

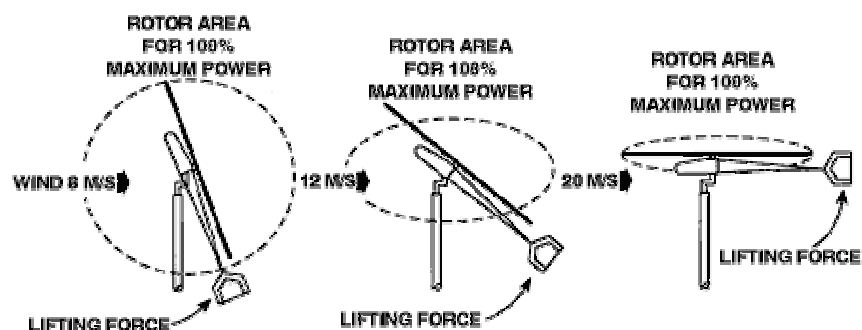
USA Solar & Wind Inc.

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Synergy Wind Turbine Information and Specifications

Synergy Wind Turbine Information: SLG-300

The Synergy wind turbine is differentiated from all other small wind turbines on the market by its technologically unique, patented ability to vary rotor area on a pivotal tilting axis according to wind speed. The SLG wind turbine will generate reliable electricity producing up to 300 kWh/day in Class 2 winds (average 9.8 mph / 4.5 m/s). Synergy's SLG turbine is registered with the California Energy Commission as an approved wind turbine and eligible for rebates under the Emerging Renewables Program.



SLG- 300 TURBINE SPECIFICATIONS

ROTOR CONFIGURATION

Type	3 Blade Variable Axis
Orientation	Downwind
Diameter	20 Meters
Swept Area	314 Square Meters
Maximum Rotor Speed	44 RPM
Power Regulation	Tilt control

ROTOR SHAFT CONFIGURATION

Hub material	Ductile cast iron
Main Bearings	Spherical roller
Main shaft material	AISI 4340 or 8620

BRAKE

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Type Pneumatic release
Location Low Speed Shaft

GENERATOR

Type Induction
Rated Power 35 kW
Synchronous speed 44 rpm
Voltage 415/480 Volts
Frequency 50/60 Hz

YAW SYSTEM

Type Passive
Bearing Turret (ball type)

TOWER

Type Guyed, Tubular
Hub Height 24.6 Meters (Standard)

COMPONENT MASS WEIGHTS

Blades each x 3 150 kg
Rotor Assembly 575 kg
Nacelle & frame 1,000 kg
Tower Min. 4,760 kg (24.2 Meters)

ROTOR BLADES

Length 10 Meters
Tip Chord 714 mm
Root Chord 1428 mm
Material Fiberglass (FRP)

DRIVE TRAIN

Gearbox Type Right angle helical
Gearbox ratio 1:17
Coupling gearbox Mainshaft (Keyed, hollow shaft)
Coupling generator Gearbox (2 rubber element couplings)
Manufacturer SEW Eurodrive

MAINFRAME

Construction Fabrication
Material Steel

CONTROLS

Controller type Microprocessor based

OPERATIONAL PARAMETERS

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Cut in wind speed
Rated power output
Cut out wind speed

3 M/S
300 kWh/day (Class 2 Wind)
Not required

ESTIMATED LIFESPAN OF EQUIPMENT

20+ years

NOTE:

Synergy Power Corporation reserves the right to change components without notice as long as they are equal to or of better quality than specified herein.

