ae 4.0-68.7-2

General Data

Blade length (m)	68.7	Maximum chord (m)	4.8
Design Type Class (-)	2A	Prebending at tip (m)	4.50

Operation Parameter

Rated power (kW)	4000
Rotor diameter (m)	140
Nominal speed (rpm)	11.3
Nominal tip speed (m/s)	83

Aerodynamic Parameter

Tip speed ratio (-)	9.4
Power coefficient** (-)	0.47

Blade Connection

BCD blade root (mm)	3200
Number, size of tension bolts	90 x M42

Mass and Frequencies

Mass (excl. T-Bolts) (kg)	19160
Mass-T-Bolts (kg)	745
CoG (m)	20.37
First/Second flap-wise frequency (Hz)	0.59 / 1.61
First/Second edge-wise frequency (Hz)	0.87 / 2.45

** 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.