



WinWinD 3

Wind Turbine

SIMPLY PRODUCTIVE!

WinWinD 3 is a completely new 3 MW utility class wind turbine. It offers exceptional productivity and reliability in all wind classes. With a new 120 m rotor diameter the turbine sets new productivity standards even for low wind speed sites. A substantially lighter nacelle weight makes the installation effortless and cost efficient.

WinWinD 3 - Simply Productive

THE ENTIRELY NEW WINWIND 3 TAKES THE INTEGRATED POWER UNIT CONCEPT TO A NEW LEVEL.

PRODUCTIVE IN ALL WIND CLASSES!

WinWinD 3 offers you maximal energy production in all wind speed sites. With the option of three different rotor sizes of 100, 109 and 120 meters, the turbine is optimized for all wind conditions.

LIGHT WEIGHT!

Due to considerably lighter turbine weight, WinWinD 3 installation and logistics costs are optimized. In addition, thanks to intelligent design including sophisticated loads control, a high energy yield is achieved in all wind classes.

RELIABILITY THROUGH PROVEN CONCEPT!

Reliability has been a key target in designing the new WinWinD 3. We have taken the next step with WinWinD's integrated power unit concept, where the main bearing transfers the rotor loads directly to the main casing of the supporting structure. This keeps the whole drive train free from deformation, providing high reliability. The integrated power unit, comprising the main bearing, planetary

gearbox and permanent magnet synchronous generator, eliminates the unreliability of high-speed components.

GRID COMPLIANT!

WinWinD turbines fulfill the most demanding grid code requirements. This is achieved with our own control system and full conversion inverters.

WinWinD 3 turbines are type approved by a respected certification body.

WINWIND 3 ADVANTAGES:

- Light nacelle weight – 80 t
- 120 m rotor diameter
- Exceptional productivity – especially at low wind speeds
- Proven concept with 30 % less moving parts than conventional drive train system
- Designed for high availability
- Maximal grid compliance

GENERAL

Rated power	3000 kW
Cut-in	3–4 m/s (rotor dependent)
Rated wind speed	11–12.5 m/s (rotor dependent)
Cut-out	20–25 m/s
Wind class	IEC IA, IIA, IIIA (rotor dependent)
Design lifetime	20 years
Power control	Variable speed, variable pitch control
Turbine concept	Planetary gear with medium speed permanent magnet synchronous generator and full power conversion

ROTOR

Type	Three-bladed turbine
Diameter	100 m / 109 m / 120 m
Swept area	7867 m ² / 9348 m ² / 11366 m ²
Rotational speed	5–16 rpm

POWER UNIT / DRIVE TRAIN

Main bearing	Two-row tapered roller bearing
Gear box	Planetary
Generator	Synchronous, permanent magnet
Converter	Full power IGBT conversion
Grid frequency	50 Hz / 60 Hz

TOWER

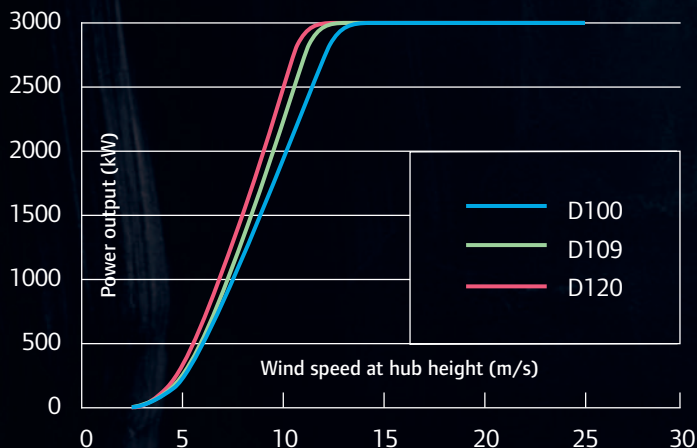
Type	Steel, tubular and concrete / steel hybrid
Hub height	90–120 m

BRAKE SYSTEM

Aerodynamic	Individual electric pitch with emergency power supply
Mechanical	Hydraulic disc brake

Several services and options are available for your wind park, including O&M and wind park control.

WinWinD 3 POWER CURVES



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