

OUR 3WT SERIES

ENGLISH

DATASHEET

The 3WTR blade is designed for use in a small wind turbine rotor based on the standard 3-bladed W-hub.

The 3WTR rotor can extract up to 40% of the energy content of the wind passing through the swept area of the rotor. The energy can be used for electric power-generation, heat generation, pumping water or any other power consuming task.



DESIGN FEATURES

- 3 - bladed fixed-pitch rotor
- Variable speed optimised for 5.5 Tip-Speed-Ratio
- Clockwise rotation viewed from upwind direction.
- Starts to produce at speed 4 m/s
- Maximum productive speed 18 m/s
- Rotor diameter is 1750 mm. The diameter can be cut to other sizes, but performance data for other sizes is only available upon request.

TECHNICAL CONSIDERATIONS

1. Rotor speed rotation is optimised for windspeeds of about 4 - 18 meters per second, generating some 0 - 3500 watts, depending on the generator used.
2. The rotor in itself has no airbrake or speed limiting functions. The application, where it is used should include a speed limiting system preventing speeds of over 1200 rpm.

MATERIALS

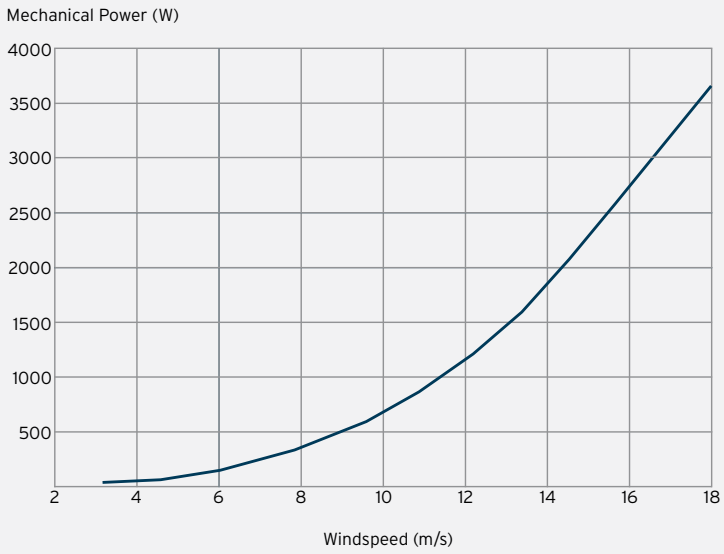
The hub parts are standard manufactured in a pressure die cast silumin alloy (EN-AC- Al Si12 Cu1 (Fe)). The blades and the spinner are currently available in:

PAG Glass Reinforced Polyamide

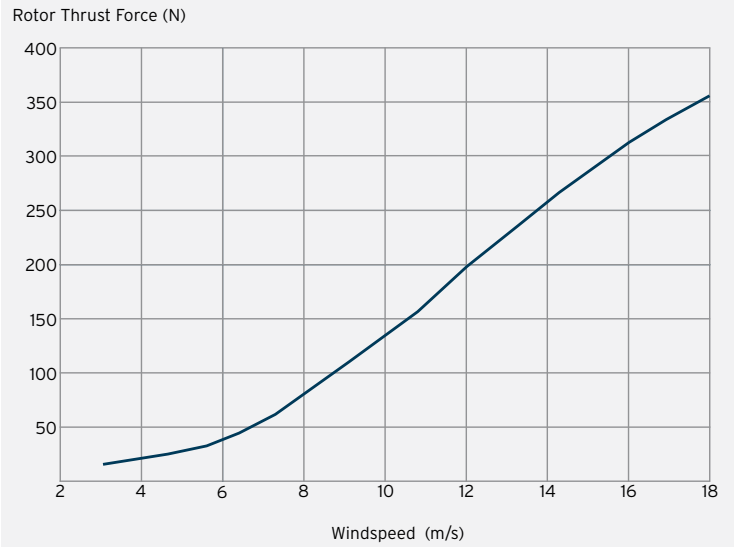
Temperature range: -40°C to +110°C

The values for the mechanical properties are mean values and can be subject to variations due to the use of different suppliers.

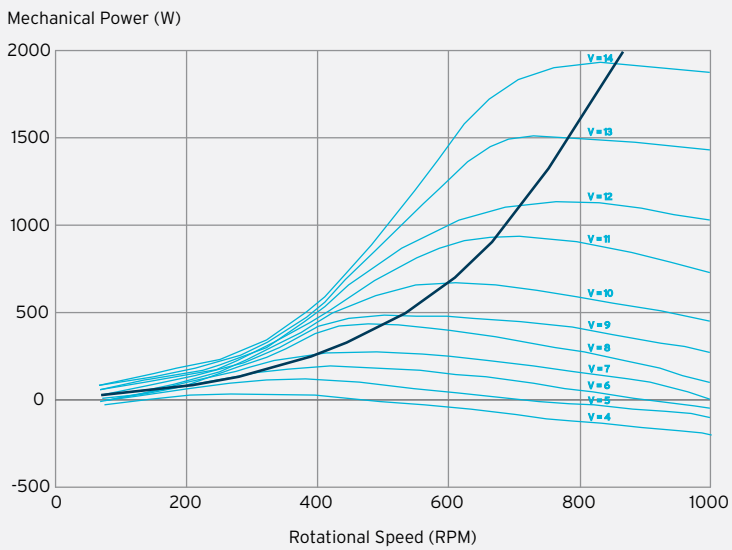
We reserve the right to change the materials of manufacture. The values for the mechanical properties are mean values and can be subject to variations due to the use of different suppliers.



Power Curve



Thrust Curve



Optimum Generator Characteristic

Power vs. rotational speed at different windspeed v (m/s)

