



SYSTEM CONFIGURATION

ITEMS INCLUDED IN THE SUPPLY:

- ① - LE00 Process Plant for Dairy Products complete as specifications.
- ② - Control Interface Box.
- ③ - Data Acquisition Board.
- ④ - Software for: Computer Control + Data Acquisition + Data Management.
- ⑤ - EDIBON SCADA-NET Software Package for classroom control and management.
- ⑥ - PLC Module for the Control of Industrial-Processes with all necessary accessories.
- ⑦ - PLC Control Software.
- ⑧ - Computers and local network included.
- ⑨ - Interconnection elements and **all accessories** included for normal working operation.
- ⑩ - **Manuals for:** Practices and Exercises, Required Services, Assembly and Installation, Interface and Control Software, Starting-up, Safety, Maintenance, Calibration etc.

EXERCISES TO BE DONE WITH THIS SYSTEM

This Process Plant has the target of: **Research, Teaching, Production and future businessman platform.**

It permits the following control and process aspects:

- Analysis of all phases of the product transformation, from reception to packaging.
- Qualitative evaluation of the finished product as function of the productive operations performed.
- Experimentation on the efficiency of the different chemical products used for the preservation process.

- Organization of procedures for continuous quality control of the production operations.
- Execution of procedures for disinfection and sanification of the equipment.
- Evaluation of technical, legal and administrative aspects concerning food adulteration
- Manual and computer control operation.
- Sensors calibration systems.
- SCADA systems and local net.

TECHNICAL SPECIFICATIONS SUMMARY

- **Anodized aluminium structure and stainless steel metallic elements. All elements needed are chemical resistant.**
- **Data Acquisition, Computer Control and Data Management Software. Flexible and open Control Software, compatible with any Windows operating system. PID analog and digital control. Sampling velocity up to 130.000 data per second. Calibration system for all sensors. Registration of the state of the alarms.**
- **Control Interface with front panel process diagram. Real Time PID control and with shield and filtered signals. Sensors with signals of 4-20 mA, 0-5 V, microvolts and Hz, etc, prepared for 0-10 V computer output. 16 analog + 16 digital inlets and 16 digital + 2 analog outlets. Up to 130 kHz sampling velocity. Proportional position and on/off Control, for actuators and control instruments.**
 - Feed back control system.
 - Sensors connections in interface with different number of pins, for avoiding student mistakes.
- **PLC box for Industrial Control Processes, with front panel process diagram including PLC Control Software.**
- **Manual, semiautomatic and automatic controlled. All system is connected with a local net with 30 computers in which any student can control any block of the process. When the complete process plant is working synchronized, the control is unique and the rest of the computers in the net works as visualization screens.**
- **It has been design for a wide range of feed, since 11 to 300 liters, to provide the use for teaching, the production and research.**
- **The following units have been designed for optimization of all process involved:**
 - **Plates Filter (Filtrate):** Complementaries techniques specifications available.
 - **Refrigerated tank (Refrigeration):** Complementaries techniques specifications available
 - **Pasteurization unit (Pasteurization):** Complementaries techniques specifications available.
 - **Homogenization unit (Homogenization):** Complementaries techniques specifications available.
 - **Yogurt maker (Obtain yogurt):** Complementaries techniques specifications available.
 - **Cheese maket (Obtain curd):** Complementaries techniques specifications available.
 - **Ice-cream maker (Obtain ice-cream):** Complementaries techniques specifications available.
 - **Freeze dryer (Freeze dried):** Complementaries techniques specifications available.
 - **Dehydration unit (Dehydration):** Complementaries techniques specifications available.
 - **Press unit (Obtain cheese):** Complementaries techniques specifications available.
 - **Butter Maker unit (Obtain butter):** Complementaries techniques specifications available.
 - **Cream Separator unit (Skim):** Complementaries techniques specifications available.
 - **Tank to salting, storage and maturation (Salting and maduration):** Complementaries techniques specifications available.
 - **Packing unit (Packing):** Complementaries techniques specifications available.
 - **UHT unit (UHT process):** Complementaries techniques specifications available.
 - **Bottling unit (Bottling):** Complementaries techniques specifications available.
- **Analysis and quality control laboratory.**

NOTE: Complete technical specifications and detailed additional information available.

REQUIRED SERVICES

- Electrical supply: 220 V / 50 Hz or 110 V / 60 Hz.
- Water supply.
- Compressed air supply.
- Vapour supply.

DIMENSIONS & WEIGHTS

- Dimensions approx. :
14 X 12 X 3 m.
- Weight approx. : 3200 Kg.

* Specifications subject to change without previous notice, due to continuous improvements of the product.



C/ Julio Cervera, 10-12-14. Móstoles Tecnológico.
28935 MÓSTOLES. (Madrid). ESPAÑA - SPAIN.
Tel.: 34-91-6199363 Fax: 34-91-6198647
E-mail: edibon@edibon.com Web: www.edibon.com

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REPRESENTATIVE: