

ae 5.0-63.5

General Data

| | |
|-----------------------|--------|
| Blade length (m) | 63.525 |
| Design Type Class (-) | 1B |

| | |
|-----------------------|------|
| Maximum chord (m) | 5.1 |
| Prebending at tip (m) | 2.31 |

Operation Parameter

| | |
|-------------------------|------|
| Rated power (kW) | 5000 |
| Rotor diameter (m) | 130 |
| Nominal speed (rpm) | 12.5 |
| Nominal tip speed (m/s) | 85 |

Aerodynamic Parameter

| | |
|-------------------------|------|
| Tip speed ratio (-) | 8.7 |
| Power coefficient** (-) | 0.48 |

Blade Connection

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

Mass and Frequencies

| | |
|---------------------------------------|-------------|
| Mass (excl. T-Bolts) (kg) | 21373 |
| Mass-T-Bolts (kg) | 744 |
| CoG (m) | 19.90 |
| First/Second flap-wise frequency (Hz) | 0.65 / 1.74 |
| First/Second edge-wise frequency (Hz) | 1.03 / 3.14 |

** 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.

