



25 MW PMDD WIND TURBINE



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

GOLDWIND 2.5MW PMDD WIND TURBINE KEY FEATURES

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/m³

GW 103/2500



GW 109/2500



GW 121/2500



Item Unit Specifications				
Model		GW 103/2500	GW 109/2500	GW 121/2500
Parameters	1	1	1	1
Rated Power	kW		2500	
Wind Class		IEC IB	IEC IIA	IEC IIIB
Cut-in Wind Speed	m/s	3		
Rated Wind Speed	m/a	10.9	10.2	0.2
(Static)	11/5	10.0	10.5	9.0
Cut-out Wind Speed	m/s	25	25	22
Designed Service Life	Year	20		
Operating Temperature Range	C	-30°C ~ +40°C		
Survival Temperature Range	C	-40°C ~ +50°C		
Rotor				
Rotor Diameter	m	103	109	121
Rotor Swept Area	m ²	8397	9931	11595
Generator				
Generator Type		Permanent Magnet Synchronous Generator (PMSG)		
Rated Power	kW	2650		
Rated Voltage	V	690		
Rated Rotor Speed	rpm	14.5	13.5/14.5	13.5
Generator			-	·
Converter Type		Full Power Conversion		
Power Factor Regulation Range		Capacitive 0.95~inductive 0.95, dynamically adjustable		
Rated Frequency	Hz	50/60		
Rated Output Voltage	V	690		
Brake System				
Aerodynamic Brake System		The blades can be feathered by pneumatic brake		
Mechanical Brake System		Hydraulic Mechanical Brake System (for maintenance)		
Yaw Brake		1		
Type/Design		Motor drive/Four Planetary Stages for Speed Reduction		
Yaw Brake		Hydraulic Brake		
ntrol System and Lightning P	rotection			
Type		PLC Control System		
Lightning Protection Standard		Complying with IEC 61400/24-2002, IEC62305-2006 in conformance with the GL Standards for the Certification of Wind Turbines.		
Ground resistance	Ω		≤ 4	
Tower				
Туре		Conical Steel Wind Turbine Tower		
Hub height	m	80	80/90	90/120
Weight			1	1
Blade	t/p	12	12.1	14.7
Rotor (excluding blades)	t	28.6	28.6	28.6
Nacelle	t	29	29	29
Generator	t	55	55	55
Dimension				
Blade	m	50.5	53.2	59.5
Rotor (excluding blades)	m	5.0×4.4×3.5	5.0×4.4×3.5	5.0×4.4×3.5
Nacelle	m	8.1×4.3×4.0	8.1×4.3×4.0	8.1×4.3×4.0

TECHNICAL SPECIFICATIONS

2.5MW



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