

WIND ENERGY GENERATION KIT

Mod. WG-K/EV

INTRODUCTION

This equipment features the typical configuration of a horizontal axis wind power generator, used to convert the wind kinetic energy directly into electric energy.

TRAINING PROGRAM

- Components of a stand-alone wind system for electricity production
- Wind generator energy conversion efficiency (*)
- Battery charging system management
- Connection to wind power generator indoor operation device *WG-IM/EV* (**optional item** – refer to the end of this data sheet) for wind generator characteristic curve construction
- (*) Cup vane air velocity meter *THAC* (**optional item** – refer to the end of this data sheet) required

TECHNICAL SPECIFICATIONS

Horizontal axis wind power generator

- Aluminium generator body
- 3 composite material blades (rotor diameter 1,17 m):
 - Energy output: approx. 30 kWh/month at 5,8 m/s (13 mph) average wind speed
 - Startup Wind Speed: 3,6 m/s (8 mph)
 - Survival wind speed: 49,2 m/s (110 mph)
- Permanent magnet brushless alternator
- Microprocessor-based controller:
 - Output voltage: 12 Vdc
 - Overspeed protection: electronic torque control
- Stainless steel supporting pole:
 - Length 1,5 m
 - Outer diameter: 48,1 mm
 - Mounting kit

Buffer battery:

- Rated voltage: 12 Vdc
- Capacity: 100 Ah

Inverter:

- Continuous output power: 600 W
- Output peak power: 1200 W
- Input voltage: 12 Vdc
- Output voltage: 230 Vac - 50 Hz
- Output waveform: modified sine wave
- Stop for low battery charge
- Protection against: overload, short circuit, overtemperature

Clamp meter:

- Voltage range (ac/dc): 0 to 600 V
- Current range (ac/dc): 0 to 200 A



Dimensions

Rotor diameter: 117 cm
 Net weight: 70 kg

SUPPLIED WITH

THEORETICAL-EXPERIMENTAL HANDBOOK



OPTIONAL (REF. ACCESS. AND INSTRUMENTS)

WIND POWER GENERATOR INDOOR OPERATION DEVICE Mod. WG-IM/EV

To operate the aerogenerator indoor



ELECTRIC BATTERY CHARGER Mod. EBCH

To recharge the buffer battery after a prolonged period of inactivity of the system

SPOTLIGHT Mod. ACL220V

To be used as 230 Vac electric load



LAMP Mod. DCL12V

To be used as 12 Vdc electric load

CUP VANE AIR VELOCITY METER Mod. THAC

For the calculation of the wind energy into electric energy conversion efficiency

