

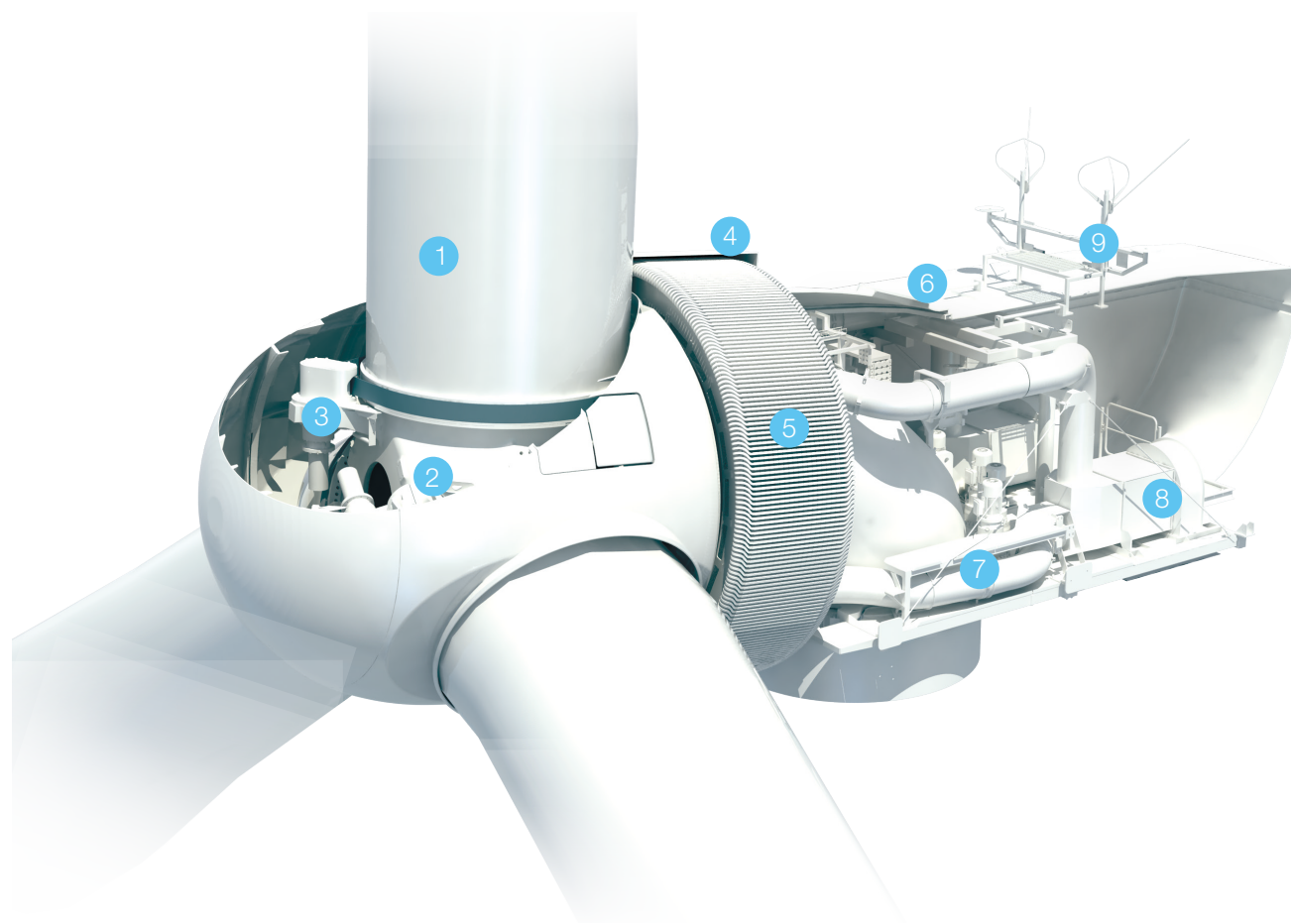
# 3.0MW(S)

## PMDD WIND TURBINE



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## GOLDWIND 3.0MW(S) PMDD WIND TURBINE KEY FEATURES



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

### Platform Evolution

- 20+ years of operational experience from 21,000+ Permanent Magnet Direct Drive (PMDD) wind turbines
- Expansion of the successful Goldwind 2.5 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

### Smart Features

- Smart Sensing: Strategic sensors monitor key components, enabling predictive diagnostics and precision control
- Smart Control: Goldwind's big data analysis of 21,000+ 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

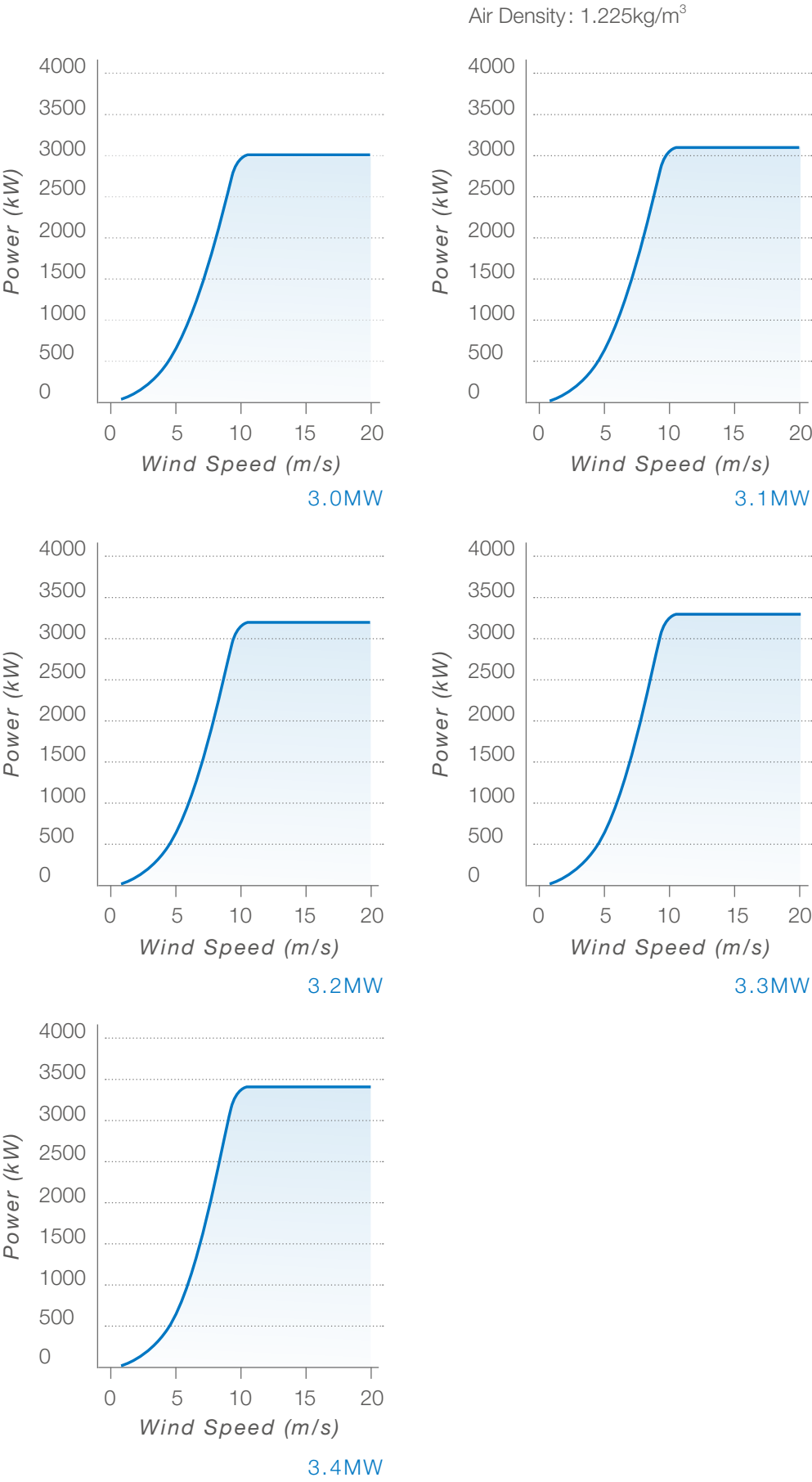
### High Reliability

- 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



TECHNICAL SPECIFICATIONS

GW 3.0MW(S)			
Item	Unit	Specifications	
Model		GW 140/3MW(S)	
Parameters			
Rated Power	kW	3000-3400	
Wind Class		IEC IIIA	
Cut-in Wind Speed	m/s	2.5	
Rated Wind Speed	m/s	10.5 - 11 (based on the Rated Power)	
Cut-out Wind Speed	m/s	≥20 (customized based on the site conditions of the wind farm)	
Designed Service Life	Year	≥20	
Operating Temperature Range	℃	-30℃ to +40℃	
Survival Temperature Range	℃	-40℃ to +50℃	
Rotor System			
Nominated Rotor Diameter	m	140	
Rotor Swept Area	m²	LM: 14712 / Sinoma: 15474	
Generator			
Generator Type		Permanent Magnet Synchronous Generator (PMSG)	
Rated Voltage	V	690	
Rated Rotation Speed	rpm	10.6 / 12 (depends on the Rated Power)	
Converter			
Converter Type		Full Power Conversion	
Power Factor Regulation Range		Capacitive 0.95 to Inductive 0.95, dynamically adjustable	
Rated Output Voltage	V	690	
Brake System			
Aerodynamic Brake System		Blade Pitch Triple-Redundant	
Mechanical Brake System		Hydraulic Mechanical Brake System (for Maintenance)	
Yaw System			
Type/Design		Motor Drive / Four Planetary Stages for Speed Reduction	
Yaw Brake		Hydraulic Brake	
Control System and Lightning Protection			
Type		PLC Control System	
Lightning Protection Standard		Complying 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	
Tower			
Type		Conical Steel	Hybrid Tower
Hub Height	m	100	120

INNOVATING FOR  
A BRIGHTER FUTURE



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