts out” and goes into standby mode, however it will continue to function and provide a positive contribution down to the “cut out” point (approximately speed of “cut out” is 2.0 m/s (4.5 mph). The Qr6 turbine has a high wind speed safety “cut out” of 20 m/s (44.7mph).

The low speed “cut in” of 3 m/s makes the Qr6 turbine the market leader in low wind speed start up and operation. The benefits of the low speed “cut in” is that the Qr6 turbine will operate for significantly longer periods of the year when traditional VAWT turbines would be in a standby mode. This significantly increases the Annual Energy Production of the Qr6 turbine. The low-speed performance improvements have been achieved by, significant improvements to the aerodynamic efficient, a considerable reduction in the rotating mass, an increase in overall operational efficiency, a large decrease in parasitic power loss, revised operating software/firmware and a substantial lessening in rolling resistance due to enhanced bearings.



Qr6 Turbine Dimensions

Total Static Weight:	6m x 3.1m approx. 500 kgs
Weight Rotating Mass:	90 kgs
Operating Wind Speeds:	Start up at 3 m/s (6.7 mph) “cut out” approx. 2.0m/s (4.5 mph), high wind speed “cut out” 20 m/s (44.7 mph)
Operating Temperatures:	-30ºC(-22ºF) subject to dew point and ice formation to 55ºC(131ºF) ambient
Power rating:	7.5 kW
Customer supply:	400 volts 3ph AC50Hz,4 wire 16 amps plus earth
Distance:	Turbine base to controller- max 75m
Telemetry cabling:	Between turbine and controller cabinet CAT5/6FTP
Cabling:	Between turbine and control cabinet 4core SWA2.5mm
Anemometer:	Gill Maximet weather station
Foundation:	Vertical load into foundation 4.4kN, Lateral force 5 kN. Please note masts loads and weights. should be added to figures.
Standard mast option:	Tilt down-15m / 18m ground mounted