



# TekVal International Inc.

Engineering & Renewable Sources of Energy



## Technical Specification

Item Name	Parameters
	Rated Output (Capacity) <b>780kW</b>
<b>1. ROTOR</b>	
1.1 Type	3-blade
1.2 Rotor Diameter	50m
1.3 Swept Area	1,962 m <sup>2</sup>
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
<b>2. GEAR BOX</b>	
2.1 Type	3-stage planetary and spur
2.2 Oil - quantity	180L
2.3 Gear Ratio	1: 67.4
<b>3. BLADES</b>	
3.1 Blade length	24m
3.2 Material	Fiber reinforcement Glass
3.3 Lightning Protection	LPS level I (GL2003)
<b>4. GENERATOR</b>	
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%
<b>5. YAW SYSTEM</b>	
5.1 Type	Active Yaw
5.2 Yaw Control	Automatic
5.3 Yaw Rate	0.68° /s
<b>6. CONTROLLER</b>	
6.1 Type	PLC
6.2 Grid Connection	Yes
6.3 Remote Communication	yes
6.4 UPS	yes
<b>7. BREAKING SYSTEM</b>	
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.	<b>TOWER</b>	
8.1	Type	Tubular Steel
8.2	Tower Heights	50 meter (Other heights avail.)
8.3	Corrosion Protection	According to ISO12944-2 C5M
9.	<b>WEIGHTS</b>	
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°C~+40°C
12.	Climatic Condition (Standstill)	-20°C~+50°C