

# G97-2.0 MW

Technological innovation and experience

Gamesa's G97-2.0 MW wind turbine is one of the latest additions to the Gamesa 2.0 MW series, the most versatile platform available on the market. The G97-2.0 MW wind turbine is Gamesa's response to the growing demand for technological solutions that deliver higher energy output at sites with low and medium wind speeds.

With 26 GW installed in 39 countries and availability levels well above 98%, the Gamesa 2.0 MW is one of the most successful platforms on the market. Today, with the new G97-2.0 MW wind turbine, Gamesa offers its customers even more benefits.

- ▶ INCREASED PRODUCTION AND MINIMUM COST OF ENERGY
- ▶ MAXIMUM PROFITABILITY
- ▶ GREATER RELIABILITY AND AVAILABILITY



GLOBAL TECHNOLOGY  
EVERLASTING ENERGY



## RELIABILITY AND TECHNOLOGICAL MATURITY

The G97-2.0 MW wind turbine inherits most of the technologies, subsystems and components developed and optimized for the Gamesa 2.0 MW platform with 15 years of successful performance. Moreover the G97-2.0 MW wind turbine introduces the enhancements and adaptations that ensure the wind turbine withstands the loads associated with a larger rotor.

### >> Nacelle

Reinforcements and enhancements have been introduced in key components/modules such as the drive train, the yaw system, the main shaft, the blade bearings and the frame. The nacelle has also been redesigned to provide more interior space to facilitate the maintenance operations.

### >> Blade

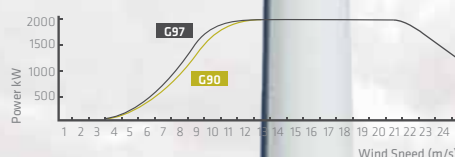
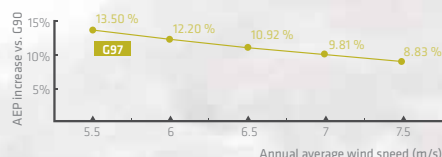
Gamesa's new aerodynamic blade profile has been optimized for low and medium wind speeds to guarantee maximum energy production, minimized noise emission levels and decreased aerodynamic loads on the nacelle. Moreover, the use of carbon fiber components in the construction reduces the blade's weight while maintaining its strength and energy production capability.

### >> Tower

New tower height available: 120 m.

## INCREASED PRODUCTION

With a 97-meter rotor that surpasses the swept area of the G90-2.0 MW by 16%, the new G97-2.0 MW wind turbine offers up to 14% more annual energy production.



## SPECIFICATIONS

General Data		Towers	
Rated power	2.0 <sup>(1)</sup> MW	Height	78, 90, 100, 104 <sup>(2)</sup> , 120 m
Wind class	IIA/IIIA	<b>Gearbox</b>	
Noise emission level	104.5 dB(A) at rated power	Type	1 planetary stage 2 parallel shaft stages
Noise control	Gamesa NRS <sup>®</sup>	Ratio	1:106.8 (50Hz) 1:127.1 (60Hz)
Temperature range	-30°C to +40°C (+45°C with de-rating)	<b>Generator</b>	
Environmental options	Versions available for high-altitude sites and dusty and high-corrosion environments	Type	Doubly-fed generator
Cut-in speed	3 m/s	Voltage	690 V AC
Cut-out speed	25 m/s (100s filter)	Frequency	50 Hz / 60 Hz
<b>Rotor</b>		Protection class	IP54
Diameter	97 m	Power factor	0.95 CAP - 0.95 IND throughout the power range
Swept area	7,390 m <sup>2</sup>	<b>MAIN MILESTONES</b>	
Rotational speed	9.6 - 17.8 rpm	G97 IIIA	First prototype 2011
Control	Variable pitch and speed	Mass production	2011
<b>Blades</b>		Type certificate	Available (DNV)
Length	47.5 m	G97 IIA	First prototype 2012
Profile	Gamesa	Mass production	2012
Material	Fiber glass pre-impregnated with epoxy resin + carbon fiber	Type certificate	Available (DNV)

(1) 2.1 MW nominal power upgrade available depending on the site.  
(2) Class S.

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