

## ae 1.5-45.0

### General Data

Blade length (m)	45.0
Design Type Class (-)	3B

Maximum chord (m)	3.0
Prebending at tip (m)	2.67

### Operation Parameter

Rated power (kW)	1500
Rotor diameter (m)	92
Nominal speed (rpm)	16.6
Nominal tip speed (m/s)	80

### Aerodynamic Parameter

Tip speed ratio (-)	10.0
Power coefficient** (-)	0.47

### Blade Connection

BCD blade root (mm)	1800
Number, size of tension bolts	54 x M30
	64 x M30

### Mass and Frequencies

Mass (excl. T-Bolts) (kg)	7107
Mass-T-Bolts (kg)	180 / 220
CoG (m)	14.55
First/Second flap-wise frequency (Hz)	0.67 / 1.86
First/Second edge-wise frequency (Hz)	1.02 / 3.18

\*\* 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.

