

3.5 kW Wind Turbine System Specification Sheet

Wind is a naturally occurring and abundant resource and is one of the cleanest ways to produce electricity. Very little processing needs to be done to convert it into clean, free energy. Operation of our wind turbines produces no pollution with no emissions, excessive noise or waste heat by-products. Wind can be harvested with minimal impact on the environment, a very important factor in meeting our increasing energy needs.

Synergy

- Solar
- Biomass
- Diesel Generator
- Hydroelectric
- Geothermal

Level elevation

Applications

- Commercial and Industrial
- Residential and Resort
- Agricultural
- Remote Communities
- Off-Grid Power
- Institutional and Public

Key Benefits

- Energy cost savings from wind generated power
- No scheduled maintenance
- Designed to reliably operate in harsh cold & hot climates
- Operation creates virtually no environmental impact
- Cost-effective and financially viable
- 5-Year Warranty

Turbine

Rated Power Output	3.5 kW
Energy Production*	500 kWh/month
Туре	5 blades, downwind
Generator	Gearless, brushless, permanent magnet
Swept Area	12.6 m ²
Blade Diameter	4 m
Blade Material	Fibreglass reinforced plastic
Total Turbine Mass	68 kg
Voltage/Phase @ Rated Pow	ver 150 Vac peak
Current/Phase @ Rated Pow	ver 8 Aac peak
Generator NEMA Rating	Class B, 5 HP
Life Expectancy	> 20 years
*5.0 m/s (18 km/h) average	wind speed, Rayleigh Distribution, Sea

Operational Data	
Rated Wind Speed	11 m/s (39 km/h)
Start-up Wind Speed	2.8 m/s (11 km/h)
Braking Wind Speed	22 m/s (80 km/h)
Furling Method	EM Brake
RPM at Rated Power	350 RPM
Survival Wind Speed	50 m/s (180 km/h)
Survival RPM	1,000 RPM



	Conve	rsion	Table
--	-------	-------	-------

km/h	mph
14	9
22	13
29	18
36	22
43	27
65	40
90	56
162	101
	14 22 29 36 43 65 90

A Revolution in Wind Energy

Inverter

Туре	Grid-tie
Input Power Rating	Three 1.3kW Inverters
Electrical Input	Three-phase
Rated Input Voltage	150 Vac peak/phase
Rated Input Current	8 Aac peak/phase
Output Voltage	120 Vrms True Sine Wave
Max Output Current	30 Arms True Sine Wave (10A per inverter)
Power Factor at Output	>0.99
Certifications	CSA 22.2 #107.1 and UL 1741
Enclosure Weight	8 kg per unit
Size	300 mm x 300 mm x 100 mm

System Power Curve		
Wind Speed (m/s)	Power Out (W): Grid-tie	
3	51	
4	134	
5	297	
6	563	
7	1000	
8	1569	
9	2233	
10	3064	
11	3500	
12	3500	

Tower

Tower Type Engineered	er Type Engineered free-standing steel monopole		
Installation Method	Gin pole; no crane required		
Foundation	3 m ³ concrete (varies with region standard)		
Number of Sections	4 x 3.7 m (12') sections		
Tower Height to Nacelle	14.5 m (48')		
Tower Mass	410 kg (900 lbs)		
Max Lateral Load at Mast	5000 N (1120 lbs)		
Max Vertical Load at Mast	880 N (200 lbs)		
Survival Wind Speed*	50 m/s (180 km/h)		
*With 5000 N (1120 lbs) loading at mast tip			

Annual Energy Production

Allitual Effergy Froduction		
Wind Speed (m/s)	kWh/year: Grid-tie	
4	2992	
4.5	4390	
5	6220	
5.5	7498	
6	9467	
6.5	10,994	
7	7 12,292	
7.5	7.5 13,837	



Toll Free. 1-877-946-3979 Ph. (306) 651-1476 sales@raumenergy.com www.raumenergy.com 3718A Millar Ave Saskatoon, SK S7P 0B1 Canada

Regional Raum Certified Dealer