

MachinePoint[®]
Food Technologies

Plate Pasteurizer

Gemina[®]

www.gemina.es

Plate Pasteurizer

At GÉMINA we are aware of the importance of developing pasteurization methods adapted to the new times and the new food industry developments and consumer trends.

For this reason, one of our main objectives consists in supporting our customers' by developing for them pasteurization plants adapted to their very particular product needs.

Adapted to a wide range of products in most industries, **plate heat exchangers** are a compact and efficient solution.

They are designed to be completely reliable in temperature control. This makes them the perfect solution for the heating and cooling process of various products following fully hygienic conditions.

Plate exchangers consist of a pack of corrugated metal plates, to provide turbulence to the fluid, with hatches for the passing of two fluids and the thermal exchange between them.

The pack of plates is assembled in a shell which is compressed by tightening screws.

The plates are equipped with gaskets which seal the channels and direct the fluids towards alternative channels.

The number of plates is determined by the flow volume, the products physical properties, the pressure fall and the fluid temperature.

Rheological data such as viscosity, thermal conductivity, density and calorific capacity will determine the type of heat exchanger chosen and the separation required between plates.

APPLICATIONS

- Pasteurization of juices with low fiber content, like apple or orange juices, musts, fruit nectars, etc.
- All kinds of soft drinks.
- Milk and dairy products.
- Beer.

ADVANTAGES

- High heat transfer coefficient.
- Economic.
- Possibility to couple with energy recovery system: great energy performance, energy recovery of up to 90%.
- Versatility: possibility to attach different bodies to the plate exchanger.
- Product variety: different types of sections which cover a wide range of products.

HOW IT WORKS

Pasteurization basically consists of making the product (dairy products, creams, juices, concentrates, soups, egg and



derivatives or any other type of fluid food) undergo a treatment of controlled temperature increase followed by a cooling down process, thus achieving an optimal sterilization of the product, without losing its organoleptic characteristics, nor its vitamins, nutritive or protein richness.

CHARACTERISTICS AND ADVANTAGES

- Working pressure: up to 10 bar.
- Design adapted to the customer's needs: in all projects realized by GÉMINA, integrating new equipment within our customers' facilities is specially analyzed.
- Mounted in a single small shell.
- Ease of use and user friendly learning of the automated system: our target is to ease people's work, and in order to do so, we use resources of rationality, ergonomics and functionality applied to our constructive methods
- Our equipment is designed and manufactured following the strict design requirements recommended by EHEDG (European Hygienic Equipment Design Group) and 3A (US norms).
- Technical assistance through internet: focused to continuously solve all the technical problems our customers may find.
- Efficiency: Absolute control of pasteurization, with double testing of process temperature.

CONSTRUCTION TECHNICAL DETAILS

- **Automation:**
Wide range of processes; from HMI screen's to SCADA.
Optimal IT (Information Technology) integration solutions, for example, with applications in MES levels (Manufacturing Executing Systems) and ERP (Enterprise Resource Planning).
Integration with the rest of systems, field buses, ASI-Bus Profi-Bus and Ethernet.
We provide the maximum ease for connectivity and start of computer systems for processing control.

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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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