

CLEAN ENERGY... JUST PLUG IT IN

Endurance[®]
wind power

S-343

S-343 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 @ 11 m/s | 5.3 kW |
| Applications | Direct grid-tied |
| Rotor speed | 166 rpm |
| Cut-in wind speed | 3.0 m/s (6.7 mph) |
| Cut-out wind speed | 24 m/s (54 mph) |
| Survival wind speed | 53 m/s (119 mph) |
| Design lifetime | 30 years * |
| Overall weight | 272 kg (600 lbs) |

ROTOR

| | |
|------------------|--|
| Rotor diameter | 6.04 m (21 ft) |
| Swept area | 31.9 m ² (343 ft ²) |
| Blade length | 3.2 m (10.5 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 |
|-----------|-------------------------------------|

WARRANTY

| | |
|-------------------|---------|
| Turbine, controls | 5 years |
|-------------------|---------|

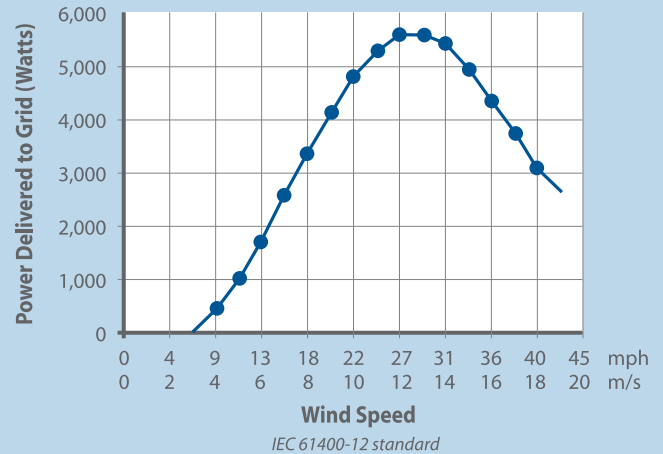
TOWERS

| | |
|--------------------|--|
| 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 |

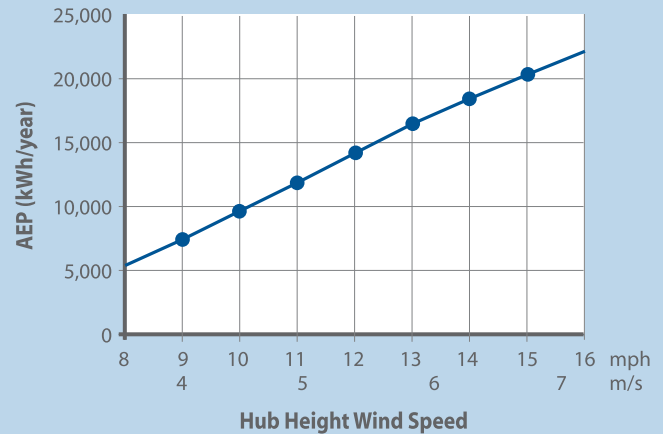
*Provided service and maintenance schedules are strictly followed



POWER CURVE



ANNUAL ENERGY PRODUCTION (AEP)



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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