TekVal International Inc.

Engineering & Renewable Sources of Energy

Green Sun Royal™

Technical Specification

Item	Name	Parameters
	Rated Output (Capacity)	780kW
1.	ROTOR	
1.1	Type	3-blade
1.2	Rotor Diameter	50m
1.3	Swept Area	1,962 m^2
1.4	Power Regulation	Stall Regulated
1.5	RPM	21.68 RPM
1.6	Cut in / out speeds	3.5 / 25 m/s
1.7	Nominal output at 14 m/s	780kW
1.8	Survival Wind Speed	70 m/s
1.9	Calculated Life Time	20years
2.	GEAR BOX	
2.1	Type	3-stage planetary and spur
2.2	Oil - quantity	180L
2.3	Gear Ratio	1: 67.4
3.	BLADES	
3.1	Blade length	24m
3.2	Material	Fiber reinforcement Glass
3.3	Lightning Protection	LPS level I(GL2003)
4.	GENERATOR	
4.1	Nominal Power	780 kW
4.2	Type	Induction Generator
4.3	Synchronous Speed	1500
4.4	Protection Classification	IP54
4.5	Efficiency at 75% Load	96%
5.	YAW SYSTEM	
5.1	Type	Active Yaw
5.2	Yaw Control	Automatic
5.3	Yaw Rate	0.68˚/s
6.	CONTROLLER	
6.1	Type	PLC
6.2	Grid Connection	Yes
6.3	Remote Communication	yes
6.4	UPS	yes
7.	BREAKING SYSTEM	
7.1	Aerodynamic - Type	3 Individual Tip-brake

7.2	Aerodynamic - Activation	Controlled by Hydraulic
7.3	Mechanical - Type	Mechanical Disk brakes
7.4	Mechanical - Location	High speed shaft
7.5	Number of Brake Calibers	2
7.6	Time to Stop Rotor from Max. RPM	8 RPM when Normal stop
8.	TOWER	
8.1	Type	Tubular Steel
8.2	Tower Heights	50 meter (Other heights avail.)
8.3	Corrosion Protection	According to ISO12944-2 C5M
9.	WEIGHTS	
9.1	Nacelle, excl. Rotor and Hub	23.5tons
9.2	Rotor incl. Hub	15 tons
9.3	Gearbox	6.7 tons
9.4	Generator	4.5 tons
9.5	Tower	53 tons
10.	Grid Frequency	50Hz
11.	Climatic Condition (Operating)	-10℃～+40℃
12.	Climatic Condition (Standstill)	-20℃～+50℃