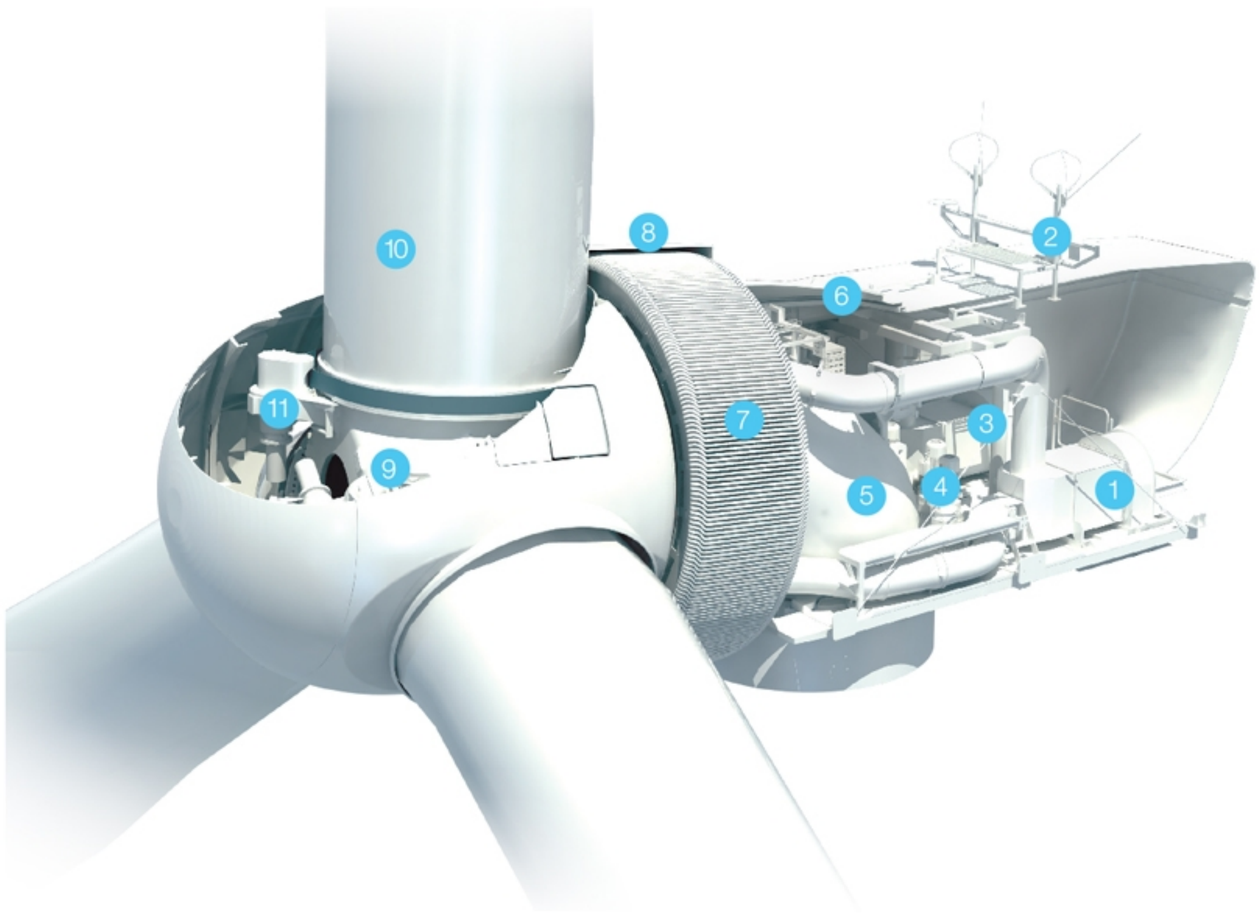
3.0MW(S)

PMDD WIND TURBINE

3.0 MW(S) PMDD WIND TURBINE



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

GOLDWIND 3.0MW(S) PMDD WIND TURBINE KEY FEATURES

Platform Evolution

- 20+ years of operational experience from 10,000+ Permanent Magnet Direct Drive (PMDD) wind turbines
- Evolution of the successful GW2500 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

Smart Features

- Smart Sensing: Strategic sensors monitor key components, enabling predictive diagnostics and precision control
- Smart Control: Goldwind's big data analysis of 10,000+ installed direct-drive turbines and more than 20 years of wind energy expertise, have resulted in the most advanced algorithms
- Smart O&M: Platform includes a QR code data management system which is customizable to customer requirements for efficient logistics

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

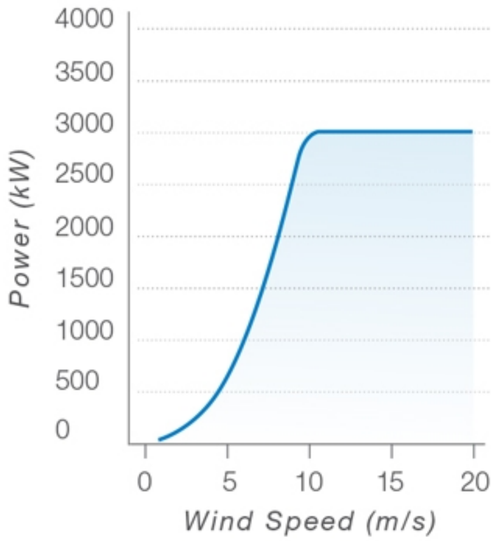
Highly Adaptable

- Grid Adaptability: Excellent zero, low and high voltage ride through capability, and compliant with associated global standards
- 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

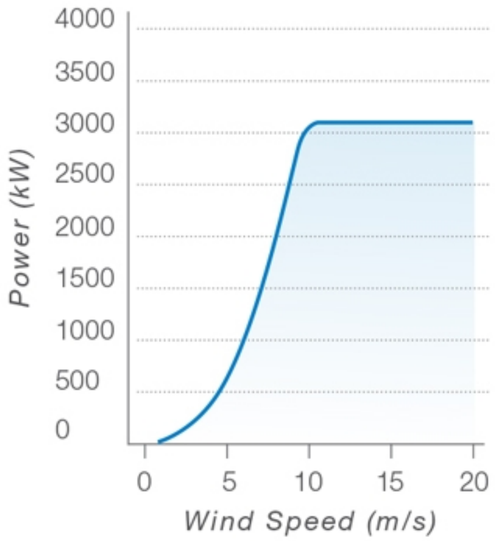
DYNAMIC POWER CURVE

GW 140/3000(S)

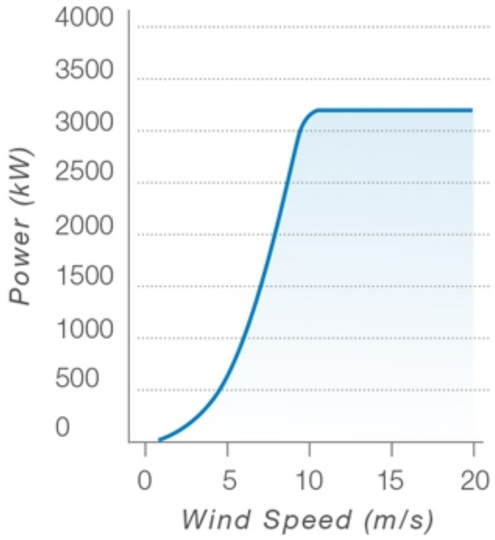
Air Density: 1.225kg/m^3



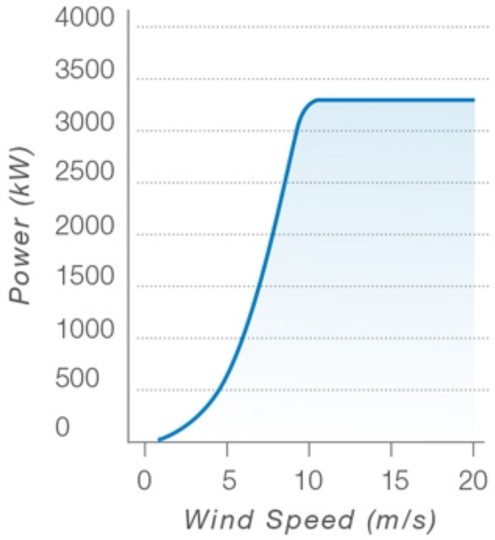
3.0MW



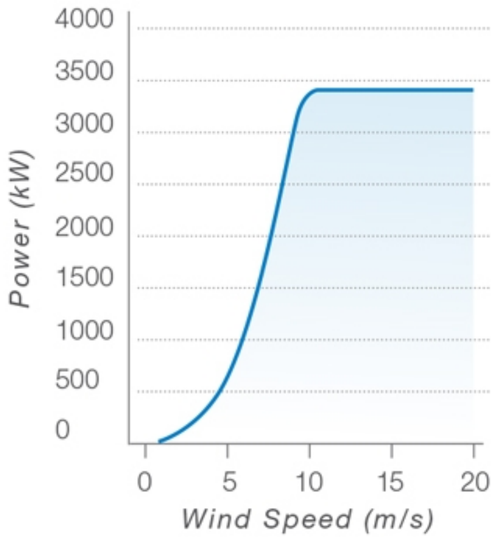
3.1MW



3.2MW



3.3MW



3.4MW

TECHNICAL SPECIFICATIONS

GW 3.0MW (S)						
Item	**Unit**	**Specifications**				
Model		GW 140/3000 (S) (onshore)				
Parameters						
Rated Power	kW	3000-3400				
Wind Class		IEC IIIA				
Cut-in Wind Speed	m/s	3				
Rated Wind Speed	m/s	11				
Cut-out Wind Speed	m/s	≥ 20 (customized based on the actual conditions of wind farm)				
Design Service Life	Year	≥ 20				
Operating Temperature Range	℃	-20℃ - +45℃				
Survival Temperature Range	℃	-30℃ - +50℃				
Rotor System						
Rotor Diameter	m	136 / 140				
Rotor Swept Area	m^2	14718 / 15480				
Generator						
Generator Type		Permanent Magnet Synchronous Generator (PMSG)				
Rated Voltage	V	720				
Converter						
Converter Type		Full Power Conversion				
Power Factor Regulation Range	1/4 of rated power	Capacitive 0.95~inductive 0.95				
	2/4 of rated power					
	3/4 of rated power					
	Rated Power					
Rated Frequency	Hz	50/60				
Rated Output Power	kVA	3159~3579				
Rated Output Voltage	V	690				
Brake System						
Aerodynamic Brake System		Blade pitch triple-redundant				
Mechanical Brake System		Generator Brake (for maintenance)				
Yaw System						
Type/Design		Electric Motor Drive/Four Planetary Stages for Speed Reduction				
Yaw Bearing		Four-point-contact Ball Bearing with Outer Ring				
Control System and Lightning Protection						
Type		PLC Control System				
Lightning Protection Standard		Compliant with IEC 61400-24-2002 and IEC 62305, and in conformance with GL Guideline for the Certification of Wind Turbines				
Ground Resistance	Ω	≤ 4				
Tower						
Type		Conical Steel/Hybrid Tower				
Hub height	m	100	110	120	140	
Weight						
Rotor (including blades)	Kg	94,800				
Nacelle	Kg	36,000				
Generator	Kg	79,500				

INNOVATING FOR A BRIGHTER FUTURE

Goldwind Australia

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