



## FUEL CELLS SYSTEMS TRAINER DL HYDROGEN-B



This trainer has been designed for the study of fuel cell systems. It teaches their engineering principles and it allows performing a set of experiments for educational purposes.

It is safe and easy to be operated.

Complete with connecting cables, experiment manual and **software for data acquisition and processing**.



### TRAINING OBJECTIVES

The trainer is very flexible, modular and suitable for the understanding of basic principles as well as more complex technology concepts.

It allows performing the following experiments:

- Familiarize yourself with the trainer,
- Performance of the PEM Fuel Cell with fixed loads, without DC/DC converter,
- Performance of the PEM Fuel Cell with fixed loads, with DC/DC Converter,
- Recording of the current/voltage characteristic curve of the PEM Fuel Cell with variable load,
- Calculation of the energy efficiency of the PEM Fuel Cell.



# RENEWABLE ENERGIES

## TECHNICAL SPECIFICATIONS

The trainer includes the following modules:

- 100 W PEM fuel cell. Performance: 14 V at 7.2 A. Consumption of H<sub>2</sub>: 1.4 l/min. it includes the electronic controller,
- 300 NI aluminum storage canister,
- DC/DC converter, output 12 V, 8 A,
- Load, with one halogen lamp, 12 V, 20 W, and one LED lamp, 12 V, 3 x 1 W,
- Variable logarithmic rheostat, 1.5 Ohm ÷ 17 Ohm, 100 W, I<sub>max</sub> = 8 A,
- Battery,
- Instruments module, containing 4 multifunction meters and 4 LCD displays.

Average training hours: 8h.

Approx. packing dimensions: 1.21 x 0.62 x 0.82 m.

Net weight: 35 kg.

### **Option:**

DL HYGEN: Hydrogen generator, for filling the hydride storage canister.