

HIGHER EDUCATION FOOD TECHNOLOGY LABORATORY (12HE)



- * 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)

Higher Education Food Technology Laboratory

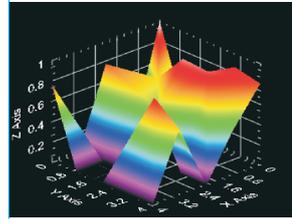
(12HE)

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Project content

Modern design



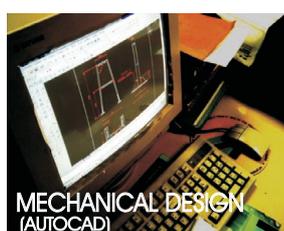
Main blocks



Products



Full units design



Technical areas available

- Electronics.
- Electricity.
- Mechanics & Materials.
- Thermodynamics & Thermotechnics.
- Process Control.
- Chemical Engineering.
- * **Food & Water Technologies.**
- Environmental.
- Complements, Instruments and Tools.

***Main area directly related with Higher Education Food Technology and Water Technology Laboratory labelled in bold letters.**

Note: The complete technical design "is ready" at our premises

Economical Proposal

Teaching Units:

"Priority 1"

1200. Food and Water Technologies

1210: Elementary Food Technology. Basic Module
1210/PLC: PLC's Module
1211: Elementary Food Technology. Medium Module
1211/PLC: PLC's Module
1212: Elementary Food Technology. Advanced Module
1212/PLC: PLC's Module
1220: Food Technology (Utilage) Module
1230: Food Technology (Milk). Basic Module
1230/PLC: PLC's Module
1231: Food Technology (Milk). Medium Module
1231/PLC: PLC's Module
1232: Food Technology (Milk). Advanced Module
1232/PLC: PLC's Module
1240: Food Technology (Oil) Module
1240/PLC: PLC's Module
1200/ESN: EDIBON Scada-Net for Food Technology units
Pilot Plants for Food Technology (30 students working simultaneously)
1200-LE00: Process Plant for Dairy Products, with "ESN"

"Priority 2"

0900. Thermodynamics & Thermotechnics

0910/10S: Refrigeration. Basic Module (10 CAI + CAL)
0910/PLC: PLC's Module
0950/10S: Heat Transfer. Basic Module (10 CAI + CAL)
0950/PLC: PLC's Module
0951: Heat Transfer. Medium Module.
0951/PLC: PLC's Module
0953/PLC: PLC's Module

1000. Process Control

1010: Process Control. Basic Module.
1010/PLC: PLC's Module

1100. Chemical Engineering

1110/10S: Chemical Engineering. Basic Module (10 CAI + CAL).
1110/PLC: PLC's Module
1111/10S: Chemical Engineering. Medium Module (10 CAI + CAL).
1111/PLC: PLC's Module
1120: Chemical Process. Basic Module
1120/PLC: PLC's Module

"Priority 3"

0200. Electronics

0213-210/10S: Elementary Electronics (10 CAI + CAL).

0400. Electricity

0413-410/10S: Domestic Electric Installations (10 CAI + CAL)

0700. Mechanics and Materials

0710/10S: Mechanics. Basic Module. (10 CAI + CAL).

1200. Food and Water Technologies

1200-CA00: Process Plant for Meat, with "ESN"
1200-CI00: Process Plant for Citrus Fruit, with "ESN"
1200-FR00: Process Plant for Fruits, with "ESN"
1200-VE00: Process Plant for Vegetables, with "ESN"
1200-AS00: Process Plant for Seeds Oil, with "ESN"
1200-AC00: Process Plant for Olive Oil, with "ESN"
1200-TO00: Process Plant for Tomatoes, with "ESN"
1200-UV00: Process Plant for Grapes, with "ESN"
1200-CE00: Process Plant for Cereals, with "ESN"

1300. Environmental

1310: Water Handling. Basic Module
1310/PLC: PLC's Module
1311: Water Handling. Medium Module
1311/PLC: PLC's Module
1321 Clear Water Treatment. Basic Module
1321/PLC: PLC's Module

Complements, Instruments and Tools:

5100. Complements, Instruments and Tools

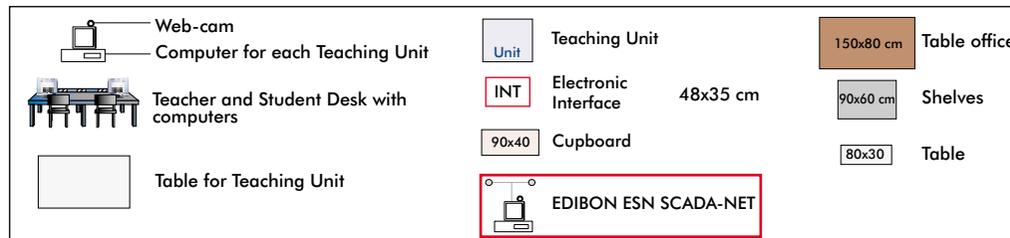
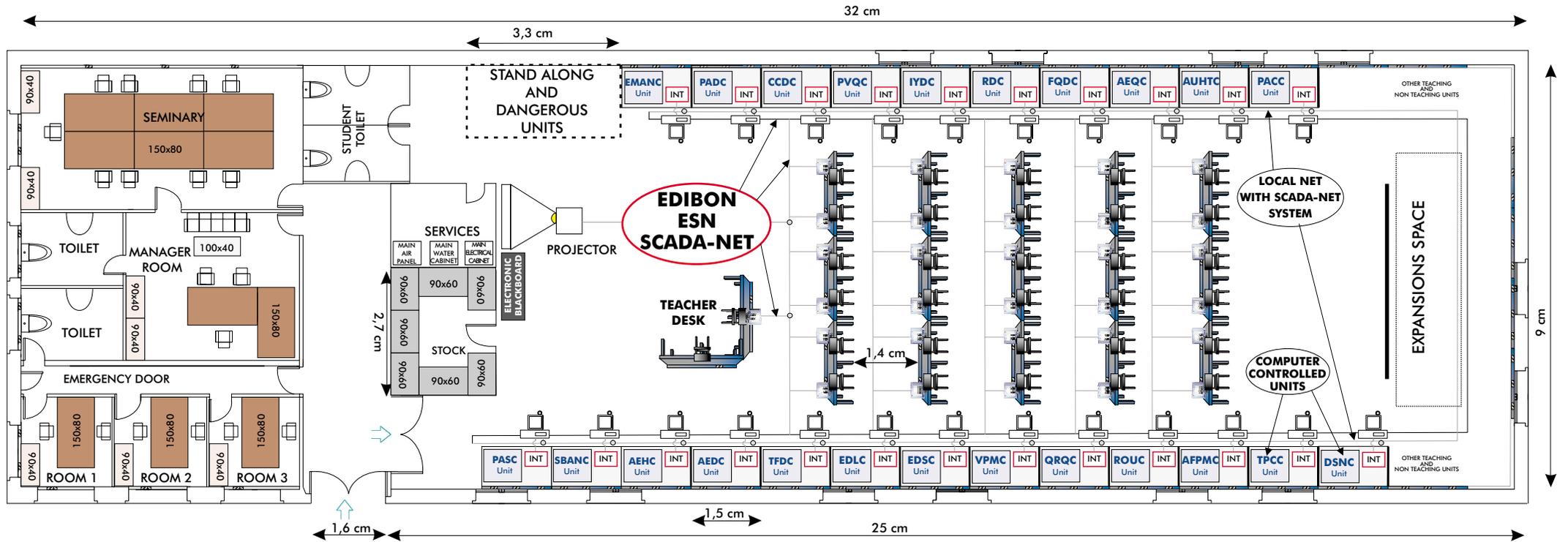
5110-1: Cupboard & Shelves Module
5120-10: Computer Module
5122: Teaching Aids Module
5124: Complete Health & Safety
5142-1: Electricity Toolkit Module
5143-20: Electronics Toolkit Module

Services:

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

Classroom and Laboratory Lay Out

HIGHER EDUCATION FOOD TECHNOLOGY LABORATORY (Example of Priority 1) (12HE)



E: 1:100

Main Teaching Units (included in priority 1) **Priority 01:**

PASC	<u>Computer Controlled</u> Laboratory Pasteuriser.
SBANC	<u>Computer Controlled</u> Tray Drier.
AEHC	<u>Computer Controlled</u> Hydrogenation Unit.
AEDC	<u>Computer Controlled</u> Desodorising Unit.
TFDC	<u>Computer Controlled</u> Teaching Frigorific Tank.
EDLC	<u>Computer Controlled</u> Teaching Machine for Putting in Plastic Packing Liquids.
EDSC	<u>Computer Controlled</u> Teaching Machine for Putting into a container Solids.
VPMC	<u>Computer Controlled</u> Multipurpose Processing Vessel.
QRQC	<u>Computer Controlled</u> Chemical Reactors Training System.
ROUC	<u>Computer Controlled</u> Reverse Osmosis/Ultrafiltration Unit.
AFPMC	<u>Computer Controlled</u> Plate and Frame Filter
TPCC	<u>Computer Controlled</u> Contact Plate Freezer.
DSNC	<u>Computer Controlled</u> Teaching Cream Separator.
EMANC	<u>Computer Controlled</u> Butter Maker Teaching Unit.
PADC	<u>Computer Controlled</u> Teaching Autonomous Pasteurization Unit.
CCDC	<u>Computer Controlled</u> Teaching Curdled Tank.
PVQC	<u>Computer Controlled</u> Teaching Cheese Vertical Press.
IYDC	<u>Computer Controlled</u> Teaching Yogurt Incubator.
RDC	<u>Computer Controlled</u> Teaching Cottage Cheese Maker.
FQDC	<u>Computer Controlled</u> Teaching Cheese Melter.
AEQC	<u>Computer Controlled</u> Cheese Vat & Cheese Making accessories
AUHTC	<u>Computer Controlled</u> UHT Unit.
PACC	<u>Computer Controlled</u> Continuous Cycle Oil Production Plant.

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 “*Higher Education Food Technology 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 “*Higher Education Food Technology 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:

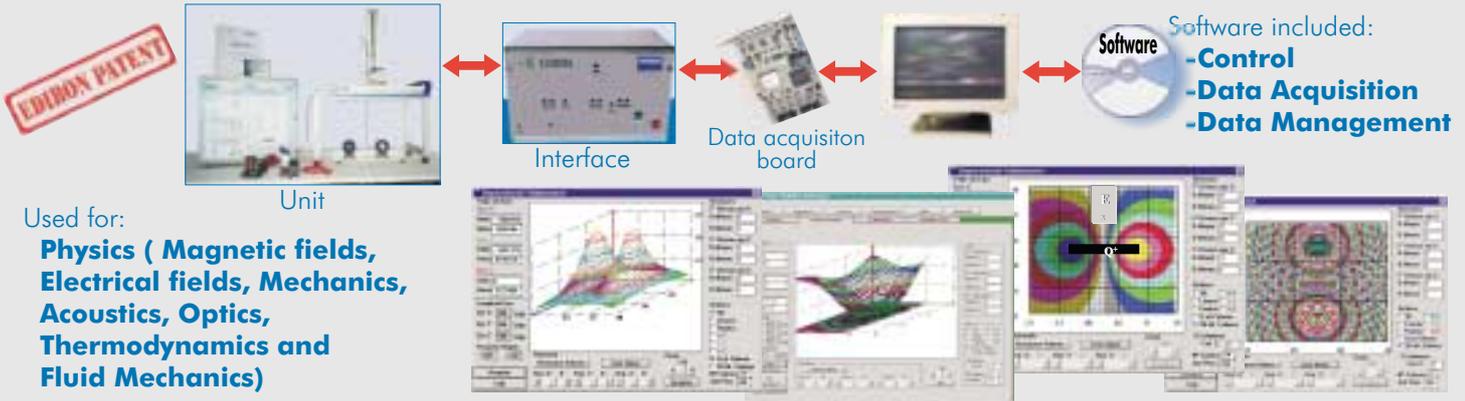
- Packing.
- Financing Charges.
- C.I.F. Charges.

c) Other conditions:

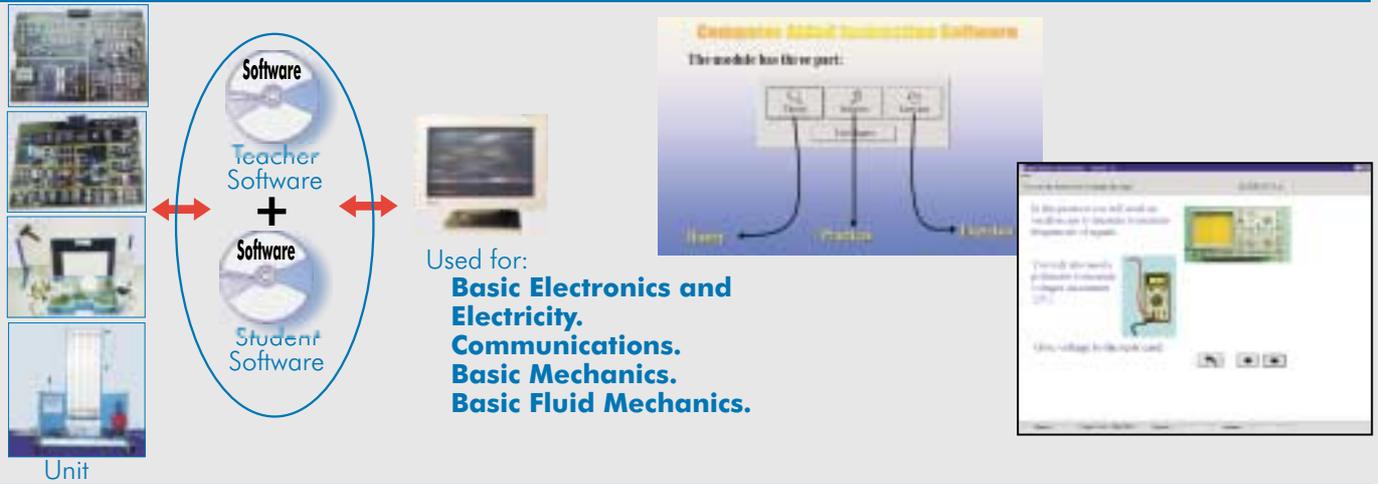
- 8 Manuals for each teaching equipment:
 - . Required services manual.
 - . Assembly and installation manual.
 - . Interface and software/control console manual.
 - . Set in operation manual.
 - . Safety norms manual.
 - . Practices manual.
 - . Maintenance manual.
 - . Calibration manual.

TEACHING TECHNIQUES USED

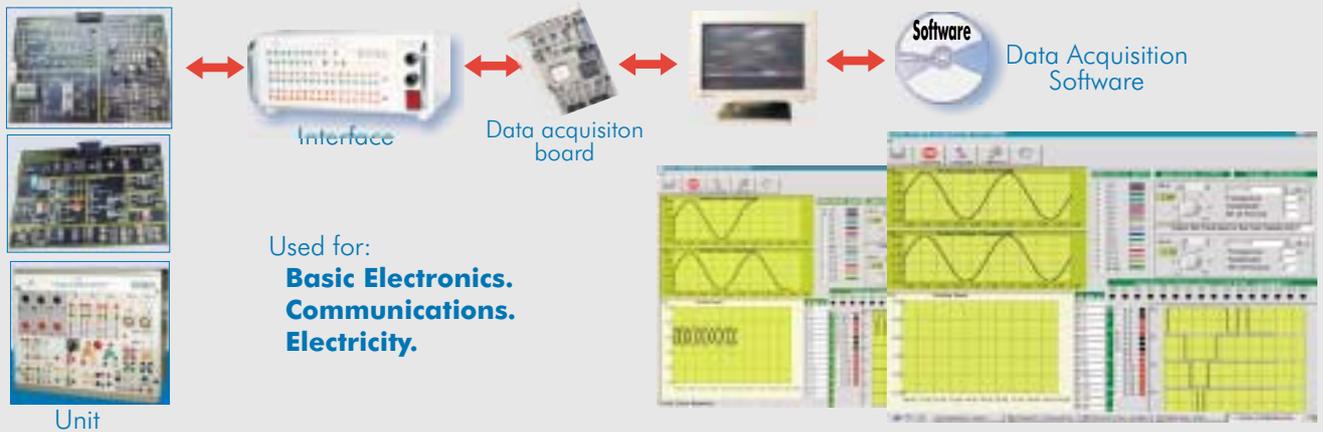
3D. EDIBON THREE DIMENSIONS SYSTEM



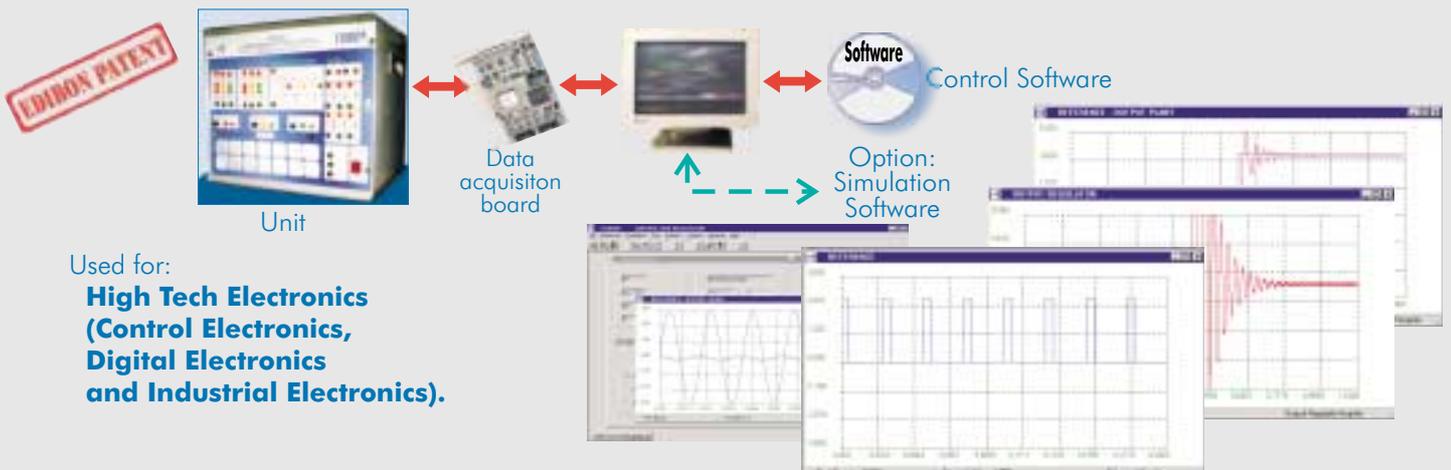
CAI. COMPUTER AIDED INSTRUCTION SYSTEM



EDAS. EDIBON DATA ACQUISITION SYSTEM



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



HYBRID. EDIBON TEACHING HYBRID SYSTEM (ENERGY)

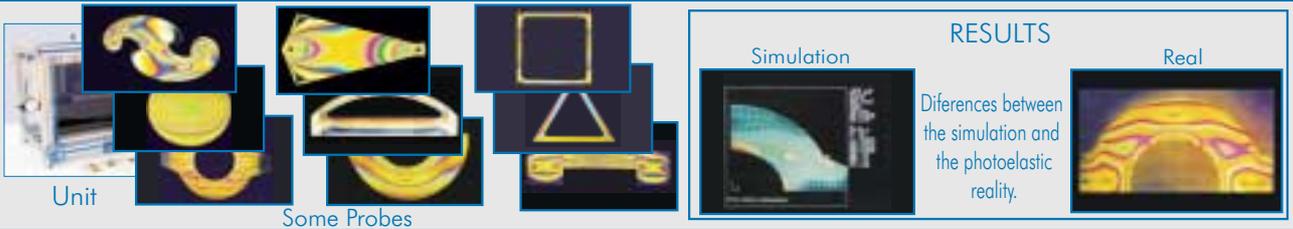
EDIBON PATENT

Used for:
Energy Power Plants.



PHOTOELASTICITY

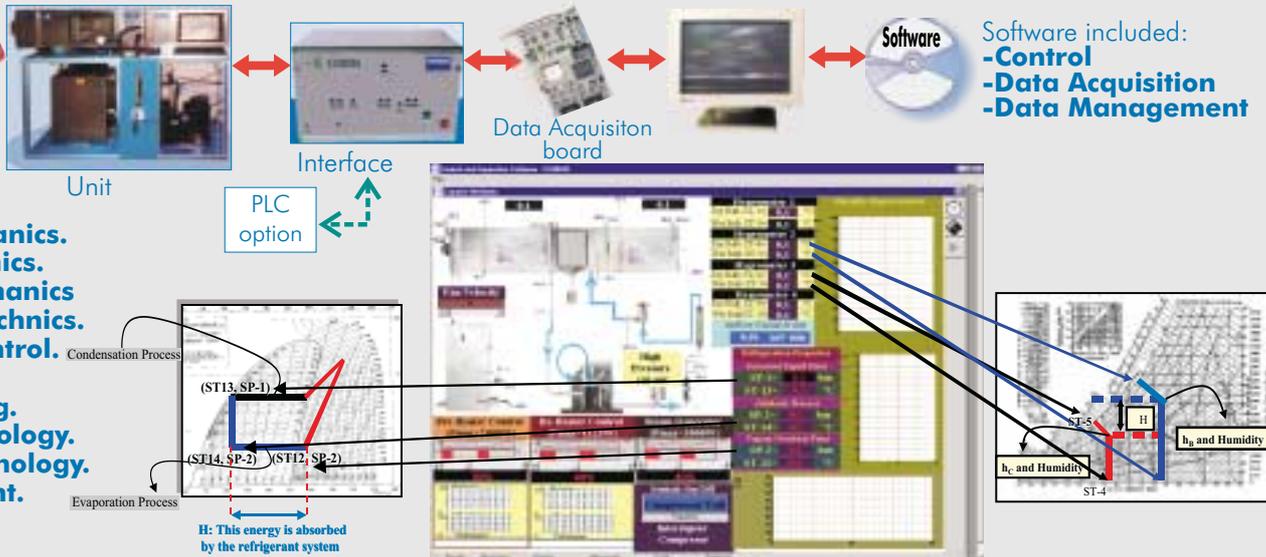
Used for:
Strength of Materials.



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

EDIBON PATENT

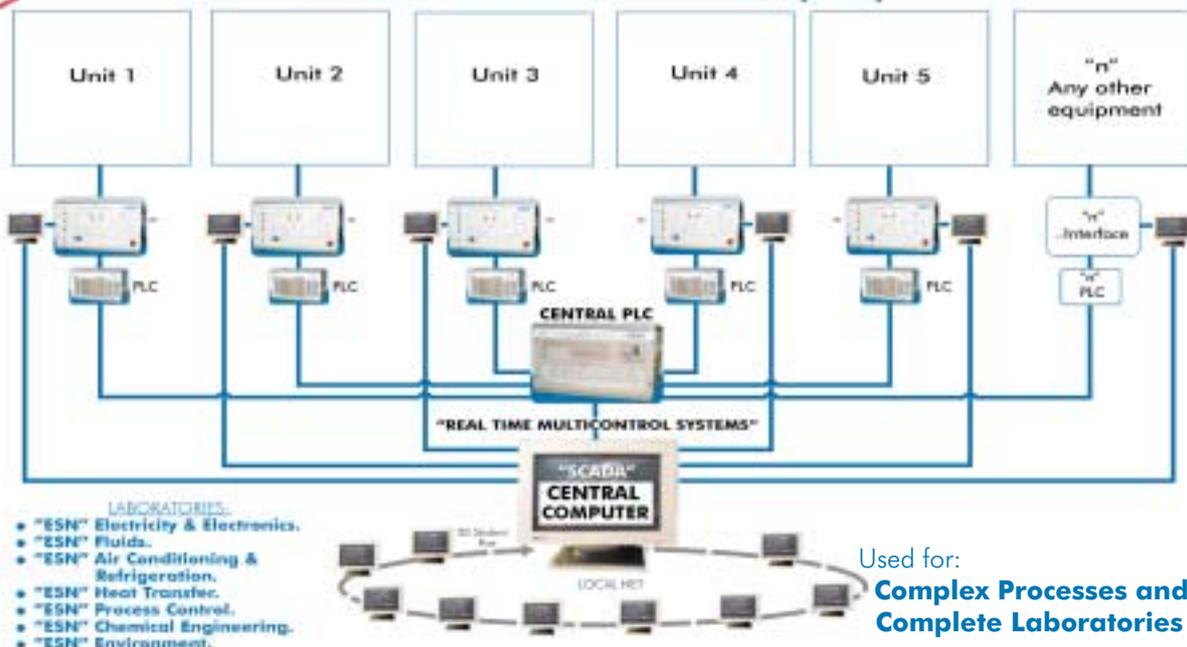
Used for:
**Fluid Mechanics.
Aerodynamics.
Thermodynamics & Thermotechnics.
Process Control.
Chemical Engineering.
Food Technology.
Water Technology.
Environment.**



ESN. EDIBON SCADA-NET SYSTEM

EDIBON PATENT

EDIBON SCADA-NET SYSTEM (ESN)



Used for:
Complex Processes and Complete Laboratories