



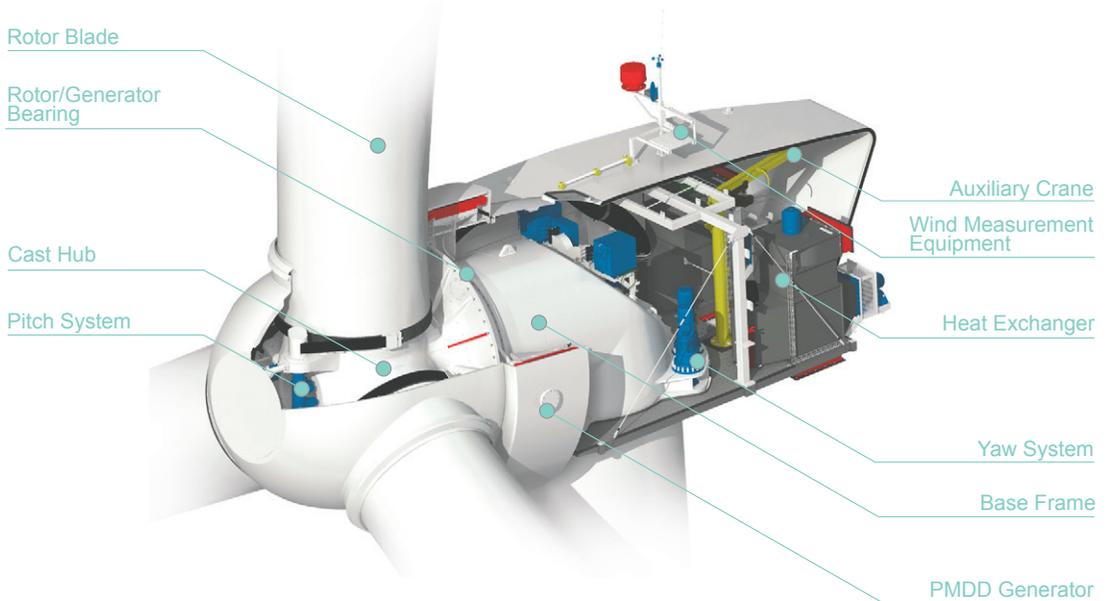
 GOLDWIND

PMDD WIND TURBINE

2.5MW



2.5MW PMDD WIND TURBINE



GOLDWIND 2.5MW PERMANENT MAGNET DIRECT-DRIVE (PMDD) WIND TURBINE

HIGH POWER GENERATING EFFICIENCY

- Permanent magnet generator (PMG) eliminates the need for electrical field excitation and associated energy losses.
- PMG operates more efficiently at partial load compared to other generator types

HIGH POWER TO WEIGHT RATIO

- Goldwind 2.5MW wind turbines feature a smaller external diameter compared to wound rotor designs.
- The combination of a PMG and direct-drive technology results in lowest-in-class top head mass and reduced crane requirements.
- Single-bearing design allows for a smaller physical structure, further enabling easier transportation.

SUPERIOR POWER QUALITY AND GRID CODE COMPLIANCE

- Full power conversion, which allows for reactive power feed, ensures compliance with demanding grid code requirements and offer low-voltage and zero-voltage ride through capabilities
- Flexible control systems provide curtailment and ramp-rate control

ADVANCED PITCH-DRIVE BELT SYSTEM

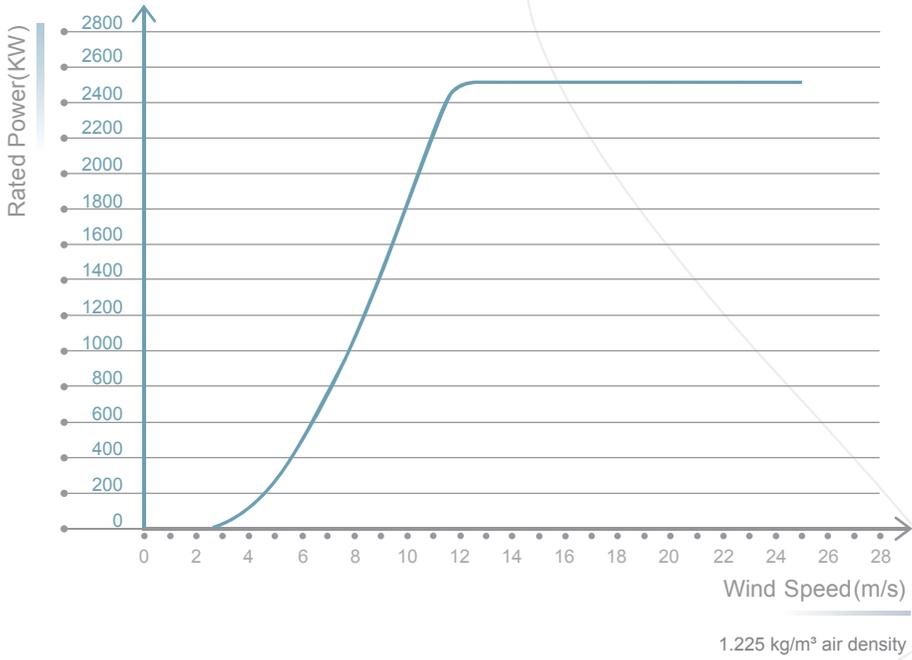
- Goldwind's advanced pitch-drive belt system eliminates localized wear experienced by gear-driven pitch systems, reducing the replacement of expensive parts and associated crane service requirements
- Ultra capacitors replace lead acid or gel batteries for Goldwind's pitch control system, offering higher power density, faster charge speed, wider operating temperature range, higher reliability, and reduced maintenance intervals compared to conventional battery systems.

SIGNIFICANTLY REDUCED MAINTENANCE COST AND TOTAL OPERATING EXPENDITURE

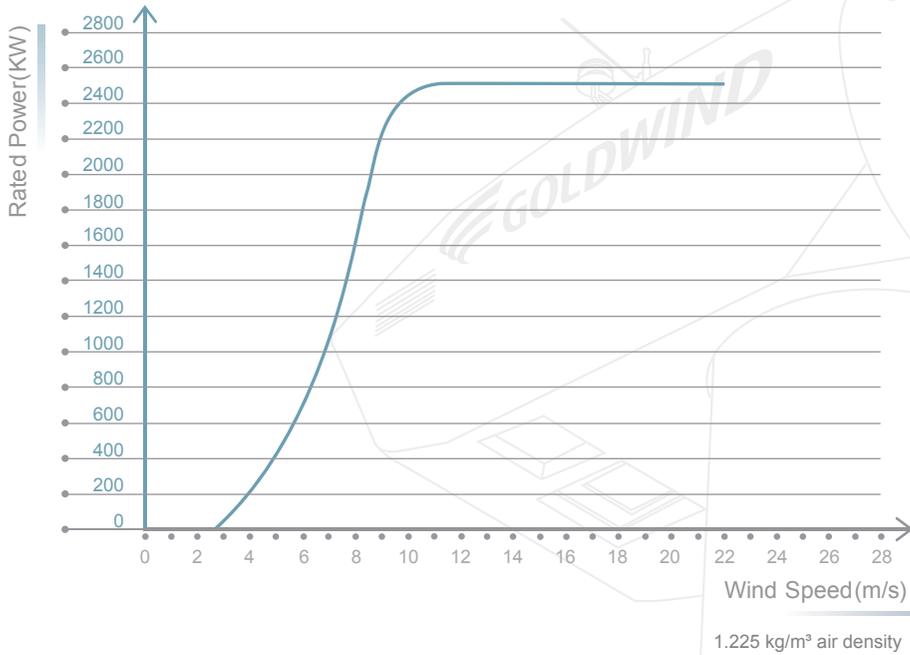
- The design principles of the 2.5MW PMDD wind turbine avoid sources of expensive faults that require crane mobilization
- The absence of high-current carbon brush slip-rings in the generator reduces faults, downtime and overall cost over the lifetime of the turbine
- Only one moving part in the drive train increases reliability compared to hundreds of total parts in a conventional gearbox including highspeed gears, bearings and couplings.
- The generator and rotor require only one bearing compared with more than 20 for conventional gearbox machines
- Automatic lubricating system for the yaw bearing reduces the frequency of unplanned maintenance

DYNAMIC POWER CURVE

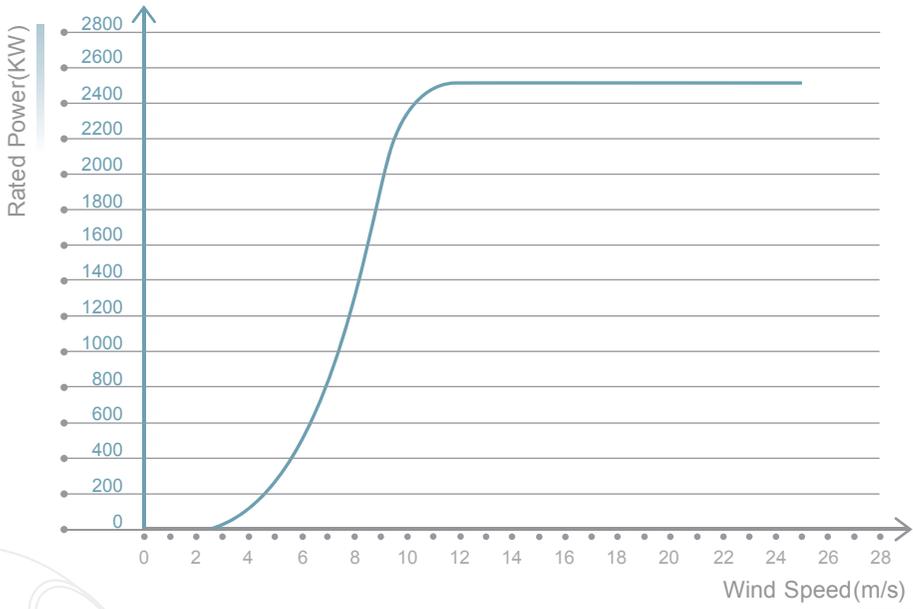
GW 100/2500



GW 121/2500



GW 109/2500



1.225 kg/m³ air density



GOLDWIND 2.5MW PMDD WIND TURBINE SERIES

GENERAL TECHNICAL SPECIFICATIONS

PARAMETER	GW 100/2500	GW 109/2500	GW 121/2500
Operation Parameters			
IEC Wind Class	IIA	IIA/IIIA	IIIB
Rated Power	2500kW		
Cut-in Wind Speed	3m/s		
Rated Wind Speed (Static)	11.1m/s	10.5m/s	9.3m/s
Cut-out Wind Speed (10 min avg.)	25 m/s	25 m/s	22 m/s
Rotor			
Diameter	100m	109m	121m
Number of Blades	3		
Swept Area	7823m ²	9516m ²	11595m ²
Power Control	Collective Pitch Control / Rotor Speed Control		
Safety System	Independent Blade Pitch Control Hydraulic Disk Brake Hydraulic Rotor Lock		
Generator	Permanent Magnet Direct Drive Synchronous Generator		
Rated Voltage	690V		
Yaw System	4 Induction Motors with Hydraulic Brakes		
Tower	Tubular Steel Tower		
Foundation	Flat Foundation (Others Possible)		
Converter	Full Power Converter (IGBT) Modular System		
Control System	Microprocessor Controlled with Remote Monitoring		







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