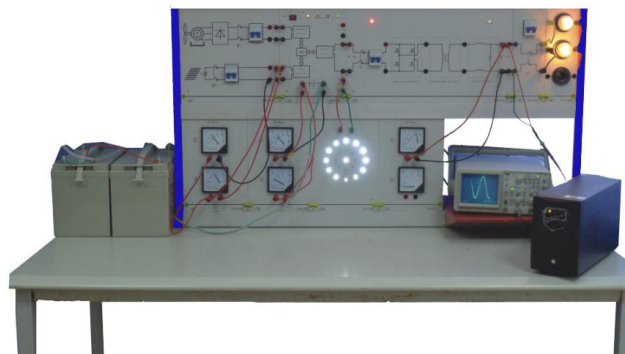


ALTERNATIVE RENEWABLE ENERGY TRAINER

Model Number : GOTT-ARET-0



FEATURES

To provide for student understanding of photovoltaic systems a portable, frame-mounted integrated trainer is proposed. It models electrical production with energy storage for use anytime day or night. It comprises a complete energy system including different types of solar PV panels, caster-mounted support frame, typical control modules, energy storage modules and manuals covering student exercises, instructor operating notes and technical documentation. Systems comprised of commercially available components, with enhanced instrumentation for improved student understanding. Includes a custom designed training module. Note that this trainer is a real working system intended for the PV panels to be moved outside to natural sunlight.

DESCRIPTION

The Wind & Light complementary electricity-generating training system utilize the time and regional complementarities of wind power and solar power, use wind and sun resources as energy source, convert the wind power and solar power into electricity through wind power generator and solar cell, supply the electric power to the equipment.

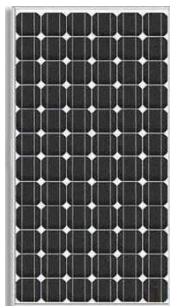
PORTABLE PHOTOVOLTAIC ENERGY TRAINER

DESCRIPTION

A solar panel (photovoltaic module or photovoltaic panel) is a packaged interconnected assembly of solar cells, also known as *photovoltaic cells*. The solar panel can be used as a component of a larger photovoltaic system to generate and supply electricity in commercial and residential applications. Because a single solar panel can only produce a limited amount of power, many installations contain several panels. A photovoltaic system typically includes an array of solar panels, an inverter, may contain a battery and interconnection wiring.

PHOTOVOLTAIC SPECIFICATION

Photovoltaic panel specification - 120W/18V x 2pcs



The panel design is consistent with IEC-61215, 2005 standard.

High quality and low price.

Front: high-transmission (over 92 %) 3.2mm tempered glass. Back :TPT, Encaapsulant: EVA.

Panel size can be charged according to customer's requirement.

Under 10% decrease of output power within 10 years.

All panels are tested by appearance and electronic technical testing.

Maximum Power(Pm): 120W

BATTERY SPECIFICATION

Nominal Voltage		12V
Nominal capacity(10 hour rate)		100Ah
Dimensions	Length	330mm
	Width	172mm
	Height	216mm
	Total Height	222mm
Weight Approx		31Kg

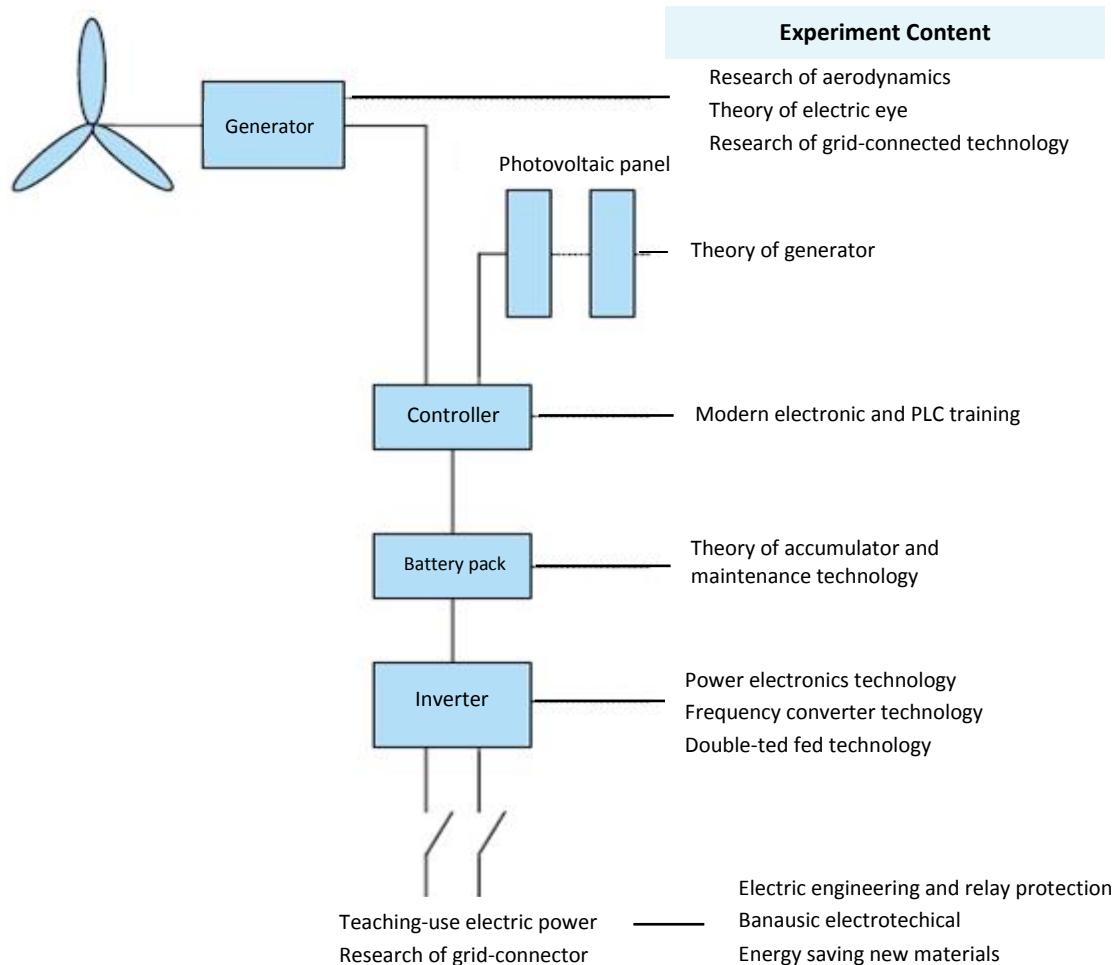
SPECIFICATIONS

Capacity (25°C)	20HR	108Ah
	10HR	100Ah
	5HR	91Ah
	1 HR	68Ah
Internal Resistance(25°C)	After Full Charged	3.6mΩ
Capacity affected by Temperature (20 hour rate)	40°C	102%
	25°C	100%
	0°C	83%
	-15°C	64%
Capacity after different months storage	After 3 month	91%
	After 6 month	82%
	After 9 month	63%

CHARACTERISTICS

ALTERNATIVE RENEWABLE ENERGY TRAINER

Model Number : GOTT-ARET-0



WIND ENERGY TRAINERS

DESCRIPTION

Wind energy is the direct conversion of wind energy into electricity. Our Wind Energy Trainers are designed to model two basic technologies:

- Small independent stand-alone system with energy storage for use anytime day or night

To provide for student understanding of wind systems basic models are proposed. Each trainer comprises a complete energy system including wind turbines, generators, support towers, typical control modules, and energy storage modules. Manuals covering student exercises, instructor operating notes and technical documentation are provided. Systems are comprised of commercially available components, enhanced instrumentation for improved student understanding and with custom designed training module. Note that these trainers are real working systems intended for the wind turbines to be mounted outside.

YW 600 SPECIFICATION




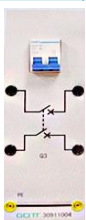
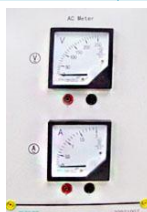
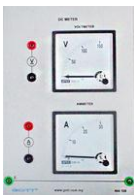

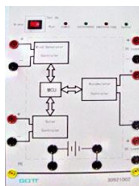
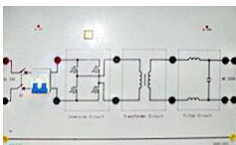






Technical Data

Model No.	GOTT-600	Rated Wind Speed	10 m/s
Turbine Type	Horizontal axis	Braking Wind Speed	13 m/s
Generator Type	Permanent Magnet	Max. Safe Wind Speed	35 m/s
Blades Number	3	Rotor Speed	up to 600 rpm
Material of Blades	Aluminum Alloy	Insulating Level	B
Work Type	SI	Protection Level	IP64
Rotor Diameter	2.4m	Noise	≤55dB
Rotor Power coefficient	0.30	Ambient Temperature	-20°C~55°C
Rotor Swept Area	4.52m ²	Braking System	Mechanical & Electronic
Radial Runout	≤0.04	Life Expectancy	10 Years
Rated Power	600W	Net Weight	34.5KG
Rated Voltage	DC 24V	Packaging	Carton with styrofoam
Star-up Wind Speed	2.5 m/s	Packaging Size	1240 x 470 x 290mm

ALTERNATIVE RENEWABLE ENERGY TRAINER

Model Number : GOTT-ARET-0

PRODUCT MODULES							
SOLAR PANEL	CODE 444-101	BATTERY	CODE 444-102	WIND GENERATOR	CODE 444-103	LOAD	CODE 444-104
							
CIRCUIT BREAKER	CODE 444-105	LED SIMULATION	CODE 444-106	RECTIFIER	CODE 444-107	AC METER	CODE 444-108
							
DC METER	CODE 444-109	WIND & SOLAR CIRCUIT BREAKER UNIT	CODE 444-110	WIND & SOLAR CHARGE CONTROLLER	CODE 444-111	INVERTER UNIT	CODE 444-112
							
U-LINK	CODE 159-019	SAFETY CONNECTING LEAD	CODE 237-001	VERTICAL FRAME	CODE 297-000	EXPERIMENT MANUAL	CODE 444-113
A unit which is wed to link the unit together 		4mm connecting leads 		High Level: Din Standard A4 with two shelves Material: Alumunium Side Frame: T shape Size: 3-Layer 1450mm Length 			

EXPERIMENTS TOPICS :

- Learn the working principle and basic structure of wind generator
- Command the experiment method to measure the working character of a wind generator
- Learn the working principle and basic structure of solar cells
- Command the experiment method to measure the working character of solar cells
- Design a practical application with solar cells
- Understand the working principle of the controller
- Learn the working mode of the controller
- Understand the control of charging and discharging to the battery with the controller
- Understand the control of input and output of the battery when the input power and output load changes

Manuals :

- (1) All manuals are written in English
- (2) Model Answer
- (3) Teaching Manuals

General Terms :

- (1) Accessories will be provided where applicable.
- (2) Manual & Training will be provided where applicable.
- (3) Design & specifications are subject to change without notice.
- (4) We reserve the right to discontinue the manufacturing of any product.

Warranty :

2 Years

ORDERING INFORMATION :

ITEM	MODEL NUMBER	CODE
ALTERNATIVE RENEWABLE ENERGY TRAINER	GOTT-ARET-0	444-100

* Proposed design only, subject to changes without any notice.