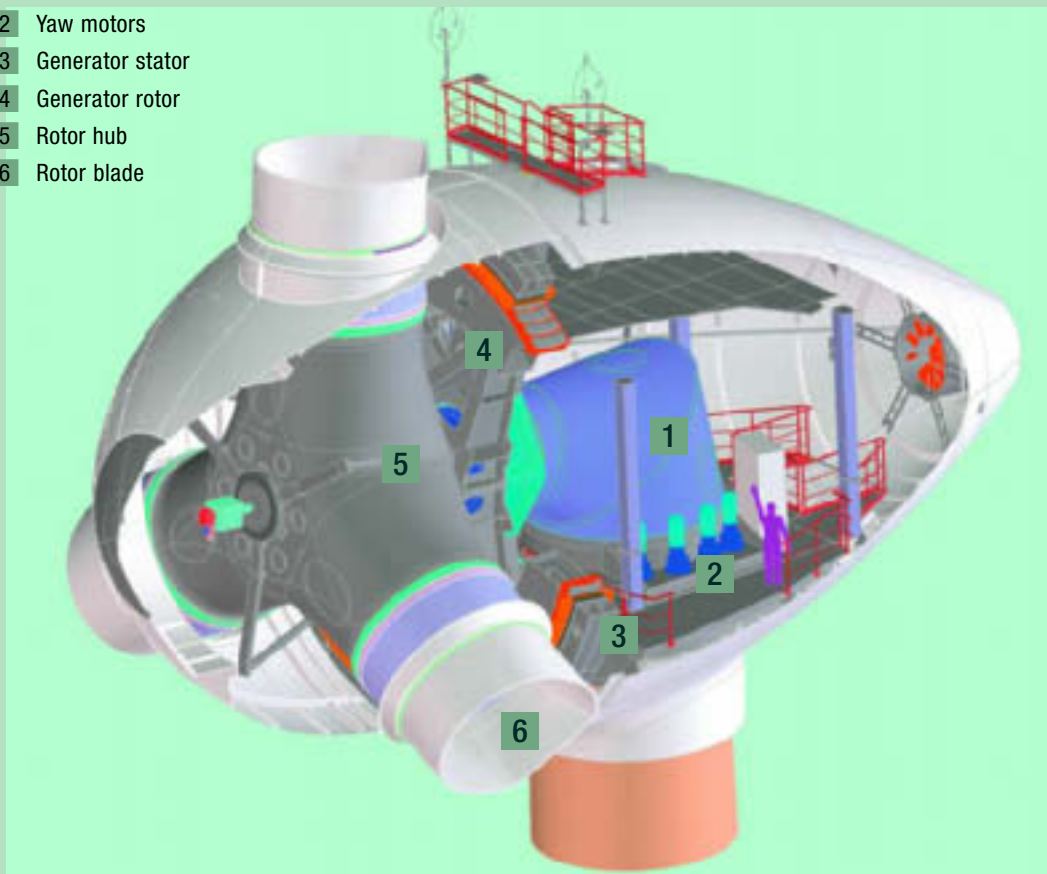




E112

- 1 Main carrier
- 2 Yaw motors
- 3 Generator stator
- 4 Generator rotor
- 5 Rotor hub
- 6 Rotor blade



E112

The E-112 is designed for large power capacities in the renewable energy sector. Gearless ENERCON system technology opens up new dimensions in terms of both generating energy and siting options. The turbine's many high-tech highlights include the transportation and assembly methods, the precisely calculated proportions of the whole complex, the load flow concept, the digitalised turbine features and the ENERCON grid system complying with the latest grid feeding guidelines. Not to mention its ability to generate enough power for a small town.

TECHNICAL DATA

Rated power: 4500 kW
 Rotor diameter: 114 m
 Hub height: 124 m
 (in situ concrete tower)

Turbine concept: Gearless, variable speed, variable pitch control

Rotor
 Type: Upwind rotor with active pitch regulation
 Direction of rotation: Clockwise
 Number of blades: 3
 Swept area: 10207 m²
 Blade material: Fibreglass (epoxy resin); integrated lightning protection
 Rotor speed: Variable, 8–13 rpm
 Tip speed: 48–78 m/s
 Pitch control: ENERCON blade pitch system, one independent pitching system per rotor blade with allocated emergency supply

Drive train with generator
 Hub: Rigid
 Main bearings: Dual-row tapered/single-row cylindrical roller bearings
 Generator: Direct-drive ENERCON ring generator

Grid feeding: ENERCON inverter

Braking systems:
 – 3 independent blade pitch systems with emergency supply
 – Rotor brake

Yaw control: Active via adjustment gears, load-dependent damping

Cut-in wind speed: 2.5 m/s

Cut-out wind speed: 28–34 m/s

Remote monitoring: ENERCON SCADA