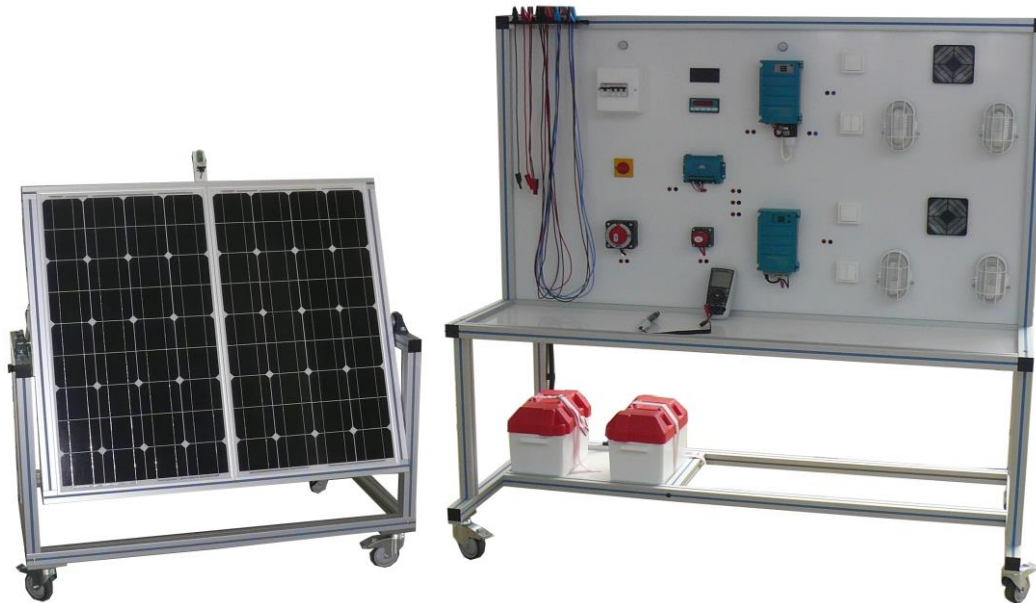


## SOLAR PHOTOVOLTAIC INSTALLATION STUDY UNIT



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### Experimental capabilities

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- **Identification of the components of a solar photovoltaic installation**
- **Display of the implementation of components**
- **Starting up, use and settings**
- **Measurement of various operating parameters (illumination, voltage and electric current)**
- **Analysis of energy efficiency of the system**

## Operating principle

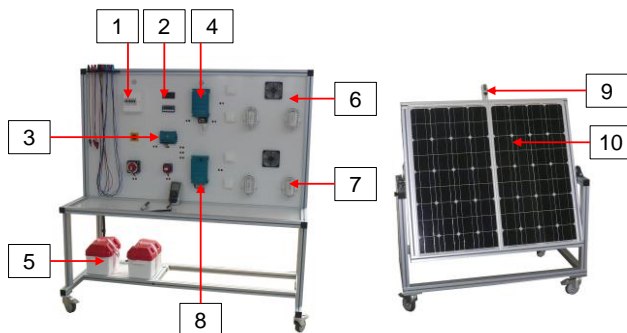
The ERS500 bench allows the study of a system for producing electrical energy from solar energy (photovoltaic). Students will initially identify the different components of the production chain.

They will in a second time put the system into operation, adjust and provide an electrical production. They can then take up the various installation parameters (current, voltage, illumination ..) and analyze the produced powers and performance of various components.

The robust design of this equipment makes it perfectly suited for school use.

Its anodized aluminum structure on wheels makes it very robust as well as a great flexibility of integration into your premises. The manufacture of this equipment meets European machine directive

## Illustrations



## Technical details

1. Electric power supply bench with circuit breakers and differential protection
2. Zone of instrumentation comprising:
  - a 230VAC network analyzer for the output of the inverter
  - Indicator of power of solar radiation
  - measurement sockets of electric voltages
  - measurement wire of electric currents
3. Charging regulator
4. Inverter 24VDC-230VAC
5. Battery with protective tray
6. 230VAC dissipation elements (2 lamps and a fan)
7. 24VDC dissipation elements (2 lamps and a fan)
8. Backup battery charger
9. Measuring probe of solar radiation
10. Photovoltaic solar Panels (power: 80Wc)

Accessories included:

- multimeters DC with current clamp meter for measuring the currents and voltages
- Security cordons for connecting of the elements
- cable connection between the panels and the main module (length 20m)

## Services required

- Power supply: 230Vac - 50 Hz - 10 A
- Electrical supply type: 1 phase (s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 1260 x 600 x 1450
- weight (Kg): 300

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

## Documentation

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Certificate of conformity CE