### Turbine Specifications

**Main dimensions**
- Rotor diameter: 46.1 m
- Hub height: 47.2 m
- Application: Dual speed
- Grid connected operation

**Design data**
- Operational area: 3.5 - 25 m/s
- Max. designed wind speed: 52.5 m/s
- Operational area nominal power: 14 m/s
- Nominal rotor speed: 28.5 rpm
- Generator power: 500 kW

**Rotor data**
- Blades: 3
- Material: Glass-fibre reinforced Epoxy
- Blade profile: NACA 634, 636 and DU
- Power regulation: Active stall control
- Shaft angle: 5°
Brake systems
a) Aerodynamic : blade pitch control to -90°
b) Mechanical : two disc brakes on high speed shaft
Both systems : fail safe

Transmission
Gearbox : Hansen
Transmission ratio : 1 : 53.199
Gearbox capacity : 2 x 308 kW
System : parallel axis, 3 stage twin
Coupling to rotor shaft : direct

Electrical system
Generator : asynchronous, 690 V, 3 phase 4-pole, 1515 rpm
Connection to grid : automatic, soft starters
Type generator : M2CG 355MA 4 B5

Yaw mechanism
System : hydraulic yaw system activated by a wind direction sensor
Bearing : plastic slide bearing

Cooling system : powered intake of fresh air, using the natural flow pattern in the nacelle. Air intake and outlet grids are designed to reduce environmental noise radiation. The gearbox has an oil-cooling system, controlled by thermostat.

Safety system
Controller : NedWind Wind Turbine Controller (WBB)
Type of controller : microprocessor

Construction
Nacelle : frame constructed of girders and partitions
Tower : tube out of annealed construction steel
Access to nacelle : safety ladder in tower interior
Foundation : reinforced concrete slab, (on piles if necessary)

Weights
Rotor : 14,500 kg
Nacelle : 26,000 kg
Tower : 36,200 kg