



# Heaters and Coolers

*Gémina*<sup>®</sup>

[www.gemina.es](http://www.gemina.es)

# Heaters and Coolers

## TYPES AND USES

There are three types of heaters and coolers available: single tube, shell & multi tube and annular heat exchangers.

### SINGLE TUBE HEAT EXCHANGERS

- Low PH products.
- Product with high amount of particles, fibers and big size bits.
- Fruit pulps.
- Fruit and vegetable cubes.

### SHELL AND MULTI TUBE EXCHANGERS

- Liquids.
- Fruit juices with high content in fibers and pulp, like orange with pulp cells, peach juices, tropical juices, pineapple with pulp cells...
- Gazpachos.
- Soups (Courgette, vegetables, meats,...)

### ANNULAR HEAT EXCHANGERS

- Tomato cubes.
- Orange pulp cells.
- Any product which can be treated with a single tube heater when there are big quantities (increased performance with respect to single tube ones.)

Consult our catalogue of heat exchangers for further information.



## ADVANTAGES AND CHARACTERISTICS

- Custom-designed and configured, according to product and needs.
- Automated.
- Process control by HMI touch screen.
- Heat exchangers made wholly of AISI 316 steel.
- Chassis made of AISI 304 steel.
- Compact design.
- Heater mounted in modules: Heat exchanger module + module with electrical panel, touch screen and pumps.

## HEATERS

### APPLICATIONS

- Enzymatic deactivation treatments
- Heating of products previously to treatments like refining or mixing.

NOTES: the heat exchangers can use different heating systems: either heating through hot water or by steam.





## COOLERS

### APPLICATIONS

- Cooling of products after the treatments of mashing, extraction and conservation.
- Cooling previous to pasteurizing treatment (thus avoiding decantation.)
- Stopping of enzymatic activity.
- In wineries, for the control of fermentation temperatures (in single tube configuration.)
- Loading of cistern trucks at low temperature for bulk goods expedition.



# MachinePoint®

## 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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