

Elegant wind power has arrived with the new quietrevolution vertical axis wind turbine.

The quietrevolution QR5 is an innovative new wind turbine designed to work well in the urban environment, where wind speeds and directions change frequently. The helical (twisted) design ensures a robust performance even in turbulent winds, it also virtually eliminates noise and vibration, critical for use on or near buildings.

The design arises from a combination of sound engineering principles and state-of-art aerospace technology, where form follows function to create an efficient and visually engaging turbine made of carbon fibre and with a design life of 25 years.

- The quietrevolution vertical axis wind turbine (VAWT) has a key advantage over a more traditional horizontal axis wind turbine (HAWT) in that it doesn't need to change its orientation to track the wind.
- QR5's sophisticated control system takes advantage of gusty winds: an innovative fuzzy logic controller learns about the site's wind conditions over time to further improve the amount of energy generated.
- The blade tip speed is much lower than on a similarly rated HAWT so less noise is produced.
- The helical blade design results in very smooth and vibration free operation.



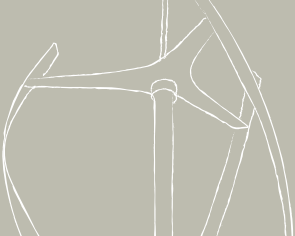
- QR5 boasts a light and durable carbon fibre structure conceived using cutting edge computer design and modelling.
- QR5 is easy to integrate into existing structures due to its compact shape.
- The turbine's predicted output of 9600 kWh per year at an average annual wind speed of 5.8 m/s will provide 10% of the energy for a 600 m² office building.



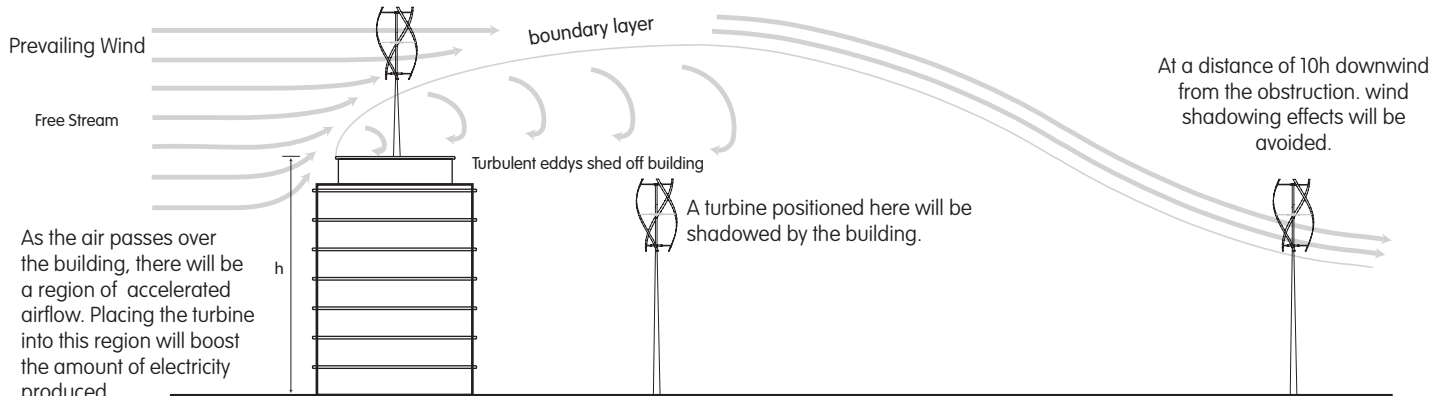
quietrevolution Ltd is a spin-off from London based engineering and design studio XCO2. Concerned with low carbon solutions for both new and refurbished buildings, XCO2 works in conjunction with architects and developers to design energy efficient eco-friendly buildings.

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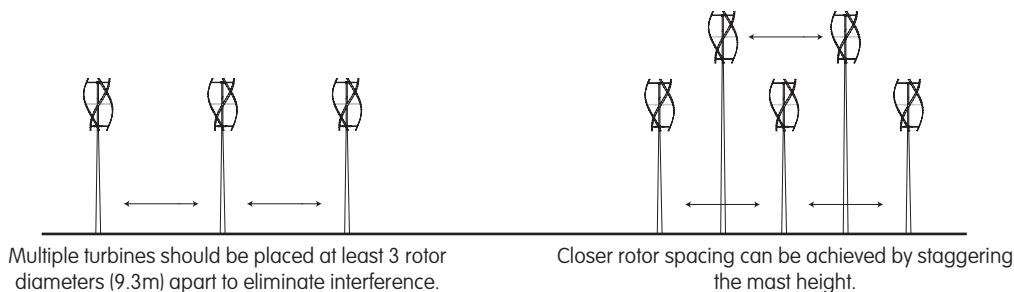
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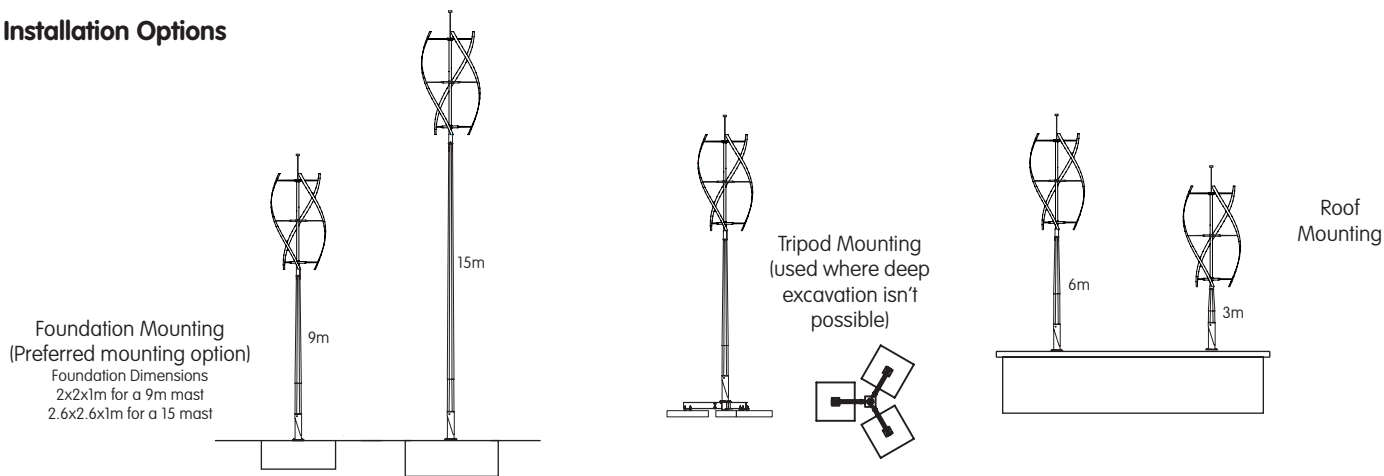
Optimising Wind Energy in the Urban Environment



Turbine Spacing



Installation Options



Technical Specification

Physical dimensions:	5m high x 3.1m in diameter	Design life:	25 years (annual inspections recommended)
Generator:	Direct drive, mechanically integrated, weather sealed permanent magnet generator	Roof mounting:	Minimum recommended height above buildings: 3m
Power control:	Peak power tracking constantly optimises turbine output for all sites and windspeeds	Tower mounting:	Minimum mast height: 9m to bottom of blades. Demountable models are also available for temporary installations
Operation mode:	Max wind speed: 16 m/s; Min wind speed: 4 m/s	Remote monitoring:	Event log can be accessed via GSM Dial up. Remote monitoring stores operation and kW hours of electricity generated
Rotor construction:	Carbon fibre and epoxy resin blades and connection arms	Warranty:	Two years on components
Brake and shutdown:	Over-speed braking above 14 m/s wind speed, auto shutdown in high wind speeds (above 16 m/s)	Cost of turbine:	£25,000
		Installation cost:	Around £5,000-£10,000 (site dependent)