New Medium-Speed Permanent Magnet Platform Featuring High Reliability and More Opportunities

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Product Features

- **More reliable**

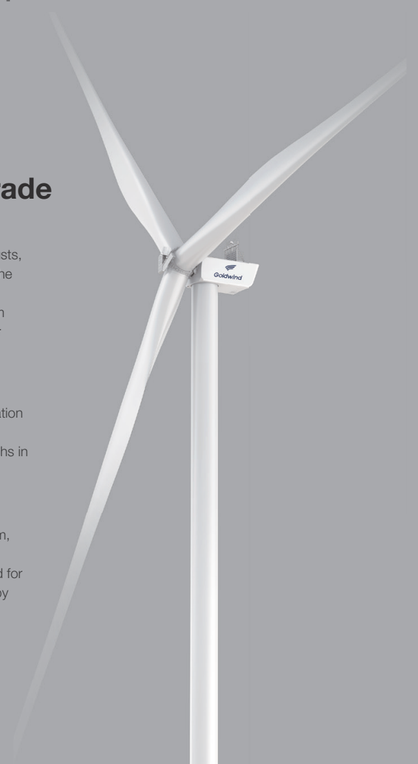
To guarantee high reliability, the new platform is designed with the technical merits of double tapered roller bearings drivetrain, middle-speed planetary gearbox, none coupler & slip ring design, etc. Double tapered roller bearing drivetrain design decouples torque & bending moment from the rotor effectively to make the gearbox operate under pure torque, thus remarkably improving the reliability of the gearbox.

- **More economical**

The 182m rotor diameter and 7.2MW rated output led to a significant increase in power generation. Compared with the previous generation model, larger rotor size and higher rated output power result in a maximum 10% increase in Annual Energy Production (AEP) at 7.0m/s and a 5% decrease in Levelized Cost of Energy(LCoE). Smart control technologies are incorporated into the wind turbine to improve the power generation continuously, such as yaw correction, field-level control, and energy consumption optimization.

- **More friendly**

Featuring a permanent magnet synchronous generator and a full-scale converter, the new platform inherits excellent grid-connection performance from the PMDD platform, including but not limited to quicker dispatch response, more accurate active power/frequency & reactive power/voltage control, and smoother fault voltage ride-through. The new platform improves environmentally and engineering friendly with available technical options, such as shadow control, noise control, single blade installation, and separated installation.



Intelligent all-round upgrade

- **Smart perception**

Real-time monitoring of severe wind conditions such as gusts, turbulence and wind shears can be conducted based on the advanced environment reconstruction algorithm for the perception system. The advanced unit controlling algorithm decreases the unit's operation risks while improving power generation.

- **Smart diagnosis**

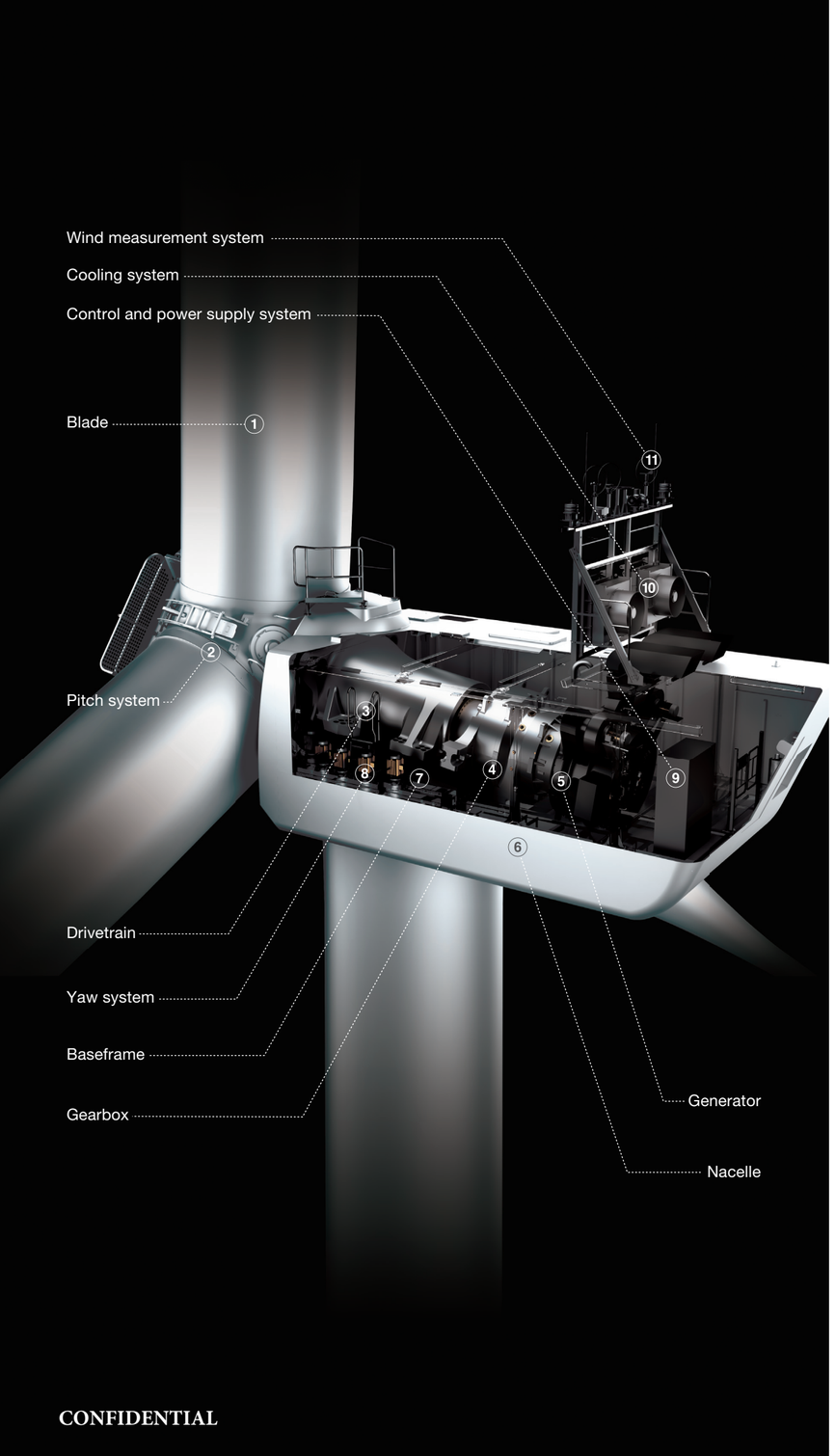
A comprehensive wind turbine health diagnosis and evaluation system Continuous online monitoring is conducted for key components and unhealthy facilities will be warned 2 months in advance to lower their overall fault rate by 20%.

- **Smart coordination**

Based on the Goldwind intelligent wind farm control system, intelligent cooperative control solutions such as flow field cooperative control and full life cycle control are conducted for all units to improve the maximum outcome of wind farms by 5%-10%.

DRIVING OUR RENEWABLE FUTURE

Goldwind



A New Generation of Onshore MSPM Series

Specification			GWH182-6.2MW	GWH182-7.2MW
Operating parameter	**Parameter**	**Unit**		
	Rated power	kW	6200	7200
	Wind class	IEC	S	
	Cut-in wind speed	m/s	2.5	
	Rated wind speed	m/s	10.9	12
	Cut-out wind speed	m/s	24	
	Designed service life	year	20	
	Operating temperature	℃	-30℃~+45℃	
	Survival temperature	℃	-40℃~+50℃	
Rotor system	Rotor diameter	m	182	
	Swept area	m^2	26016	
Gearbox	Type	\	Three-stage gearbox	
Generator	Type	\	Permanent magnet synchronous generator	
	Rated voltage	V	1380	
Converter	Type	\	Full power converter	
	Power factor regulation range	\	Capacitive 0.9 ~ inductive 0.9（Optional）; Capacitive 0.95 ~ inductive 0.95（Default）	
	Rated output frequency	Hz	50 / 60	
	Rated output voltage	V	1140	
Brake system	Aerodynamic brake system	\	Aerodynamic braking by feathering of three blades	
	Mechanical brake system	\	Generator brake (for maintenance)	
Yaw system	Type/design	\	Motor-driven / planetary gear	
	Yaw bearing	\	Sliding bearing	
Control system and lightning protection	Type	\	PLC control system	
	Lightning protection design standard	\	IEC61400 / 24 and IEC62305	
	Lightning protection strategy	\	Unit lightning protection (GL certification standards)	
Tower	Type	\	Steel tower / hybrid tower	
	Hub height	m	110,160 and site-specific	