

## ae 2.0-50.0

### General Data

Blade length (m)	50.0
Design Type Class (-)	3A

Maximum chord (m)	3.5
Prebending at tip (m)	2.60

### Operation Parameter

Rated power (kW)	2000
Rotor diameter (m)	102
Nominal speed (rpm)	14.9
Nominal tip speed (m/s)	80

### Blade Connection

BCD blade root (mm)	2110
Number, size of tension bolts	60 x M36
	64 x M30
	80 x M30

### Aerodynamic Parameter

Tip speed ratio (-)	9.5
Power coefficient** (-)	0.48

### Mass and Frequencies

Mass (excl. T-Bolts) (kg)	10000
Mass-T-Bolts (kg)	340/251/291
CoG (m)	15.11
First/Second flap-wise frequency (Hz)	0.66/1.92
First/Second edge-wise frequency (Hz)	1.16/3.70

\*\* conservative approximation, depends on specific turbine configuration

The standard design of the blade is performed with the wind conditions and operation parameters as listed above. Any customized modifications of the wind conditions, the blade materials and the structural design are possible. Its lightweight construction using modern glass fibre textiles along with its load reducing design makes this blade well-balanced. The blades' structure is based on the well proven and successful aerodynBlade concept.

