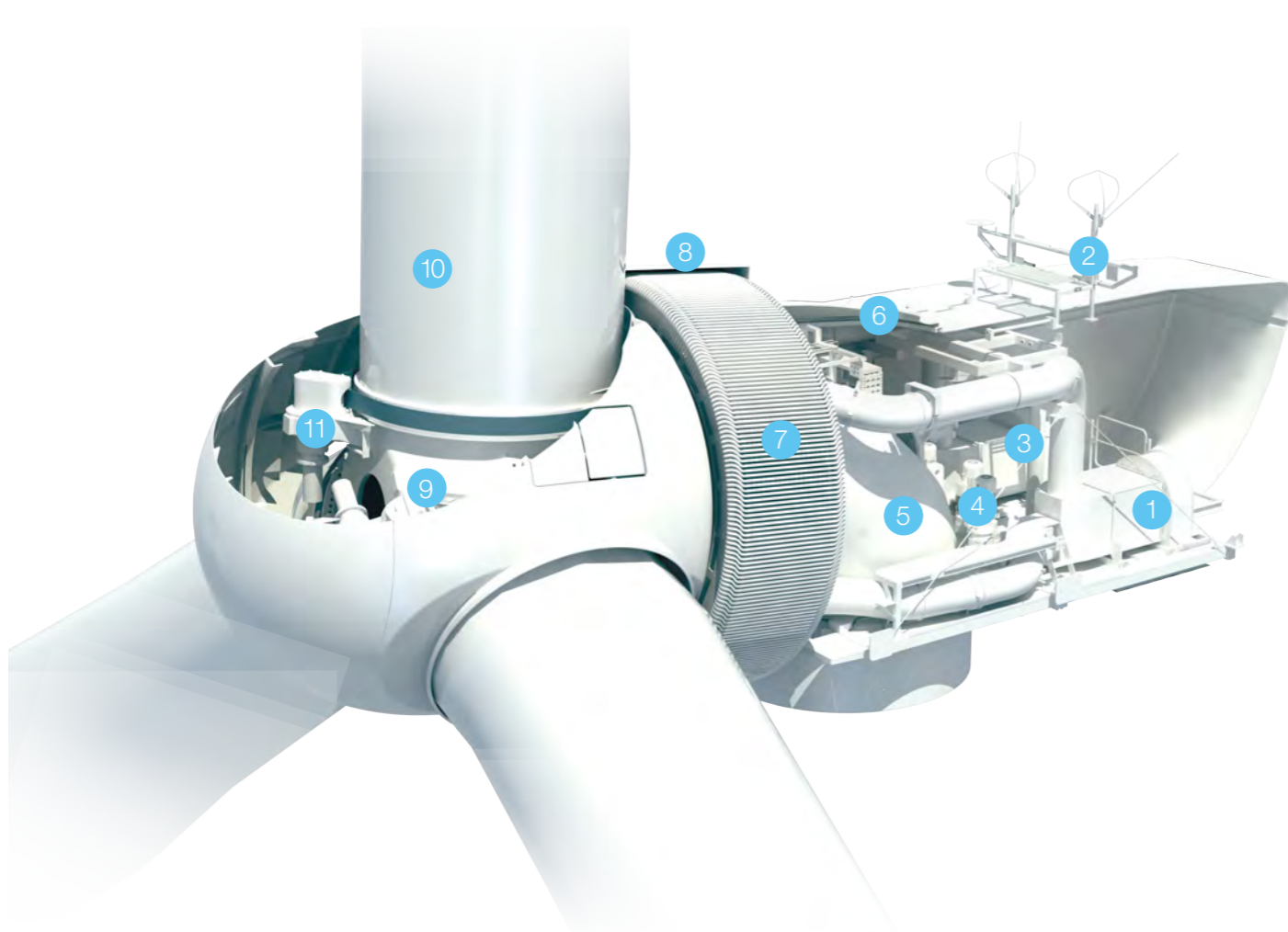


# 3.0MW(S)

## 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

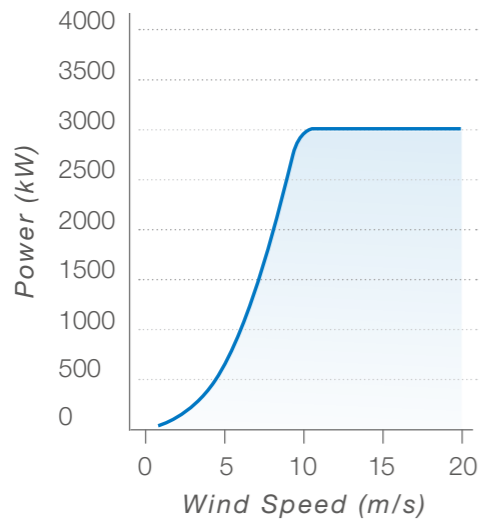
- The gearless drivetrain design eliminates the possibility of gear failure during the operational life of the turbine
- Maintenance-free design of the toothed belt pitch drive system simplifies pitch system maintenance requirements
- PMSG does not require high maintenance slip rings for conducting power

### 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

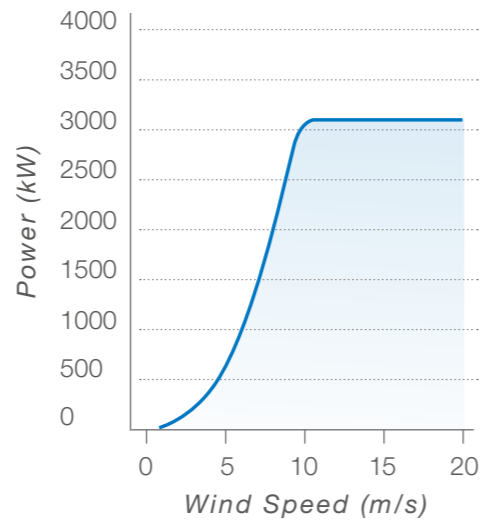
## DYNAMIC POWER CURVE

GW 140/3000(S)

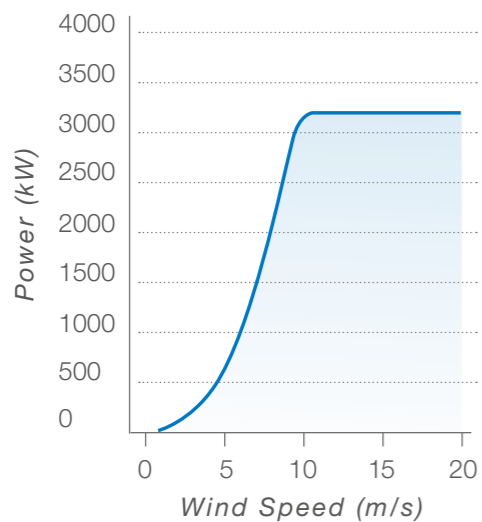


3.0MW

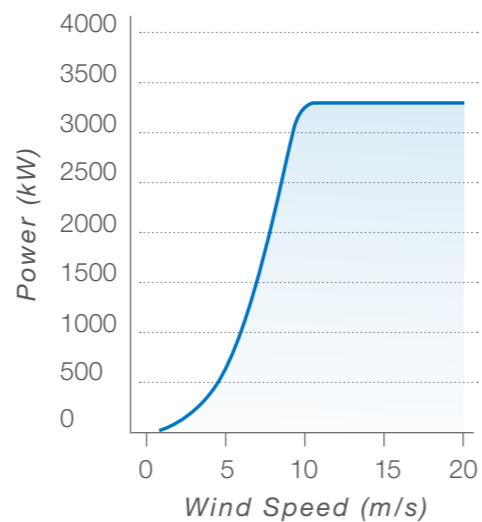
Air Density: 1.225kg/m<sup>3</sup>



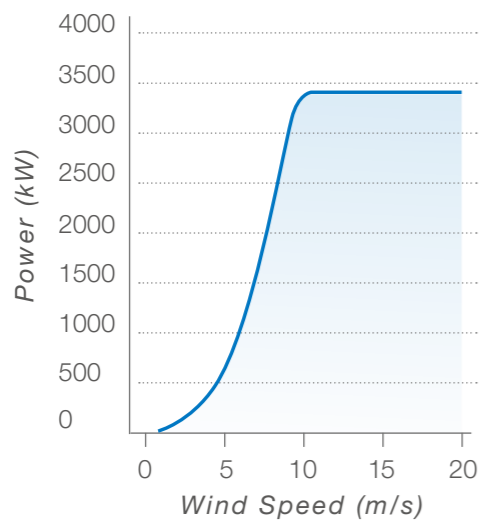
3.1MW



3.2MW



3.3MW



3.4MW

## TECHNICAL SPECIFICATIONS

GW 3.0MW (S)				
Item	Unit	Specifications		
Model		GW 140/3000 (S) (onshore)		
<b>Parameters</b>				
Rated Power	kW	3000-3400		
Wind Class		IEC IIIA		
Cut-in Wind Speed	m/s	2.5		
Rated Wind Speed	m/s	11		
Cut-out Wind Speed	m/s	≥ 20 (customized based on the actual conditions of wind farm)		
Designed Service Life	Year	≥ 20		
Operating Temperature Range	°C	-30°C - +40°C		
Survival Temperature Range	°C	-40°C - +50°C		
<b>Rotor System</b>				
Rotor Diameter	m	136 / 140		
Rotor Swept Area	m <sup>2</sup>	14712 / 15480		
<b>Generator</b>				
Generator Type		Permanent Magnet Synchronous Generator (PMSG)		
Rated Voltage	V	720		
<b>Converter</b>				
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		
<b>Brake System</b>				
Aerodynamic Brake System		Blade pitch triple-redundant		
Mechanical Brake System		Generator Brake (for maintenance)		
<b>Yaw System</b>				
Type/Design		Electric Motor Drive/Four Planetary Stages for Speed Reduction		
Yaw Brake		Four-point-contact Ball Bearing with Outer Ring		
<b>Control System and Lightning Protection</b>				
Type		PLC Control System		
Lightning Protection Standard		Compliant 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/Hybrid Tower		
Hub height	m	100/Conical Steel	120/Hybrid Tower	140 (under planning and design)
<b>Weight</b>				
Rotor (including blades)	t	98		
Nacelle	t	40		
Generator	t	82		

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INNOVATING FOR  
A BRIGHTER FUTURE

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