



## ***Gazelle 20kW Wind Turbine***

The Gazelle wind turbine is an elegant, green solution for medium power users such as:

- Schools
- Small businesses
- Dairy farms
- Water works
- Visitor centres
- Eco centres
- Rural businesses
- Community buildings



## ***Clean power for all***

- Power produced by the turbine is used on the premises, off-setting bought in electricity.
- Renewable Obligation Certificates can be obtained for all of the wind turbine's electricity output.
- When the user requires more electricity than the Gazelle is generating, it is drawn from the grid.
- Power is standard 400/415 volt 3-phase. The turbine is grid connected.
- Control of the turbine is automatic. It starts up and shuts down depending on the wind conditions.
- The Gazelle should be sited more than 180m from neighbouring domestic properties, but can be closer to commercial properties.
- With an annual mean wind speed of 6.5 metres per second at hub height it is designed to produce over 60,000kWh per year



more over



Gazelle Wind Turbines Ltd is based on Tyneside in the North of England. Manufacturing of the turbines is carried out for Gazelle by MKW Engineering Ltd, a well established engineering company in the region.

The Gazelle turbine was originally developed by North Energy, who are renewable energy specialists, based in Morpeth, Northumberland.

It was developed with the aid of the DTI's SMART and SPUR awards.

## Technical Specifications

Rotor diameter	11m
Rotor speed	106 rpm
Rotor position	Down wind
Nominal output	20kW
Power regulation	Stall
Rated wind speed	13 m/s
Cut-in	4 m/s
Cut-out	20 m/s
Turbine design	IEC 1400-1 Class III
Blade material	Carbon fibre epoxy
Emergency brakes	2 spring/hydraulic
Service brake	1 hydraulic
Gearbox	2 stage helical
Generator	4 pole 1500 rpm
Nominal voltage	400 V, 3-phase
Nominal frequency	50Hz
Nameplate rating	22 kW
Yaw	Free yaw
Nacelle	Torque tube & bedplate
Tower	Tubular steel
Hub height	13 m (20m option)
Installation	Crane
Access	Ladder with harness
Controller	PLC
Power quality	to Eng. Rec. G59/1



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