



**Baoding HuiDe Wind
Turbine Company, Ltd**

BHD's reliable, G/L-certified, 1-MW wind turbines are produced under an exclusive license from Fuhrlander AG, a leading European turbine manufacturer. There are over 130 Fuhrlander-designed, 1-MW machines in operation around the world, including the 10-turbine project BHD and Soaring Wind recently completed in Lubbock, Texas. The BHD 1 MW is a workhorse turbine built to perform in extreme weather and seismic zones.

**Soaring Wind and BHD's
landmark project in Lubbock,
Texas, marks the first
installation of Chinese wind
turbines in the U.S.**

An Aviation Industry of China (AVIC) company, BHD is backed by one of the country's largest state-owned enterprises. BHD turbines are certified by Germanischer/Lloyd and produced under Fuhrlander's supervision.

BHD and Soaring Wind Energy stand behind our wind turbines:

- **Comprehensive two-year warranty**
- **On-site spare parts inventory**
- **97 percent production guarantee**
- **95 percent availability guarantee**

**Each commitment is fully backed by a
letter of credit from a U.S. bank.**



SOARING WIND
ENERGY

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BHD FL-1000 Wind Turbine

TECHNICAL SPECIFICATION

Item	Parameter	Units	Technical data or description
1 TECHNICAL PARAMETER			
1.1	Rated power	kW	1000
1.2	Rated Voltage	V	690
1.3	Rated Frequency	Hz	60
1.4	Cut-in wind speed	m/s	3.5
1.5	Rated wind speed	m/s	13.5
1.6	Stop wind speed	m/s	25
1.7	Type		IEC IIA GL IIA
1.8	Number of blades	pic	3
1.9	Diameter of blade	m	55
1.10	Center height of blade	m	70
1.11	Direction of wind turbine		Upwind
1.12	Rotation speed of rotor	RPM	21.95
1.13	Power regulating mode		Stall
1.14	First brake system		3 blade tip aerodynamic brake
1.15	Second brake system		Mechanical soft brake on high speed shaft
1.16	Survival temperature range	Deg C	-3040
1.17	Operating temperature range	Deg C	-2040
1.18	Design Life	Year	20
1.19	Availability		≥95%
2 GEARBOX			
2.1	Construction design		One stage planetary, two stage bevel gear
2.2	Gear Ratio		1:82.824
2.3	Rated power	kW	1100
2.4	Lubrication method		Forced lubrication with heating system
2.5	Cooling for lubricant		Automatic cooling system
3 GENERATOR			
3.1	Type		Double-coil asynchronous generator
3.2	Rated Power	kW	200/1000
3.3	Max. Power	kW	1200
3.4	Rated Voltage	V	690
3.5	Rated Frequency	Hz	60
3.6	Rated Current	A	192/910
3.7	Rated rotation speed	RPM	1800
3.8	Protection level		IP 54
3.9	Insulation level		H/F
3.10	Lubrication method		Automatic Lubrication
3.11	Cooling method		Totally Enclosed Water to Air Cooled



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Item	Parameter	Units	Technical data or description	
4	BLADE			
4.1	Length	m	26.7	
4.2	Weight	Tons	4.35	
4.3	Material		Glass-fiber Reinforced Polyester	
4.4	Tip brake control	control	Hydraulic-control, Auto-control or Manual	
5	YAW SYSTEM			
5.1	Type		Face to wind automatic and actively	
5.2	Yaw bearing		Inner gear bearing	
5.3	Yaw speed	degree/s	0.75	
5.4	Yaw brake		Disc brake with dampener	
5.5	Max. allowed rotation angle	degrees	720	
6	CONTROL SYSTEM			
6.1	Model/design		Micro-processor full automatic control	
7	GRID-CONNECTION SYSTEM			
7.1	Type		Micro-processor full automatic control	
7.2	Power factor compensation		Capacity compensation	
7.3	Power factor (COS)		0.951	
8	MONITORING SYSTEMS			
8.1	Type		Automatic remote monitor	
9	TOWER			
9.1	Type		Steel plate welding cylinder	
9.2	Height	m	68	
10	WEIGHT			
10.1	Blade	T	18.5	
10.2	Nacelle	T	40.5	
10.3	Tower	T	88.8	
11	TRANSPORTATION DIMENSIONS			
11.1	Blade	m	26.7×1.4×2.3	
11.2	Nacelle	m	8.9×3.4×3.6	
11.3	Hub	m	4×3.2×2.9	
11.4	Tower	Foundation ring	m	4.2×1.6
		First section	m	3.9×18
		Middle section	m	3.5×24
		top section	m	2.8×24.85



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√[m/s]	Power [kW]
1	0
2	0
3	8
4	17
5	55
6	112
7	188
8	305
9	438
10	573
11	724
12	849
13	953
14	1077
15	1103
16	1090
17	1076
18	1056
19	1032
20	1009
21	985
22	972
23	958
24	951
25	947

1.0 MW WIND TURBINE POWER CURVE - RATED AT SEA LEVEL

