



Goldwind International Headquarters

No. 8 Boxing 1st Road Economic & Technological
Development Zone Beijing, 100176, China
T: +86 10 6751 1888 (ext. 6800)
E: info@goldwind.com.cn
W: goldwindinternational.com

Goldwind Africa (Pty) Ltd.

3rd Floor, China Construction Bank Building
95 Grayston Dr., Sandton, Johannesburg, SA 2196
T: +27 1 0007 2450
E: info@goldwindafrica.com

Goldwind Australia Pty Ltd.

Suite 2, Level 23, 201 Elizabeth Street
Sydney, NSW 2000, Australia
T: +61 (2) 9008 1715
E: info@goldwindaustralia.com
W: goldwindaustralia.com

**Goldwind Equipamentos e Soluções em Energia
Renovável Ltda**

Alameda Santos, 2326, Cerqueira
César, São Paulo-SP, 01418-200, Brasil
T: +55 62 9 81393899
E: brazil@goldwind.com.cn

Goldwind International (Thailand) Co., Ltd.

Unit 65/28, 2nd Floor, Chamnan Phenjati
Business Centre, Rama 9 Road, Huaykwang
Sub-district, Metropolis 10310, Bangkok, Thailand
T: +66 2 643 1099
E: gwi.thailand@goldwind.com.cn

Goldwind International Türkiye İRTİBAT BÜROSU

Levent Loft Residence, Esentepe Mahallesi, Büyükdere Caddesi,
No:201, A Blok D:34, 34394, Şişli, İstanbul – Türkiye
T: +90 212 280 00 15
E: b.erkut@goldwind.com.cn

Goldwind MENA

No. 8 Boxing 1st Road Economic & Technological
Development Zone Beijing, 100176, China
T: +86 10 6751 1888 (ext. 6800)
E: info@goldwind.com.cn

Goldwind USA, Inc.

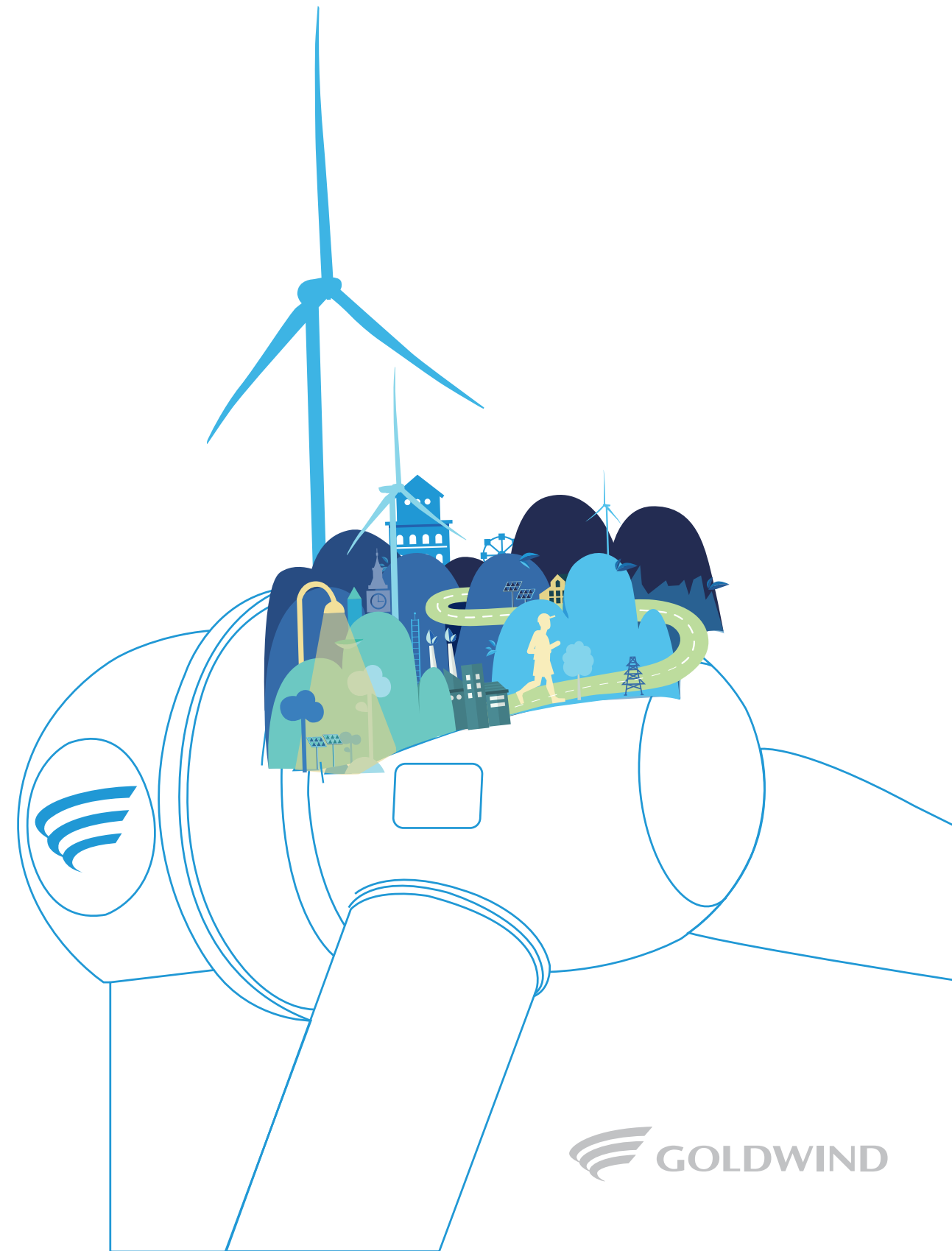
20 N. Wacker Drive, Suite 1375
Chicago, IL 60606 USA
T: +1 312 948 8050
E: info@goldwindamericas.com
W: goldwindamericas.com



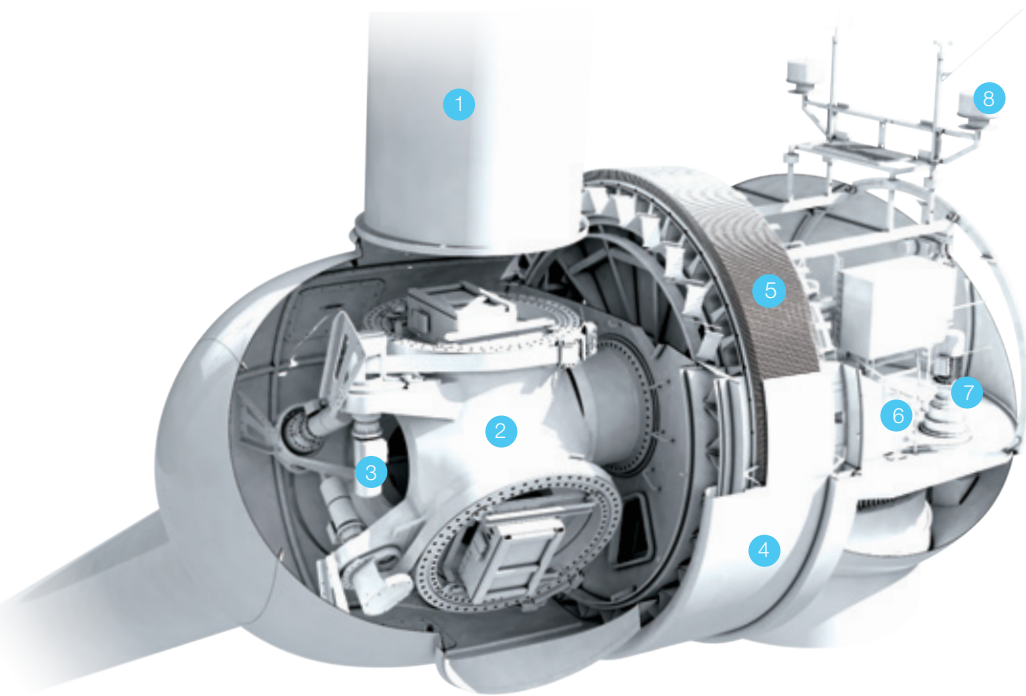
1.5 MW

PMDD WIND TURBINE

INNOVATING FOR
A BRIGHTER FUTURE



1.5 MW PMDD WIND TURBINE



1. Blade
2. Hub
3. Pitch System
4. Generator Rotor
5. Generator Stator
6. Nacelle
7. Yaw System
8. Wind Measurement Equipment

GOLDWIND 1.5MW PMDD WIND TURBINE KEY FEATURES

Platform Evolution

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

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

High Reliability

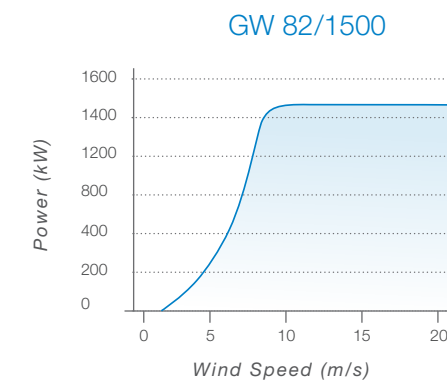
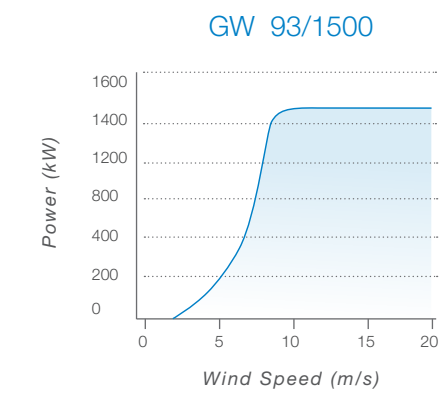
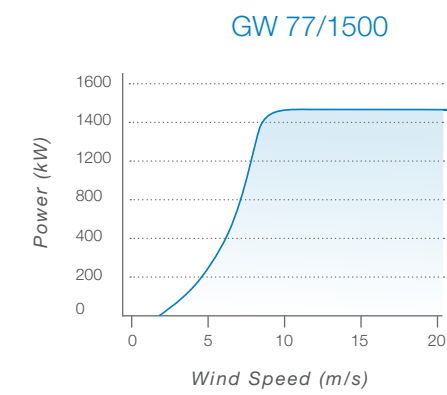
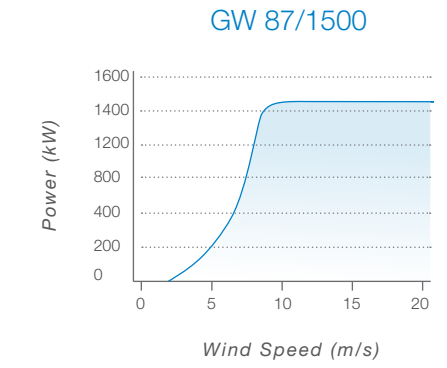
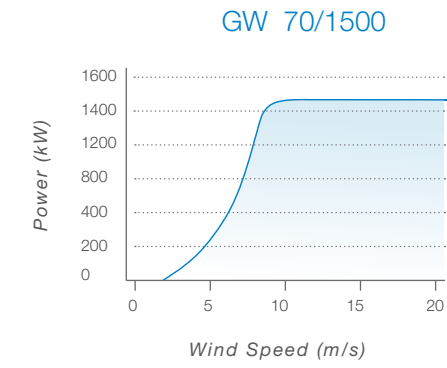
- The gearless drivetrain design eliminates the possibility of gear failure during the operational life of the turbine
- Maintenance-free design of the toothed belt pitch drive system simplifies pitch system maintenance requirements
- PMSG does not require high maintenance slip rings for conducting power

Highly Adaptable

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

Air Density: 1.225kg/m³



TECHNICAL SPECIFICATIONS

GW 1.5MW						
Item	Unit	Specifications				
Model		GW 70/1500	GW 77/1500	GW 82/1500	GW 87/1500	GW 93/1500
Parameters						
Rated Power	kW	1500				
Wind Class		IEC IA	IEC IIA	IEC IIIA	IEC IIIB	S
Cut-in Wind Speed	m/s	3	3	3	3	2.5
Rated Wind Speed	m/s	11.6	11.1	10.3	9.9	9.5
Cut-out Wind Speed	m/s	25	22	22	22	19
Designed Service Life	Year	≥20				
Operating Temperature Range	°C	-30°C to +40°C				
Survival Temperature Range	°C	-40°C to +50°C				
Rotor System						
Nominated Rotor Diameter	m	70	77	82	87	93
Rotor Swept Area	m ²	3,886	4,649	5,325	5,909	6,733
Generator						
Generator Type		Permanent Magnet Synchronous Generator (PMSG)				
Rated Voltage	V	720				
Rated Rotation Speed	rpm	19	17.3	17.3	16.6/17.3	16.6/17.3
Converter						
Converter Type		Full Power Conversion				
Power Factor Regulation Range		Capacitive 0.95 to Inductive 0.95, dynamically adjustable				
Rated Output Voltage	V	620/690				
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 Tower				
Hub Height	m	65	65/85	70/85	75/85	75/85