



WES250

'Bringing renewable energy everywhere'

The WES250 is a two bladed, high performance, reliable 250 kW midsize wind turbine with a rotor diameter of 30 meters. The mechanical part of the WES250 is based on the original proven design from 1994. For the electrical part, power conversion and control, the latest technology is used. The WES250 is also available as Hybrid Wind/diesel system.



Wind Energy Solutions BV

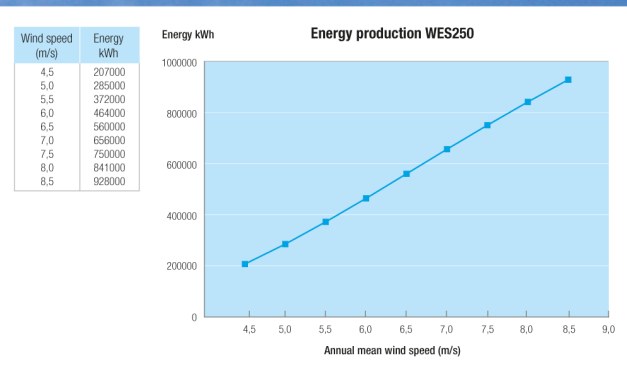
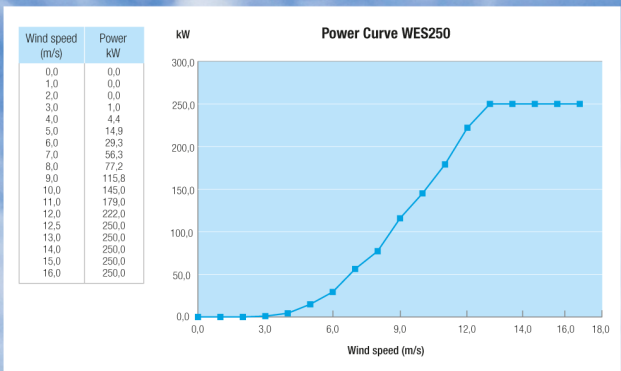
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TECHNICAL SPECIFICATIONS



GENERAL

Life expectancy: Minimum 20 years
 Nominal power: 250 kW
 Cut in Wind speed: < 3 m/s (6.7mph)
 Cut out Wind speed: 25 m/s (56mph)
 Nominal wind speed: 13 m/s (29mph)
 Survival wind speed: 60 m/s (134mph)
 Wind class: II
 Yawing: Active
 Passive power regulation: Blade-angle adjustment
 Active power regulation: Fully variable back-to-back IGBT system

Towers heights: 30 m, 39 m, 48 m
 Number of blades: 2
 Rotor diameter: 30 m
 Noise emission at 8 m/s: 45 dB(a) at 300 m
 Operating temperatures: from -20°C up to + 40°C

ELECTRICAL

Power: 250 kW
 Voltage: 400V/50Hz 3 phase + neutral or 400V/60Hz 3 phase + neutral
 Connection: grid connected / Hybrid
 Converter: back-to-back inverter (IGBT)

MATERIAL SPECIFICATIONS

Blades: carbon and glass fibre reinforced epoxy
 Nacelle: steel
 Cover: polyester
 Tower: steel (painted)
 Foundation: concrete block with anchor

WEIGHTS

Blade assembly: 315 kg per blade
 Rotor: 2.970 kg
 Nacelle incl. Rotor and blades: 10.700 kg

KEY COMPONENTS

Generator: ABB
 Gearbox: Siemens
 Converter: Control Techniques (Emerson)

APPLIED STANDARDS

Degree of protection: IP55
 CE-mark: yes

Complies with standards: NEN1010 (electrical), EN50308 (safety), EN6096 (wind turbines) UI1741, G59/2 (anti Islanding), IEC61346-2000 (Cabinet)

