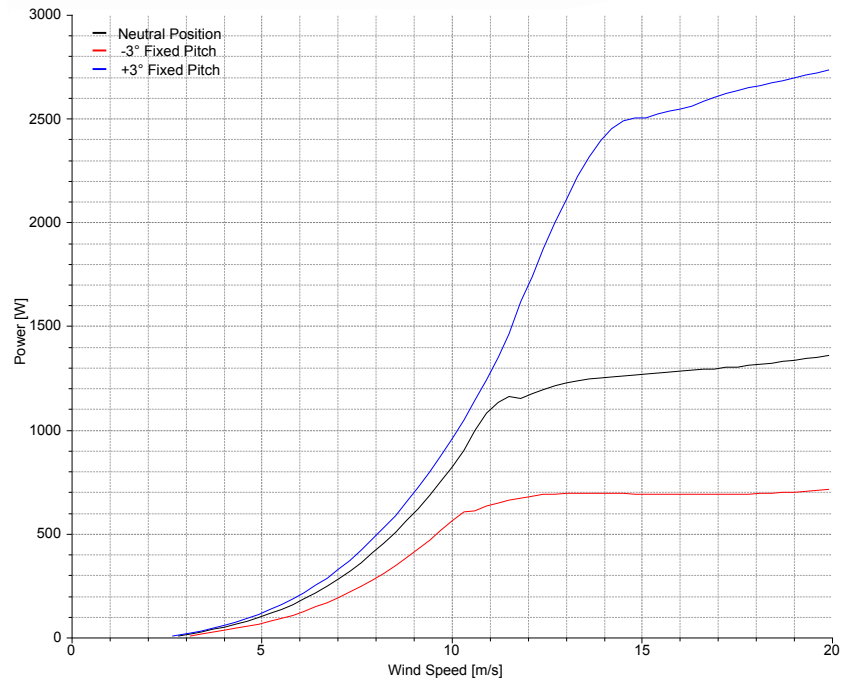
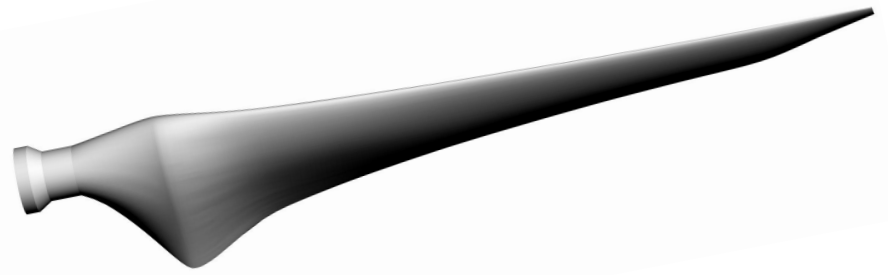


1kW HAWT Rotor

...designed by SMART **BLADE**



- High twist for efficient operation
- Low cut-in speed
- Constant power at post-stall region
- Design-Flexible root & hub design
- Low noise "Ogee" blade tip
- Efficient airfoil selection
- Anti-erosion protection (optional)
- GRP + Epoxy Construction
- Adaptable hub-shaft connection



Rotorblade Length	1 [m]
Design Tip Speed Ratio	6
Chord Distribution	Schmitz
Max. Chord	0.21 [m]
Twist	35 [°]
Design rotational frequency	400 [r.p.m]
Rotational frequency range	150 – 400 [r.p.m]
Nominal Reynolds Number	2.5 x 10 ⁵
Weight	Aprox. 1.4 [kg] per blade
Material	GRP + Epoxy
Airfoils	TU Delft (Root), Wortmann (Tip)
Blade Tip Shape	Ogee low noise tip
Blade Root Shape	Cylindrical + Conical bottom expansion
Hub Connection	Clamping + Form-Fit
Hub Diameter	0.3 [m]
Hub Design	Aluminum plates + Blade Clamps
Nominal Power	1200 [W] at 11 [m/s]
Cut-In Speed [m/s] (no mech. losses)	2.5 [m/s]
Cut-Out Speed [m/s]	20 [m/s]

