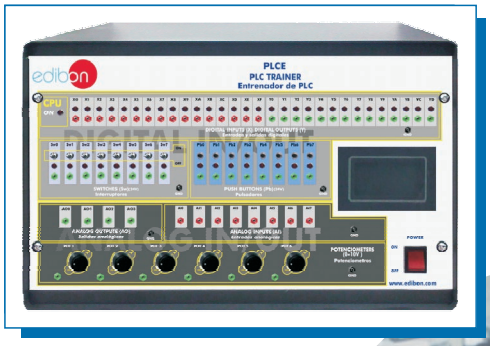
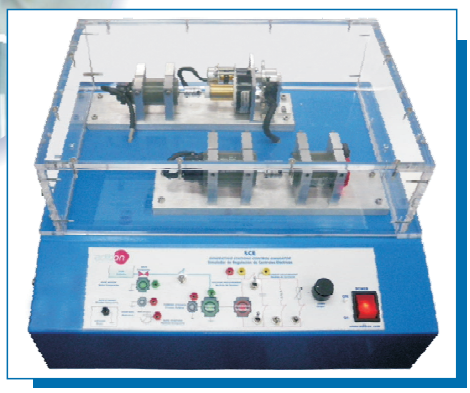
TECHNICAL AND VOCATIONAL EDUCATION
AUTOMATION AND SYSTEMS LABORATORY
(6TV)





* Center:	"....."
* Country:	"....."
* Date:	"....."
* Issue:	"....."

Quality Certificates:

ISO 9000: Quality Management
(for Design, Manufacturing, Commercialization and After-sales service)

European Union Certificate
(total safety)

Certificates ISO 14000 and
ECO-Management and Audit Scheme
(environmental management)

Worlddidac Quality Charter Certificate
(Worlddidac Member)

Technical and Vocational Education Automation and Systems Laboratory

(6TV)

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- Economical proposal.
- Classroom and Laboratory Lay Out (Example).
- Main teaching units (included in priority 1).
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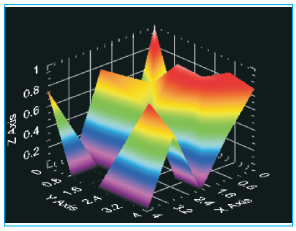
- Project conditions.
- Teaching techniques used.

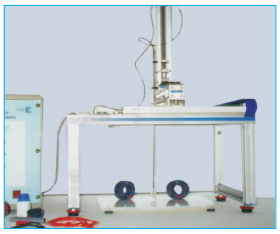
Project content

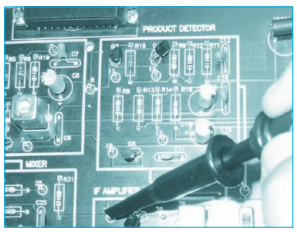
Modern design

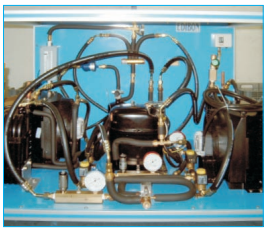


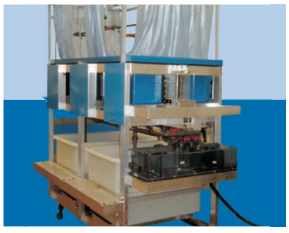
Main blocks

Products

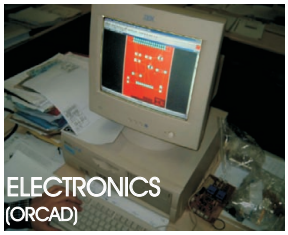


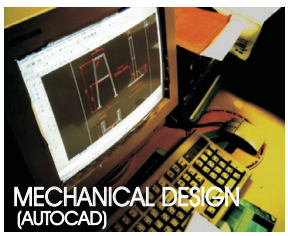






Full units design





Technical areas available

- Electronics.

- Electricity.

* **Automation & Systems.**

- Process Control.

- Complements, Instruments and Tools.

*__Main area directly related with Technical and Vocational Education Automation and Systems laboratory labelled in bold letters.__

Note: The complete technical design “is ready” at our premises

Economical Proposal

Teaching Units:

"Priority 1"

0600. Automation & Systems

0610: PLC Trainer
0620: PLC Process Emulators Applications Module
0621: PLC Small Scale Real Applications Module
0633/20S: Industrial PLC (Any) .
0650: Automation & System Module
0651: Automation (Regulation and Control) Module.
0652: Automation (Control) Module
0600/ESN: EDIBON Scada-Net for Automation & Systems units

"Priority 2"

1000. Process Control

1010: Process Control. Basic Module
1010/PLC: PLC's Module
1011: Process Control. Medium Module
1011/PLC: PLC's Module
1020: Industrial Process Module
1020/PLC: PLC's Module
1000/ESN: EDIBON Scada-Net for Process Control unit

"Priority 3"

0200. Electronics

0213-210/20S: Elementary Electronics (20 CAI + CAL).

0213-211/20S: Elementary Electronics (20 CAI + CAL).

0213-212/20S: Elementary Electronics (20 CAI + CAL).

0213/10A: Elementary Electronics (10 EDAS/VIS).

0213/10B: Elementary Electronics (10EBC-100).

0230: Transducers and Sensors Module

0400. Electricity

0413-410/20S: Domestic Electric Installations (20 CAI + CAL)
0413-411/20S: Domestic Electric Installations (20 CAI + CAL)
0423K-420K/20S: Domestic Electric Installations "kit" (20 CAI + CAL)
0423K-421K/20S: Domestic Electric Installations "kit" (20 CAI + CAL)
0423/10A: Domestic Electric Installations "kit" (10 MUAD).
0423/10B: Domestic Electric Installations "kit" (10 BASK + CABD)

Complements, Instruments and Tools:

5100. Complements, Instruments and Tools

5110-1: Cupboard & Shelves Module
5120-10: Computer Module
5122: Teaching Aids Module
5124: Complete Health & Safety
5142-1: Electricity Toolkit Module
5143-20: Electronics Toolkit Module

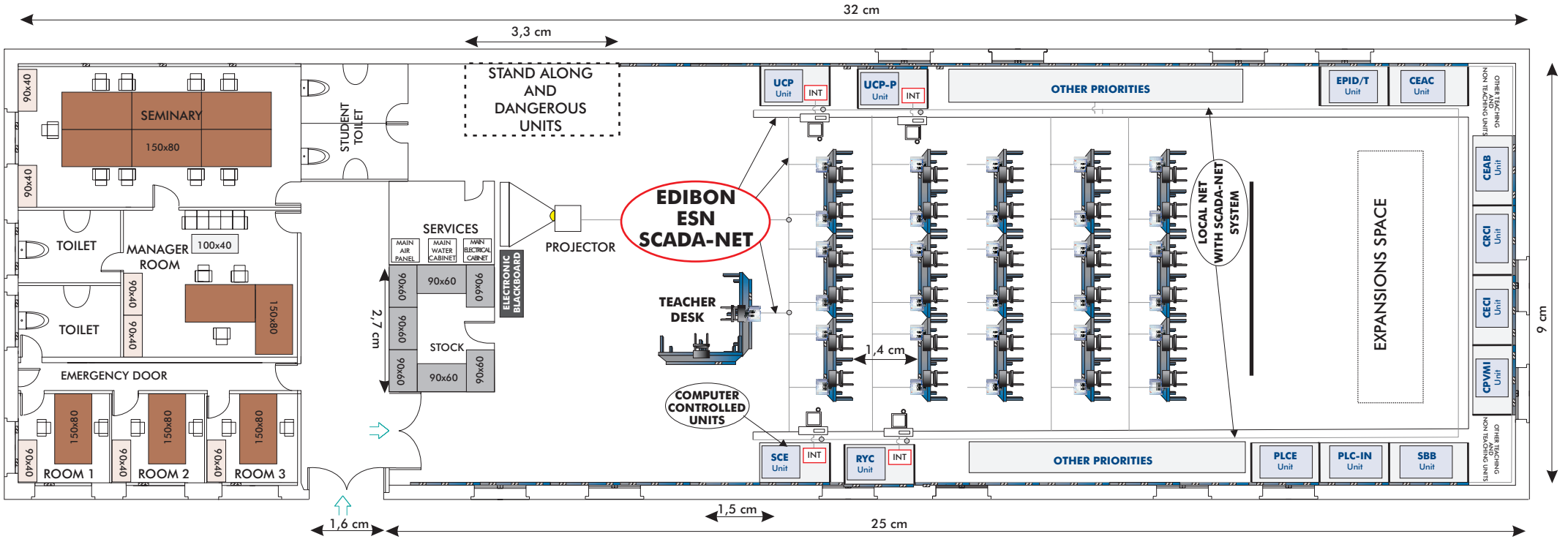
Services:

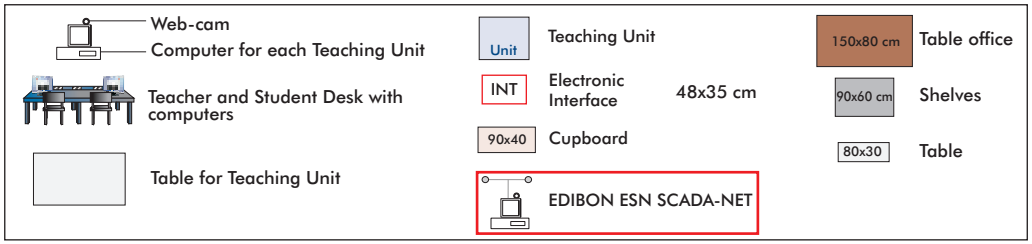
* Furnitures:
* Electrical, Water and Air Installation and others laboratory services
* Installation of all units supplied, Starting up, Training, Teacher Training and Technology Transfe

Classroom and Laboratory Lay Out

TECHNICAL AND VOCATIONAL EDUCATION
AUTOMATION AND SYSTEMS LABORATORY

(Example of Priority 1)
(6TV)





E: 1:100

Main Teaching Units
(included in priority 1)

Priority 01:

PLCE	PLC Trainer
PLC-IN	PLC Industrial Control System
SCE	Computer Controlled Generating Stations Control and Regulation Simulator (System Engineering).
SBB	Ball and Beam System.
CPVM	DC Motor Position and Speed Control.
RYC	Computer Controlled Teaching Unit for the Study of Regulation and Control.
UCP	Computer Controlled Process Control System (with electronic control valve).
UCP-P	Computer Controlled Process Control Unit for the study of Pressure (Air).
CECI	Industrial Controllers Trainer.
CRCI	Industrial Controllers Networking.
CEAB	Trainer for Field Bus Applications.
CEAC	Controller Tuning Trainer.
EPID/T	Industrial Regulation Trainer, PID type. (Temperature).

Main target

* To help the students:

  - By “quick” understanding.
  - By “clear” understanding (clear concepts).
  - By “saving” time.
  - By “extending” the laboratory to their homes.

* To help the teachers:

  - By “easy” teaching.
  - By increasing the teaching “efficiency”.
  - By “reducing” teaching costs (less time consume).
  - By “integrating” classroom and laboratory in the same place.

Project options covered

This *"Technical and Vocational Education Automation and Systems Laboratory"* will cover the following:

a) To train students at laboratory.
b) To train trainers.
c) To be used for training and update educators in current teaching technologies.
d) To give courses to workers in the industry, as it simulates industrial process.
e) To be used for carrying out applied research, in several processes and different technical areas.
f) To be used as research tool for international projects.
g) To train other countries teachers.

Project conditions

The *"Technical and Vocational Education Automation and Systems Laboratory"* includes the following technical and commercial conditions:

a) Technical conditions:

- Laboratories adaptation.
- Installation of all units supplied.
- Starting up for all units.
- Training about the exercises to be done with any unit.
- Teacher training related with the teaching unit and the teaching techniques used.
- Technology transfer.

b) Commercial conditions:

- Packing.
- Financing Charges.
- C.I.F. Charges.

c) Other conditions:

- 8 Manuals for each teaching equipment:

. Required services manual.
. Assembly and installation manual.
. Interface and software/control console manual.
. Set in operation manual.
. Safety norms manual.
. Practices manual.
. Maintenance manual.
. Calibration manual.

TEACHING TECHNIQUES USED

3D. EDIBON THREE DIMENSIONS SYSTEM

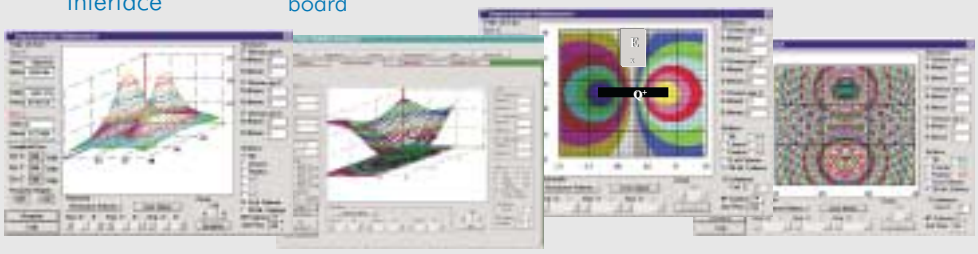

Unit


Interface


Data acquisiton board

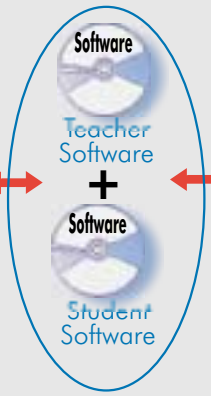
Software included:
-Control
-Data Acquisition
-Data Management

Used for:
Physics (Magnetic fields, Electrical fields, Mechanics, Acoustics, Optics, Thermodynamics and Fluid Mechanics)

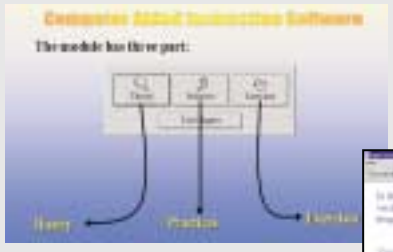


CAI. COMPUTER AIDED INSTRUCTION SYSTEM


Unit



Used for:
Basic Electronics and Electricity.
Communications.
Basic Mechanics.
Basic Fluid Mechanics.



EDAS. EDIBON DATA ACQUISITION SYSTEM

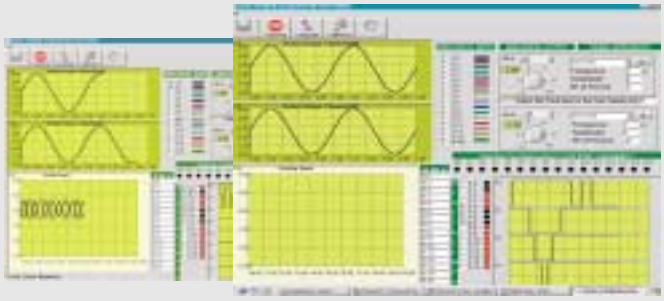

Unit


Interface


Data acquisiton board

Data Acquisition Software

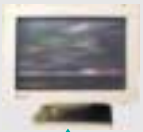
Used for:
Basic Electronics.
Communications.
Electricity.



RTC. EDIBON SYSTEM FOR HIGH ELECTRONICS (Real time control)


Unit


Data acquisiton board



Control Software

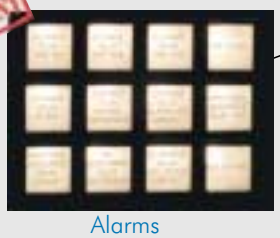
Option: Simulation Software

Used for:
High Tech Electronics (Control Electronics, Digital Electronics and Industrial Electronics).

HYBRID. **EDIBON TEACHING HYBRID SYSTEM (ENERGY)**

EDIBON PATENT

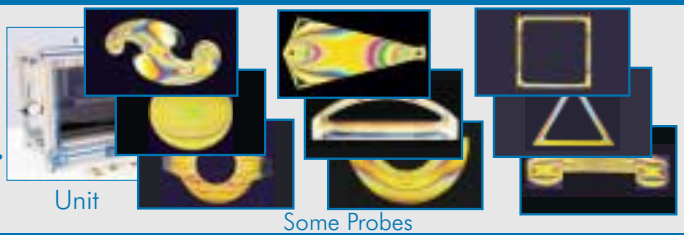
Used for:
Energy Power Plants.



Alarms

PHOTOELASTICITY

Used for:
Strength of Materials.

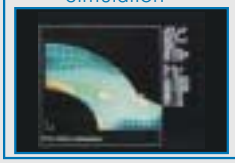


Unit

Some Probes

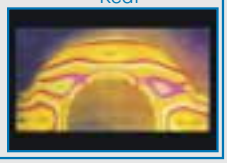
RESULTS

Simulation



Diferences between the simulation and the photoelastic reality.

Real



SACED. **EDIBON COMPUTER CONTROL SYSTEM: Control+Data Acquisition+Data Management**

EDIBON PATENT

Unit

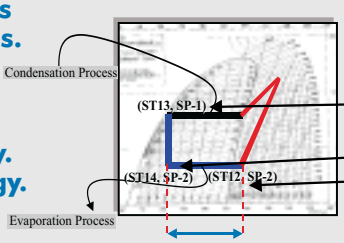
Interface

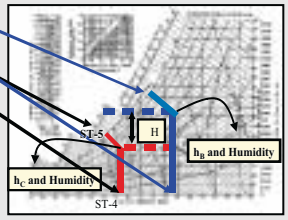
Data Acquisiton board

Software included:
-Control
-Data Acquisition
-Data Management

PLC option

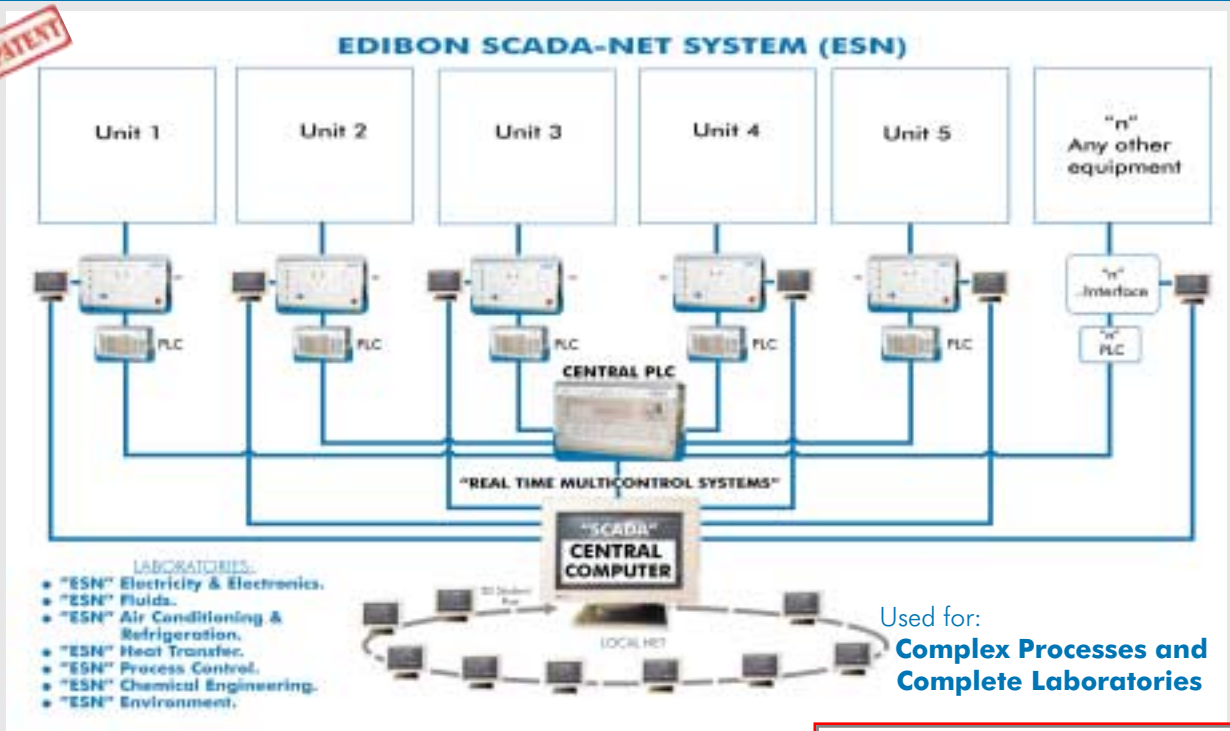
Used for:
Fluid Mechanics.
Aerodynamics.
Thermodymanics &Thermotechnics.
Process Control.
Chemical Engineering.
Food Technology.
Water Technology.
Environment.





ESN. **EDIBON SCADA-NET SYSTEM**

EDIBON PATENT



Used for:
Complex Processes and Complete Laboratories

WEB: www.edibon.com

Information in detail-CLICK HERE