

CLEAN ENERGY... JUST PLUG IT IN

Endurance[®]
wind power

S-250

S-250 5 kW model

- 1 Fiberglass blades
- 2 Rotor Hub
- 3 Dual fail safe calipers
- 4 16" brake disk
- 5 Main shaft bearings
- 6 Induction generator
- 7 Gearbox
- 8 Tower
- 9 Slipring
- 10 Turntable yaw bearing
- 11 Anemometer
- 12 Fiberglass nacelle cover and nose cone

ENDURANCE WIND TURBINES GREEN ENERGY THAT WORKS

TURBINE

Configuration	3 blades, horizontal axis, upwind
Rated power @ 14 m/s	5 kW
Applications	Direct grid-tied
Rotor speed	200 rpm
Cut-in wind speed	4.0 m/s (8.9 mph)
Cut-out wind speed	24 m/s (54 mph)
Survival wind speed	59 m/s (133 mph)
Design lifetime	30 years *
Overall weight	272 kg (600 lbs)

ROTOR

Rotor diameter	5.5 m (18 ft)
Swept area	23.5 m ² (256 ft ²)
Blade length	2.56 m (8.66 ft)
Blade material	Fiberglass / Epoxy
Power regulation	Stall control (constant speed)

GENERATOR

Frequency	60 Hz
Voltage	120-240 VAC
Phase	Single phase
Type	Induction generator

BRAKE & SAFETY SYSTEMS

Main brake system	Rapid fail-safe dual redundant brakes on rotor shaft
Secondary safety system	Redundant back-up brake on rotor shaft
Automatic shut down triggered by :	<ul style="list-style-type: none"> - Over speed - High wind speed - Grid failure - All other fault conditions

CONTROLS

PLC based	Includes remote monitoring software
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WARRANTY

Turbine, controls	5 years
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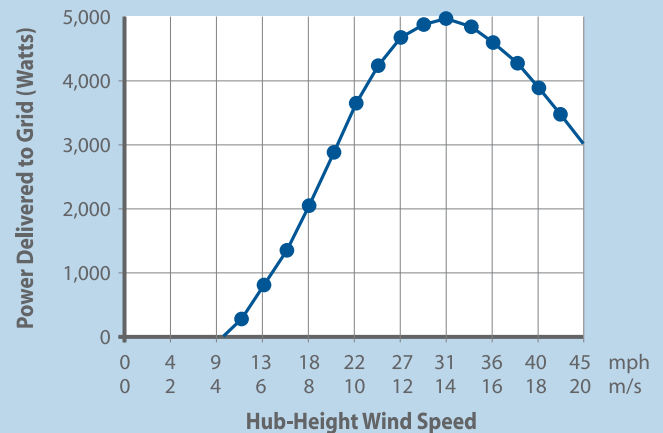
TOWERS

Types and heights	Tubular guyed 19.2 m (63 ft); 25.6 m (84 ft); 32 m (105 ft) and 36.6 m (120 ft) Standard Monopole 30.5 m (100 ft)
Maintenance Access	All are tiltable towers

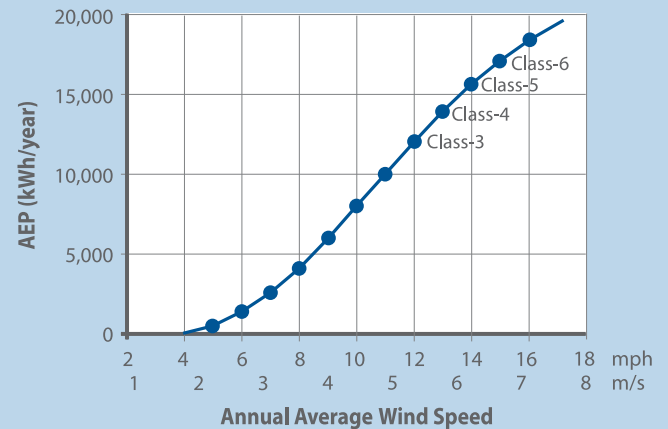
*Provided service and maintenance schedules are strictly followed



POWER CURVE



ANNUAL ENERGY PRODUCTION (AEP)



Based on annual average wind speed at 10 m height, 0.20 vertical shear, & Rayleigh wind distribution curve.

WIND SPEED CONVERSION TABLE

m/s	4	5	6	7	8	9	10	12	14	25	32	45
km/h	14	18	22	25	29	32	36	43	50	90	125	160
mph	9	11	13	16	18	20	22	27	31	56	80	100



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