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# 2.5 MW

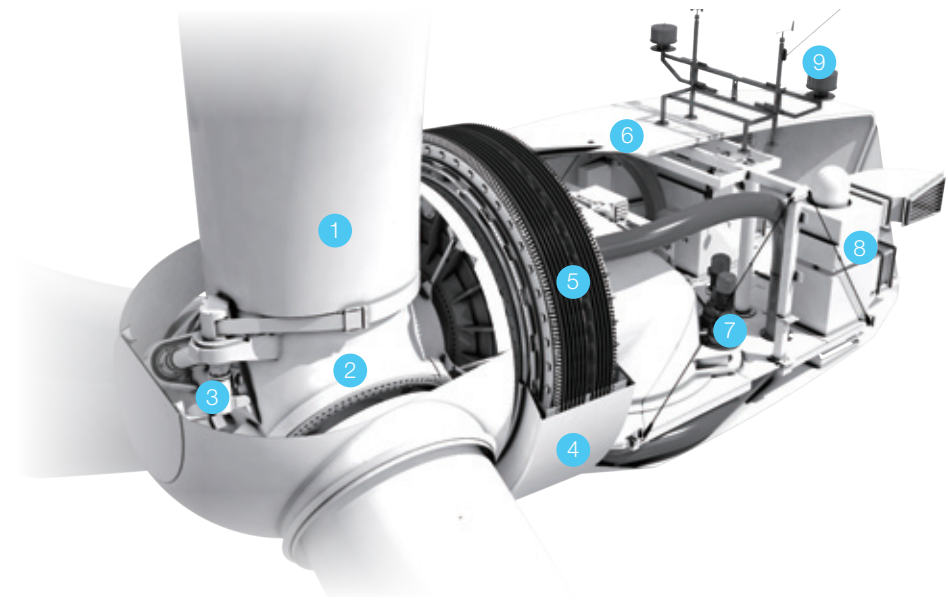
## PMDD WIND TURBINE

INNOVATING FOR  
A BRIGHTER FUTURE



# 2.5 MW PMDD WIND TURBINE

## GOLDWIND 2.5MW PMDD WIND TURBINE KEY FEATURES



1. Blade
2. Hub
3. Pitch System
4. Generator Rotor
5. Generator Stator
6. Nacelle
7. Yaw System
8. Generator Cooling System
9. Wind Measurement Equipment

### Platform Evolution

- 20+ years of operational experience from 21,000+ Permanent Magnet Direct Drive (PMDD) wind turbines
- Expansion of the successful Goldwind 1.5 MW platform with enhanced architectural features

### High Efficiency

- Permanent Magnet Synchronous Generator (PMSG) eliminates excitation losses
- The absence of gearbox eliminates losses from ancillary systems such as lubricant distribution and thermal management

### High Reliability

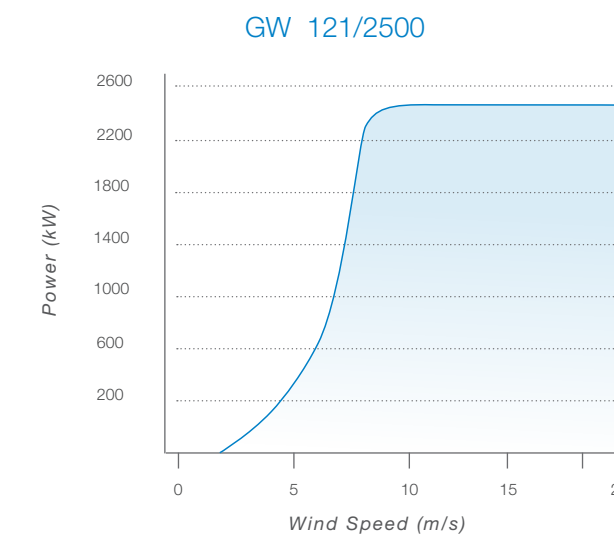
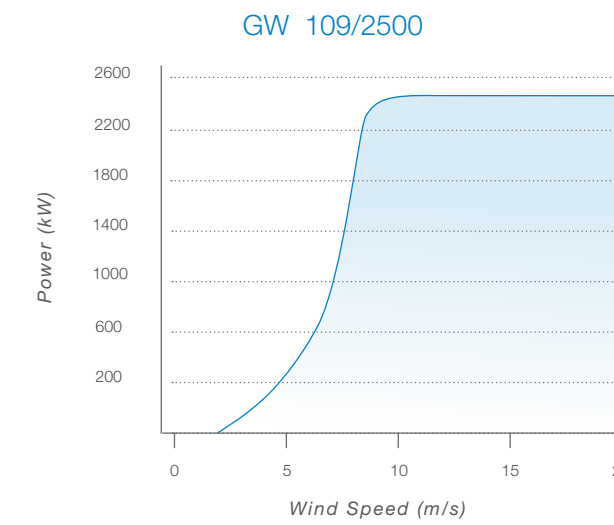
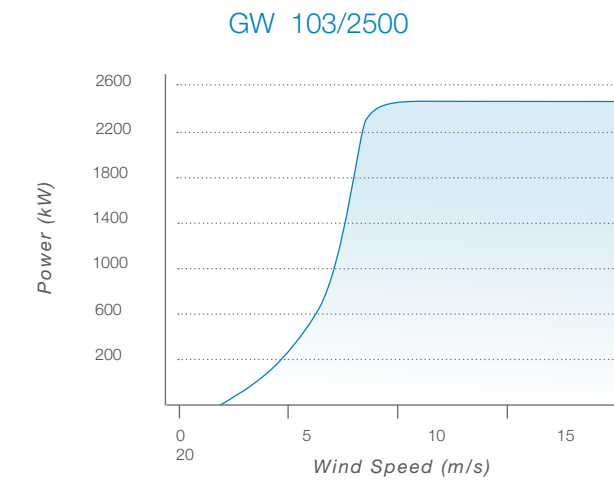
- The gearless drivetrain design eliminates the possibility of gear failure during the operational life of the turbine
- Maintenance-free design of the toothed belt pitch drive system simplifies pitch system maintenance requirements
- PMSG does not require high maintenance slip rings for conducting power

### Highly Adaptable

- Grid Adaptability: Excellent zero, low and high voltage ride through capability and compliant with associated standard's across the globe
- Maintenance Adaptability: Dual circuit design of generator and converter enables partial operation when one circuit is compromised
- Environment Adaptability: Flexible operation modes enable adaptation to extreme environmental conditions such as high and low temperature, noise constraints and challenging wind conditions
- Construction Adaptability: Individual blade assembly to conserve site space constraints

## DYNAMIC POWER CURVE

Air Density: 1.225kg/m<sup>3</sup>



## TECHNICAL SPECIFICATIONS

GW 2.5MW				
Item	Unit	Specifications		
Model		GW 103/2500	GW 109/2500	GW 121/2500
<b>Parameters</b>				
Rated Power	kW	2500		
Wind Class		IEC IB	IEC IIA	IEC IIIB
Cut-in Wind Speed	m/s	3		
Rated Wind Speed	m/s	10.8	10.3	9.3
Cut-out Wind Speed	m/s	25	25	22
Designed Service Life	Year	≥20		
Operating Temperature Range	°C	-30°C to +40°C		
Survival Temperature Range	°C	-40°C to +50°C		
<b>Rotor System</b>				
Nominated Rotor Diameter	m	103	109	121
Rotor Swept Area	m <sup>2</sup>	8,397	9,931	11,595
<b>Generator</b>				
Generator Type		Permanent Magnet Synchronous Generator (PMSG)		
Rated Voltage	V	690		
Rated Rotation Speed	rpm	14.5	14.5	13.5
<b>Converter</b>				
Converter Type		Full Power Conversion		
Power Factor Regulation Range		Capacitive 0.95 to Inductive 0.95, dynamically adjustable		
Rated Output Voltage	V	690		
<b>Brake System</b>				
Aerodynamic Brake System		Blade Pitch Triple-Redundant		
Mechanical Brake System		Hydraulic Mechanical Brake System (for Maintenance)		
<b>Yaw System</b>				
Type/Design		Motor Drive/Four Planetary Stages for Speed Reduction		
Yaw Brake		Hydraulic Brake		
<b>Control System and Lightning Protection</b>				
Type		PLC Control System		
Lightning Protection Standard		Complying with IEC 61400-24:2010 and IEC 62305:2006, and in conformance with GL Standards for the Certification of Wind Turbines		
Ground Resistance	Ω	≤4		
<b>Tower</b>				
Type		Conical Steel Tower		
Hub Height	m	80	90	90/120