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# Pilot Plants

### **APPLICATIONS**

• In-house pasteurization laboratory for pasteurizing and aseptic packing of small samples of products such as juices, sodas, vegetable creams, soups, etc.

#### **ADVANTAGES**

At **GÉMINA** we are aware that new products development occurs continuously in all food industries.

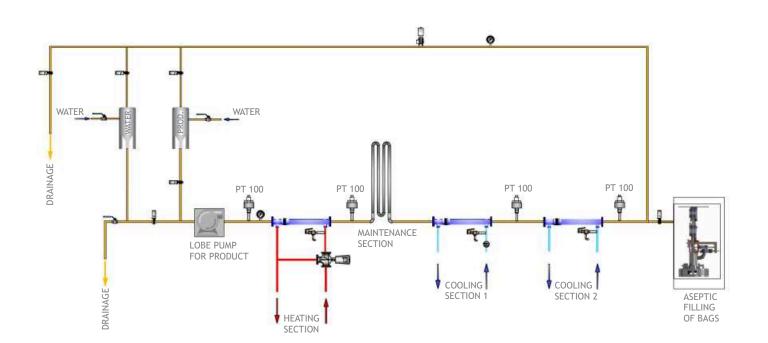
For this reason, to make the development of new products easier and avoid plant production halts, **GÉMINA** develops this specific machinery.

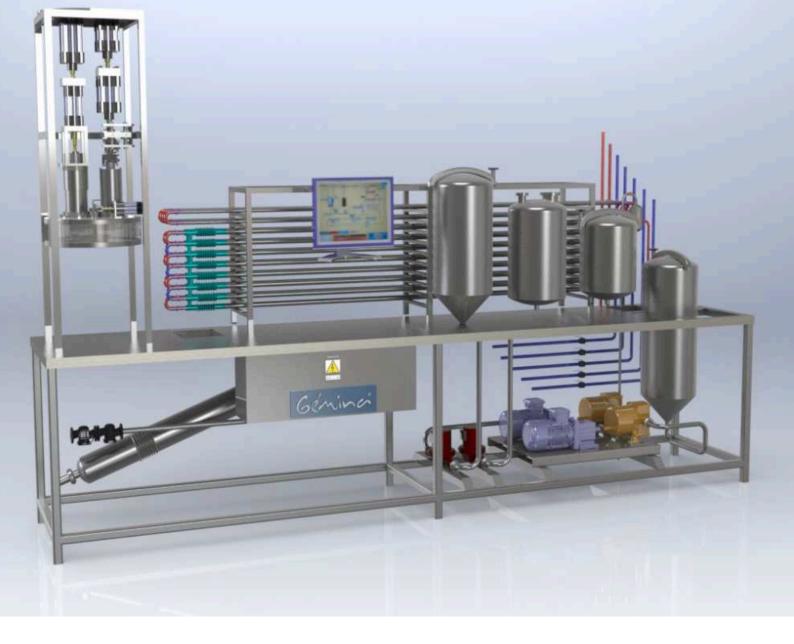
The development of new products implies halts in the production process in order to obtain product samples.

With our in-house pasteurization laboratory, such stops will not be necessary any longer, from now on, the tests will be carried out previously in a small laboratory plant which will simulate the industrial conditions and will result in savings and many advantages.









# **HOW IT WORKS**

The plant consists of a tubular pasteurization system, with variable pipe lengths to adapt them to the product and thus increase or decrease the holding section. This way, tests on products with different properties can be carried out.

The plant is delivered ready to be connected to water, steam, air and electricity supplies.

The working principle is the same as that applied to our pasteurizers, but to a small scale.

The product is heated in the heating section until it reaches the necessary temperature, according to its organoleptic properties. Following the product is driven to the holding section where it is kept at the necessary temperature to assure its sterilization and pasteurization while maintaining its properties. After, it is cooled down so it can go through the aseptic in bag filling process.

The in house laboratory plant can be put together with a different configuration, following customer's requests.

# **COMPONENTS**

- Filling head for aseptic bags from 20 to 200 liters.
- Possibility of steam sterilization or chemical sterilization.
- Balance tank.
- Aseptic tank.
- Cleaning system tank.
- Deaeration system (according to product).
- Touch screen for control and supervision of all process variables
- SCADA system for data acquisition and control, so that a log can be printed out with all the processed data . (\*)
- High level of automation:
  - Pt100 temperature sensors to control the processes of heating, holding and cooling.
  - · Valve automatic control.
  - · Control of sterilization factor f0.
  - · Control of filling of aseptic bags.
  - · Control of speed of motors by frequency variators.

(\*) Optional

# Machine Point® Food Technologies

MACHINEPOINT FOOD TECHNOLOGIES was created as a result of a joint-venture between MACHINEPOINT GROUP and GÉMINA.

**MACHINEPOINT FOOD TECHNOLOGIES** designs, manufactures and integrates lines, equipment and processes for the food industry, more specifically for the beverage processors, the dairy industry and processors of fruits and vegetables.

**MACHINEPOINT FOOD TECHNOLOGIES** belongs to an international group specialized in industrial equipment for plastic, packaging and food industries.

The group is headquartered in Spain (Valladolid) and has sales offices in Turkey, Mexico, France, India and North Africa. The engineering center is also located in Spain (Murcia). It is at the engineering center where we manufacture our equipment and have our R & D + I department.

**GEMINA PROCESOS ALIMENTARIOS S.L.** is a leading equipment manufacturer that provides innovative solutions for the food industry. It has over 25 years experience in designing, manufacturing, assembling, automating and implementing lines and processes.

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