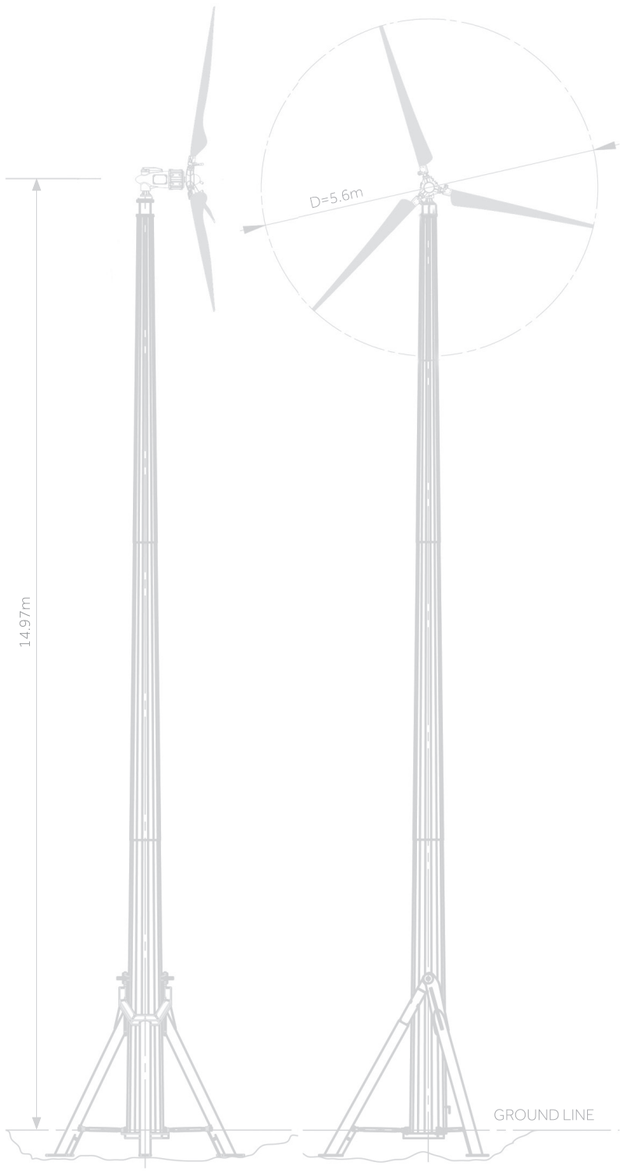
Head Office, Windcrop Ltd, The Granary,
Honingham Thorpe, Norwich NR9 5BZ
tel: 01603 882152 info@windcrop.co.uk
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System Specification

Wind turbine	Huaying HY5-AD5.6
Power	BWEA rated power at 11m/s is 4.1 kW, peak power output 5.0 kW
Physical dimensions	Rotor diameter - 5.6m ($24.6m^2$ swept area) Hub height (ground to centre of hub) - 14.97m
Tower type	Tapered free standing tower (steel) and helical pile foundation
Turbine finish	All exposed parts galvanised, painted in white
Blade finish	Glass fibre reinforced composite
Tower finish	Matt grey galvanised to BSEN1461
Rotor speed	240 rpm nominal – maximum 280 rpm
Tip speed	70.3m/sec nominal – maximum 82.1 m/sec
Rotor orientation	Downwind, self-regulating
Number of blades	3
Generator	Permanent magnet directly connected generator
Power regulation	Variable pitch system (mechanical) and G59 compliant inverter
Electrical connection	Single phase
Annual energy yield	8458 kWh at 5m/s to BWEA standards, up to 16,068 at 7m/s
Operating wind speeds	Cut in at sustained 3.5m/s
Design life	The HY5 has a design life of 20 years
Power regulation and shutdown	Power regulation begins at wind speeds above 8m/s
Warranty	Please refer to Windcrop's unique service plan for details



N.B. The energy output will vary according to the site wind speed.

When comparing turbine ratings please compare the MCS certified AEP forecast rather than the peak power output to ensure a correct comparison.

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The Windcrop System

TECHNICAL SPECIFICATION



The Windcrop System

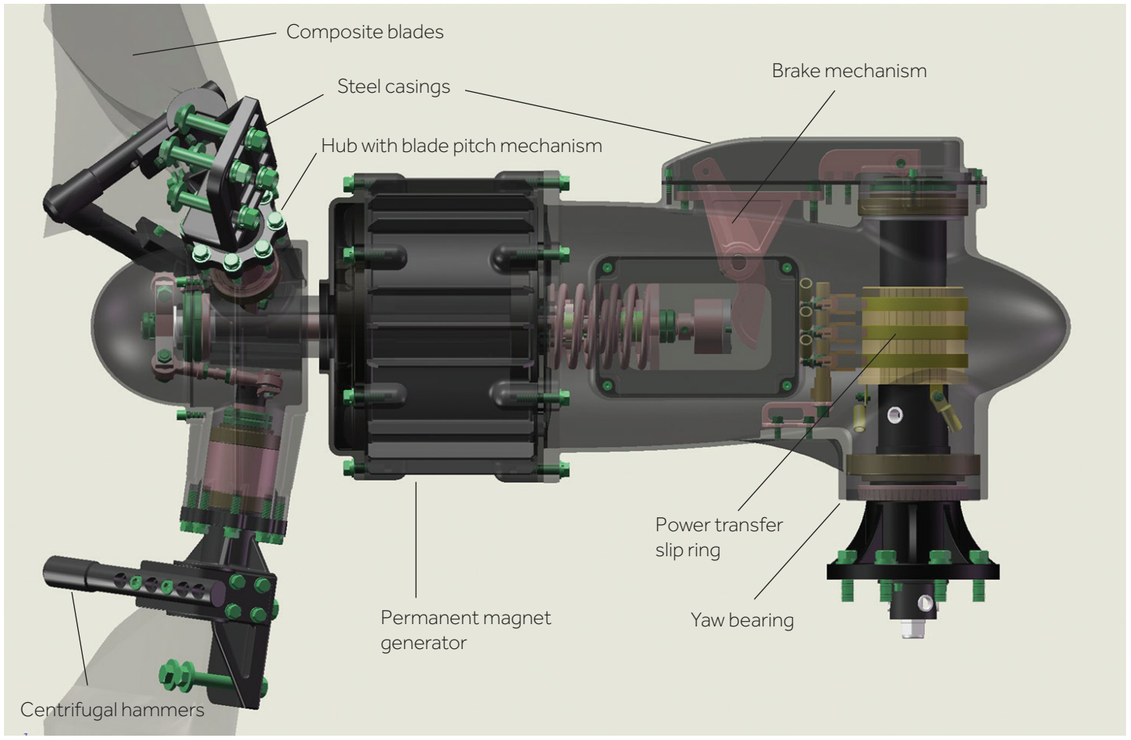
TECHNICAL SPECIFICATION

QR-HY5 Turbine Details

The HY5 is a 5kW horizontal axis, small-scale wind turbine. It has a unique, patented pitch control mechanism that ensures excellent power production in low winds whilst enabling safe operation at all wind speeds without the need to shut down. Yaw control is self-aligning down-wind which avoids the need for a visually prominent tail vane and provides very stable yaw control.

Together, these features deliver excellent energy production providing a cost effective energy source even in moderate wind speed sites.

The HY5 uses a purely mechanical pitch and yaw control system with no electronics or actuators to cause reliability problems and all parts are easily serviceable. It is designed to operate in harsh conditions with all parts corrosion protected.



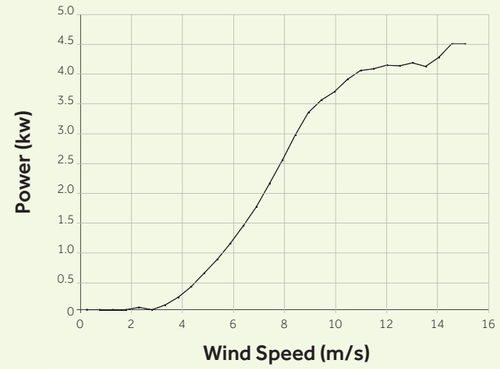
The key advantages of the QR-HY5 are:

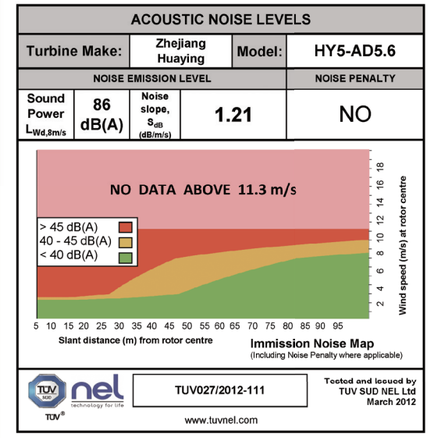
- High energy production enables good returns at lower wind speeds
- Small scale helps with both planning and grid connection consents
- Durable and serviceable mechanical design, no electronics or actuators
- Casings galvanised and powder coated, all fixings stainless steel

AEP (Annual Energy Prediction)

Annual Wind Speed (m/s)	Annual Energy Prediction (kWh)
4	4,661
5	8,458
6	12,403
7	16,068
8	19,277
9	21,971
10	24,124
11	25,725

HY5 Certified Power Production





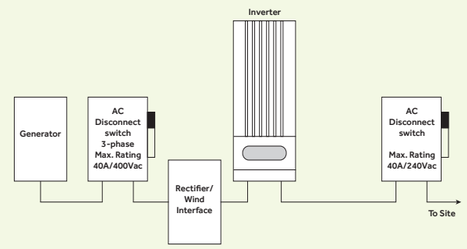
The Windcrop System

The Windcrop mast has a tripod leg system that is bolted rigidly to 3 helical piles in the ground. The helical method of fixing is a unique patented system developed by Windcrop. The piles are screwed into the ground by a small excavator in minutes, resulting in no ground disturbance. The piles are rated well in excess of the loads required. As there is no concrete or curing time, they can be used immediately.

The Windcrop mast pivot action allows the mast to be raised and lowered quickly. This allows for fast installation and maintenance with minimal site disruption.

Once the cable is trenched and the mast and turbine erected, the turbine power cable is connected to the site supply via our discrete electrical enclosure. This enclosure contains the Power One inverter which converts electricity from the turbine into grid matched 240Vac.

Connection Diagram



APPROVED PRODUCT