GOLDWIND

PMDD WIND TURBINE

1.5MW

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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.
• Passive cooling design results in fewer components and no energy lost to external cooling systems.

HIGH POWER TO WEIGHT RATIO
• Goldwind 1.5MW 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.

SUPERIOR POWER QUALITY AND GRID CODE COMPLIANCE
• Full power conversion and flexible power control ensure compliance with demanding grid code requirements
• The 1.5MW wind turbine features low-voltage and zero-voltage ride through capabilities
• Intelligent 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 and faster charge speed, ideal for a pitch system that requires quick bursts of power
• Ultra capacitors have a 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 1.5MW 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 two bearings compared with more than 20 for conventional gearbox machines
• Automatic lubricating system for the yaw bearing reduces the frequency of unplanned maintenance
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DYNAMIC POWER CURVE

GW 70/1500

- Rated Power(kW)
- Cut-in Wind Speed
- Rated Wind Speed (Static)
- Cut-out Wind Speed (10 min avg.)
- Diameter
- Number of Blades
- Rated Voltage
- Swept Area

GW 77/1500

- Rated Power(kW)
- Cut-in Wind Speed
- Rated Wind Speed (Static)
- Cut-out Wind Speed (10 min avg.)
- Diameter
- Number of Blades
- Rated Voltage
- Swept Area

GW 82/1500

- Rated Power(kW)
- Cut-in Wind Speed
- Rated Wind Speed (Static)
- Cut-out Wind Speed (10 min avg.)
- Diameter
- Number of Blades
- Rated Voltage
- Swept Area

GW 87/1500

- Rated Power(kW)
- Cut-in Wind Speed
- Rated Wind Speed (Static)
- Cut-out Wind Speed (10 min avg.)
- Diameter
- Number of Blades
- Rated Voltage
- Swept Area
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**GOLDWIND 1.5MW PERMANENT MAGNET DIRECT-DRIVE (PMDD) WIND TURBINE**

**Dynamic Power Curve**

**GW 82/1500**

**GW 87/1500**

1.225 kg/m³ air density
# GOLDWIND 1.5MW PMDD WIND TURBINE SERIES
## GENERAL TECHNICAL SPECIFICATIONS

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<td>IIIA</td>
<td>IIB</td>
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<td>Microprocessor Controlled with Remote Monitoring</td>
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