

GRADO EN INGENIERÍA MECÁNICA
TRABAJO FIN DE GRADO

***DISEÑO DE UNA PLATAFORMA FIJA TIPO
JACKET PARA UN AEROGENERADOR
OFFSHORE***

ANEXO 1- CARACTERÍSTICAS AEROGENERADOR

Alumno: Valtierra Martinez, Endika

Director: Marcos Rodríguez, Iñaki

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THE ENERCON 4 MW PLATFORM

E-141 EP4_ 4.2 MW

Smart. Efficient. Silent.



enercon.de/e141-ep4



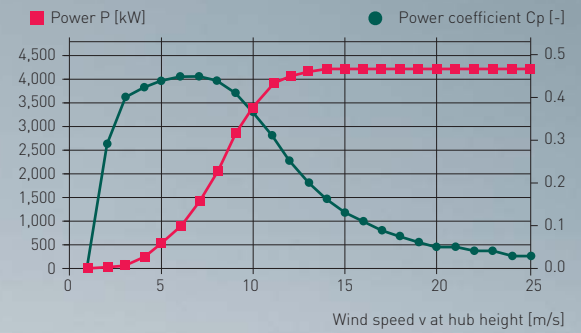
 **ENERCON**
ENERGY FOR THE WORLD

E-141 EP4_ 4.2 MW

New ENERCON specialist in 4 MW platform for inland sites

With their new E-141 EP4 / 4 200 kW turbine, ENERCON is offering a customized solution in the 4 MW segment for low wind inland sites. Tall towers and a larger rotor diameter allow for increased annual revenue and low sound power levels.

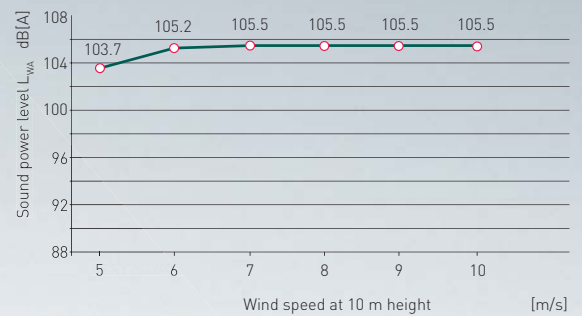
Calculated power curve E-141 EP4 / 4.2 MW



Technical details

- ~ Rated power: 4 200 kW
- ~ Rotor diameter: 141 m
- ~ Hub height: 129 / 159 m
- ~ Wind class (IEC): IEC/EN IIIA
- ~ Rotational speed: variable, 4 - 10.6 rpm
- ~ Cut-out wind speed: 28 - 34 m/s

Sound power level E-141 EP4 / 4.2 MW - 129 m hub height



Nacelle

- ~ Modular nacelle design to reduce production, transport and assembly time
- ~ Use of premium quality cast components
- ~ Simplified logistics due to the use of standard containers

Generator

- ~ Maximum running smoothness, minimised sound emission and maximum efficiency
- ~ 2-part generator design optimized for production and logistics
- ~ Advanced cooling concept with 35% less energy loss in cooling system
- ~ No use of rare earth elements

Rotor blade

- ~ Innovative aerodynamic design for maximum yield in the low wind range
- ~ Significant reduction of sound emissions by using Trailing Edge Serrations (TES)
- ~ 2-part blade design optimized for production and logistics
- ~ Significant increase in yield at cold climate sites
- ~ Excellent lightning protection system
- ~ Yield optimized flat-back profile
- ~ Minimal structural loads

4 MW
PLATFORM



E-141 EP4
Ø 141 m
IEC IIIa



E-126 EP4
Ø 126 m
IEC IIa

