Bonus 450 Turbine Specifications

Rotor Diameter – 37 meters
Tower Height – 40 meters (two sections)
Configuration: - Rotor blades, horizontal axis, upwind, stall-controlled

Operating data:

- Power-on wind speed:	4.5 m/s *
- Power-off wind speed:	28 m/s
- max. wind speed:	57 m/s

Rotor:

- No. of rotor blades:	3
- Diameter:	37 m
- Rotor area:	962 m^2
- Rotor speed:	35 min^{-1}
- Power regulation:	Constant pitch angle with stall-controls

- Rotor blade:	Cantilevered
- Design:	Glass fiber-reinforced
- Material:	Polyester
- Profile chord at the blade root:	1.35 m
- Profile chord at the blade tip:	0.48 m

Electrical System:

- Power factor:	0.96
- Generator	
Type:	Induction generator
Rated output:	450 kW
Voltage- phases:	480 D - 3 phases

Transmission:

- Gear ratio:	1 : 43
- Design:	Three stage 1st stage: Planetary gear 2nd and 3rd stage: spur gear, helical cut
- Generator coupling:	Elastics coupling
- Shaft coupling:	Elastics coupling

Brake system:

- Service brake:	Aerodynamic braking, Hydraulic actuation through the control system
- Locking brake:	Disc brake, hydraulically actuated, can only be actuated manually
- Emergency brake:	Initiation of aerodynamic brakes by the overpressure valve

Weight:

- Rotor approx.:	6,500 kg
- Nacelle approx.:	16,000 kg
- Tubular tower approx.:	18,000 kg
- Total weight approx.:	40,500 kg