

Technical specifications – E-175 EP5

General	
Manufacturer	ENERCON GmbH Dreekamp 5 26605 Aurich Germany
Type designation	E-175 EP5
Nominal active power	6000 KW (up to 6300 kW ¹)
Rotor diameter	175 m
Design service life	25 years

Rotor with pitch control	
Type	Upwind rotor with active pitch unit
Rotational direction	Clockwise (viewed from upwind)
Number of rotor blades	3
Rotor blade length	85.98 m
Swept area	23840.5 m ²
Rotor blade material	GFRP (glass-fibre reinforced plastic), CFRP (carbon-fibre reinforced plastic), balsa wood, foam
Power reduction wind speed with ENERCON storm control	25 m/s
Conical angle	-5°
Rotor axis angle to the horizontal	6°
Pitch control	One independent electrical pitch unit per rotor blade with dedicated emergency power supply

Drive train with generator	
Wind energy converter concept	Gearless, variable speed, full-scale converter
Hub	Rigid
Bearing	2 tapered roller bearings
Generator	Direct-driven, permanent magnet synchronous generator
IP code/insulation class	IP 54

Brake system	
Aerodynamic brake	Aerodynamic via 3 independent pitch units with emergency power supply
Rotor holding brake	E-brake
Rotor lock	Latching every 30°

¹ in Yield Optimized Mode 12 (OM-YO-12). The availability of Yield Optimized Mode 12 is dependent on, among other things, the tower version and the site.

Yaw control	
Yaw system	Electromechanical yaw system
Yaw brake	Electrical

Control system of the wind energy converter	
Type	Microprocessor
Grid feed	Full-scale converter with programmable logic controller
Remote monitoring system	ENERCON SCADA Edge system
Uninterruptible power supply (UPS)	Integrated

Tower types		
Hub height above ground level	Total height above ground level	Type
112.42 m	199.9 m	Tubular steel tower
132.46 m	220.0 m	Hybrid steel tower
162.00 m	249.5 m	Hybrid tower

Certified/target tower-specific design requirements					
Hub height above ground level	IEC wind class ²	IEC turbulence category ²	50-year extreme wind speed at hub height (10-minute mean) according to IEC ²	Corresponds to a load equivalent of approx. (3-second gust)	Annual average wind speed at hub height according to IEC ²
112.42 m	S	A	42.50 m/s	59.50 m/s	7.00 m/s
132.46 m	S	A	42.50 m/s	59.50 m/s	7.20 m/s
162.00 m	S	A	42.50 m/s	59.50 m/s	7.80 / 7.20 ³ m/s.

² Issue of the directive Edition 4

³ in Yield Optimized Mode 12