

Géminis[®]

TECHNICAL SERVICE



Géminis[®]

Procesos Alimentarios, S.L.

Services of installation, start-up and maintenance

(Technical service – GÉMINA Procesos Alimentarios)



Gémينا Servicio Técnico, is the technical assistance department of Gémينا Procesos Alimentarios.

We have 25 years of experience in the food sector offering services such as installation, maintenance, spare parts service, calibrations, training service, online control of production process and fault repair service.

Gémينا Procesos Alimentarios SL is an ALFA LAVAL oficial technical service.

We think that beginning a new project creates opportunities to your business and our main objective is

to get the most out of it. We offer to your company an efficient solution adapted to your needs.

Our technical assistance service solves any kind of problem guaranteeing a continuous operability to your company. Therefore, we include from the installation and start up of the project to the failure repair and the establishment of preventive maintenance plans. Our objective is to minimize the production stoppages for optimising the performance and the production periods of your plant.

The Gémينا technical service offers an efficient start up which is, at the same time, flexible, fast and without breakings. Starting a new project or expanding an existing one, we not



only offer but also guarantee that your equipment will be installed, adapted and implemented efficiently.

Experience shows the effectiveness of the preventive maintenance plans considering that after their implementation positive results are obtained. Some of them are to guarantee long term objectives, to increase the productivity, costs reduction, the fulfillment of delivery periods, to increase the lifespan of your equipment, etc. Our maintenance plan can be shaped and adapted to your needs, offering several services:

- 1 Equipment maintenance.
- 2 Assistance in production.
- 3 Online process control and failure resolutions.
- 4 Replacement parts kits adapted to your needs.
- 5 Equipment calibrations.
- 6 Training and training plans.

Services



#1

Maintenance service

The benefits of your business are directly related to the quantity of product you can produce in a given period of time. Therefore, the performance, fiability and availability of your equipments are the key to the optimal working of your production.

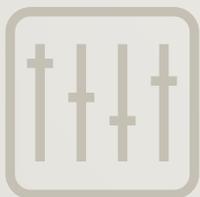
Production stoppage means losts. For this reason, Gémina implements preventive maintenance plans which are adapted to the different customers, avoiding production stoppage situations and keeping the equipments in an optimal production condition.



#2

Installation service

We guarantee an efficient and fast start-up, either in a new plant or in an extension of an existing plant. We offer flexible solutions, installing all the equipment and the needed ancillary services to operate.



#3

Calibrations

One of our main objectives is ensuring the reliability in the production processes measurements and in the quality of your products. Our technical service supplies services of calibration and industrial instrumentation maintenance to guarantee the fulfillment of the current food standards.



#4

Replacement parts services

At the moment we become part of your business, we cooperate keeping a production hazard prevention plans. Therefore, we supply all the original replacement parts of Gémina.

If you want to assure the quality of your product, you can contact us and we will identify which component or certificate you need, assuring the operation life of your equipment.

All the components we supply comply with the most demanding food industry standards.



#5

Training service

An accurate training is the main way to assure the correct operation of your plant. Gémina provides training plans of their machinery to the future employees. Thus, their future staff is trained and qualified to solve problems and operate in correct way during the production process.

#6



Online control of the production process and failure resolutions

Online assistance in failures and production stoppages is included in the maintenance plans.

Reconditioning of plate heat exchangers

Works description		Type of reconditioning				 Procesos Alimentarios, S.L.
		Premium	Premium (plates only)	Standard	Standard (plates only)	
	Previous inspection to the cleaning					Reasons of the previous inspection - Discover the dirt causes - Reject defective plates - Check required plates and joints
	Removing joints with nitrogen					Removing the joints with the appropriate procedures to avoid damaging the plates and to leave the appropriate surface for the correct settlement of the new joints
	Hidrojet cleaning					Plates which have a high level of dirt must be treated with an hidrojet cleaning to eliminate all the solid particles before going into the bath.
	Ultrasound chemical cleaning					Cleaning procedure for plates which is carried out with appropriate chemical products and ultrasounds to get high efficacy.
	Micro-pinholes detection in ultraviolet camera					Procedure which detects imperceptible pinholes.
	Replacement of defective plates until getting the number agreed with the costumer					ALFA LAVAL has plates and joints in stock offering a faster replacement service.
	Assembly of original Alfa Laval joints treated in an oven					ALFA LAVAL guarantees the use of original replacement parts. The broken joints are treated in an oven to increase their sealing and more openings and closings of the equipment can be done.
	Basic maintenance of chassis					- External cleaning of the chassis. - Bolt lubrication. - Inclusion of covers in the bolts
	Clamping bolt reconditioning					It facilitates the opening/closure of the equipment. In order to get a faster maintenance, there is the possibility of replacing the old bolts by higher performance bolts.
	Painting of the chassis					It improves the corrosion resistance due to external agents (pressure plate and chassis)
	Plates forming					Restoration of the joint channels to get a perfect adaptation and an optimal closure.
	Interchanger redesign					It improves the thermal efficiency of the equipment and reduces the tendency to soil.
	Pressure test					The pressure test guarantees the imperviousness of the equipment at the end of works.
	Reconditioning report					Delivery of a detailed report of the tasks including before and after photographs and a description of the general state of the equipment.

10 Key advice

to maintain your heat exchanger of plates in good conditions

- 1** Check the working conditions (temperature and volume of flow) in accordance with the design specifications
- 2** In the start up, ventilate the heat exchanger, open and close slowly the valves to avoid pressure rises and the water hammer.
- 3** Use filters to eliminate the soil particles and to protect the heat exchanger.
- 4** Check regularly any change in the temperature and pressure and look for external escapes signs.
- 5** Keep the bolts clean and lubricated regularly.
- 6** Use monitoring techniques to avoid opening the heat exchanger for an inspection.
- 7** Use the CIP equipment (Cleaning In Place) to avoid opening the heat exchanger for a cleaning.
- 8** When the equipments are in stop, keep them always clean and dry. If an heat exchanger is out of service, wash it with freshwater and dry it completely.
- 9** Protect the heat exchangers of splashings and the rain. Avoid the exposure to the ultraviolet rays and the ozone generated by electric sources.
- 10** Try to use only original replacement parts to guarantee the performance, fiability and the average life of the equipment. Keep a stock of basic replacement parts and follow the storage instructions.



Gemina®

is official technical service of





Alfa Laval certifies **Gémina Procesos Alimentarios** as an authorized service supplier. Therefore, **Gémina** will provide services in Alfa-Laval equipments using original replacement parts provided by Alfa-Laval Iberia SA. Moreover, our staff has received specific training in maintenance and reparation of ALFA LAVAL equipments and components.

The service contract includes the following applications:

- **Food applications.**
- **Pharmaceutical applications.**
- **Cosmetics and personal care products applications.**

The contract also includes service to the following equipment:

- **Food equipment (fluids management).**
- **Tank equipment.**
- **Heat exchanger.**
- **Installation material .**

Geographic coverage: **Spain and Portugal**

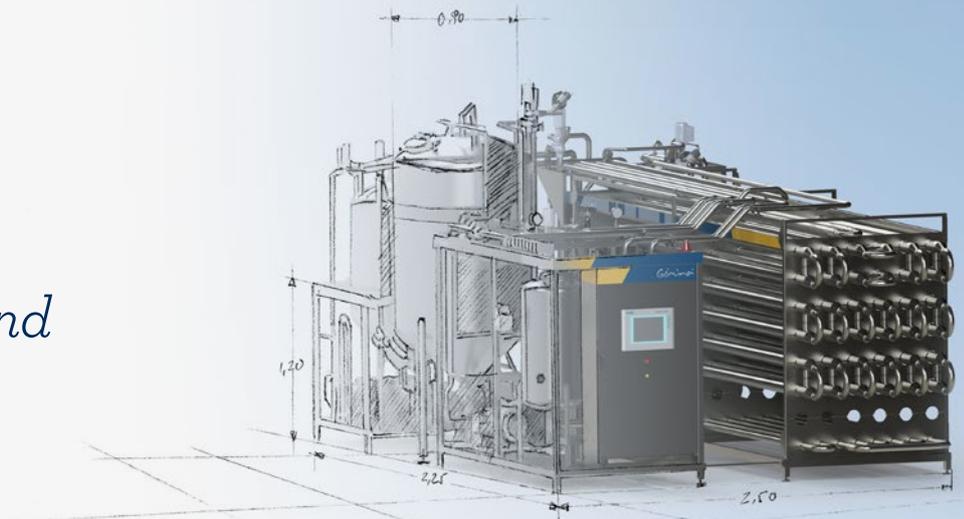
Our Company



GÉMINA Procesos Alimentarios, S.L. is located in Jumilla, Murcia, a spanish autonomous region which is a model in food production.

GÉMINA has 25 years of experience in designing, making and integration of systems which offer innovative solutions for the food sector industry.

You imagine and
we do it.



Business lines

Design and manufacture of machinery

- Design, manufacturing and integration of process equipment and food aseptic packing.
- The Manufacture is completely carried out in our installations.
- All our machinery has CE safety certificate and complies with the most exigent standards.
- I+D+i: We bet on technology innovation.

Engineering and design of processes: Projects management

In Gémina, we love our work and, therefore, our engineering department includes from the design, the calculation, the manufacture, the assembly, the automation and the start up of machines and installations. Therefore, we include a global and integral management of all our projects.

We care of every detail of the process and we advise our clients to optimize their product elaboration procedure. Gémina designs every process adapting it to the customers' requirements and standing out our customers' products among their competitors.

- Versatility and flexibility: we can plan from a plant, a simple line expansion to the installation of an equipment in a process.
- Ability of adaptation to different places and circumstances.
- Our engineering department has a big technical capacity and a long experience in this area.
- Gémina guarantees your success because we manage the whole project, reducing risks, costs and deadlines

Services Provided

1 - Technical assistance service: Alfa-Laval official technical and distributor service

- Maintenance service.
- Installation service.
- Calibrations.
- Replacement parts services.
- "Training" service.
- Online monitoring of production process and breakdown resolution.

2 - Automation and Robotics

- Automation of custom-made processes: integral solutions.
- Total Control of the process: SCADA systems, record and control of data.
- Custom-made robotics applications: different solutions for different necessities.

3 - Food Quality

- Optimization, development and validation of processing and packing equipment, besides of food elaboration processes.
- Consultancy for implantation of standards such as: BRC, IFS: ISO 22.000, FSSC...
- Product development [process + formula].

Customer Service

Gémína is characterized by its exclusive and permanent customer service. Our vocation is to become part in an operational way of the companies which we work.

Our closeness, technical competence, wide experience and self-confident are some of the main features why our costumers place their trust into our equipments and services.



Industries

Industrial sectors where GEMINA develops its projects:

- Dairy industry
- Tomato industry
- Juice and drink industry
- Vegetables and fruits industry
- Citrus fruits industry

Products catalogue

Aseptic fillings

Aseptic machine which fills metal drums with pre-sterilised bags which have pressurised cap. Besides, it also fills carton containers

Bag in box

Aseptic filling automatic feeding of pre-sterilized bags which have pressurized cap and a low volume (1-20 liters)

Extractors

Processing of a wide variety of products to get a puree free of seeds and peels.

Different methods of using: extractor or refiner

Heat exchanger

We offer all kind of models and designs, from single-tube to partial ones or rough surface exchangers.

Forced circulation evaporators

Concentrators which have great capacity and performance for products having great viscosity and a high content in solid matter.

Multiple stages which are adapted to the process and needs.

Hot/cold break units

These units process tomato puree and tomato paste guaranteeing the total or partial deactivation of the pectolitic enzymes and allowing the preservation of the pectine.

Laboratory pilot plants

Pasteurization and aseptic packing in the laboratory of small product samples, such as juices, soda drinks, vegetable creams, soups, etc.

Tubular pasteurizer

Project and constructive development of pasteurization plants adapted to different needs.

UHT

Low- acid liquid products (pH>4.5 for milk pH>6.5) are treated at 135-150°C for a few seconds with indirect heating or direct steam injection.

Heaters and coolers

Heating of products before getting through treatments such as refining or mixing. Cooling previous pasteurization treatments.

Cream extraction plants

Cream extractions of all types of fruits and vegetables, in both cold and hot extraction processes.

Aseptic Monoblock

Integration of an aseptic filling in a pasteurization plant, creating a compact, functional and versatile machine which is adaptable to a wide range of products.

Crusher

Defrosting of stored products such as fruit juices, fruit and vegetables pastes, creams, sauces and so on.

Piston Pump

It is conceived to pump viscous products, big particles of products (fruit in cubes or in pieces) or product which are sensible to shear stress.

Inverse osmosis equipment

Reduction of salinity of salty waters and sea waters.

Blending room / blending

Blending by recipes from database and transference of process parameters to pasteurizers.

Emptying of cans by aspiration

Unloading of metal cans and aseptic bags in blending rooms through emptying techniques in very few seconds.

Cip systems

Cip systems are used to carry out the chemical cleaning of food installations in a completely automatic way.

Processing tanks

Storage in aseptic packing tanks for high and low ph products, in liquid or viscous products.

Blending tanks

We have a wide range of vertical and horizontal tanks with different types of shaking and volumes. They are adapted to process needs.

Storage tanks

Storage rooms in stainless steel tanks having standard volumes or custom-made volumes.

Finisher or pulping machine

It refines crushed product to remove peels, stems and seeds.

Hammer mill

It is a grinder of pitted food (vegetables among others) for processing raw material.

Robotics

Robotic applications in proportion to palletized/ depalletized for the start and the end of processing and packing lines.



Gémina® at your service

Gémina®

Procesos Alimentarios, S.L.

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