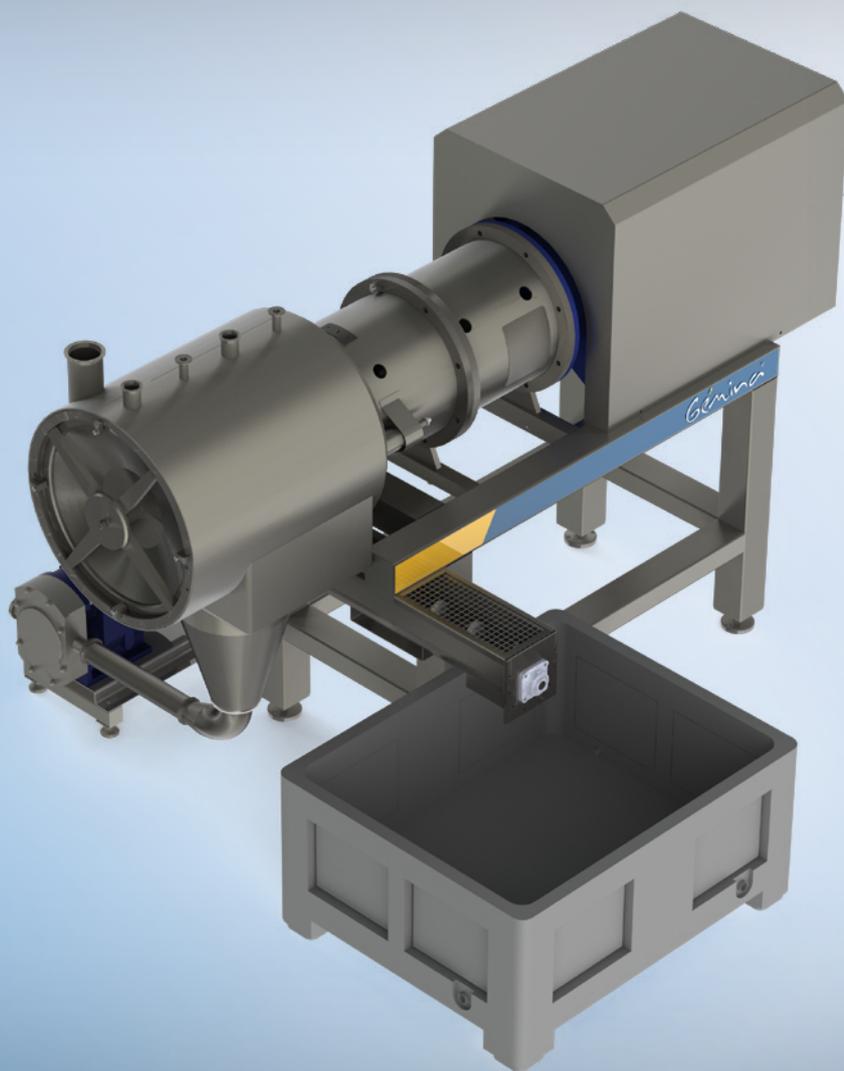


Géminis[®]

TURBO EXTRACTORS



Géminis[®]
Procesos Alimentarios, S.L.

APPLICATIONS

These are used in a wide range of products to obtain purées free from seeds and peels. It is a process used at the refinement phase of the product.

Applications range as follows:

- Tomatoes
- Apples, pears, apricots...
- Strawberries, cranberries, raspberries...
- Grapes
- Bananas and tropical fruits
- All kinds of vegetables

The purées obtained with the range of Gémina turbo extractors stand out for having a rich consistency and depth of colour. The technology is used in both hot and cold extraction processes.



DESIGN

The ground product enters into the body of the machine through an entry valve and a vane pump rotating at high speeds quickly disintegrates the product releasing its liquid content. This liquid passes through a mesh filter and is discharged at the bottom of the machine. The seeds, peels, twigs, and leaves which are filtered by the mesh, are discarded at the back of the machine. Thanks to the conical shape of the rotor, the product is constantly replaced, avoiding obstructions of the mesh by seeds, peels, etc.

The product is evenly distributed between the blades, resulting in an excellent consistency of performance and perfect dynamic stability.

ADVANTAGES

EFFICIENCY

Our extractors have a very high performance rate, with a residual humidity of 40% in tomato processing. These performance allows for the quick recovery of the machine's costs.

TRUSTWORTHINESS

Simplicity of built that avoids stoppages for repairs.

All machines are put under various vibration tests at the factory, including balancing the rotor, thus guaranteeing maximum stability under all working conditions.

All machines are CE marked, and include all security devices. Each machine is delivered with a user and maintenance manual.

MODULAR DESIGN

The design is based on ease of mesh replacement, which can be achieved in five (5) minutes, without the need to dismount the rotor.

MESH FILTER CALIBRATION

Full cleaning process of the extractor can be done under running conditions. A valve system at the top of the cylindrical body, where the rotor is localised, provides for an efficient clean-up of the machine at the end of the production process.

REGULACIÓN DEL TAMIZADO

The manual mechanical system performs the task of mesh adjustment, i.e. it adjusts the micrometric distance between the mesh and the rotor, increasing it or reducing it to achieve optimal performance based on the product.

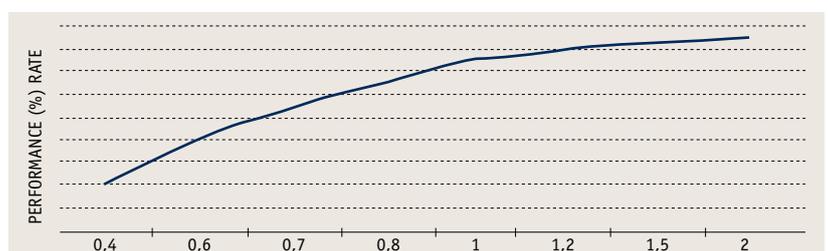
Moreover, this mechanism allows the system to calibrate the concentricity between the machine's body, the mesh and the axis. This contributes the extension of the life of the mesh filters.

SPEED ADJUSTMENT

As an option, the machine can also be supplied with a frequency converter to vary the spin speed of the motor, adjusting it at each point.

MESH FILTER SELECTION

Depending on product characteristics, whether fine grain or coarse grain products, the diameter width of the openings in the mesh could be changed, which is why we offer different mesh types with diameters that range between 0.4mm up to 5 mm. Logically, the performance of the extractor increases with the diameter of the openings in the mesh.



The rotor

The rotor can have different configurations based on the product requirements.

Within the variable parameters are the number of blades and their shape.

In many applications, a straight blade is sufficient to guarantee the desired performance for the product. However, other applications require a specific incidence angle to achieve full performance potential.

At Gémina, we study each product case to establish the best option for every situation.

The rotor is made of SPECIAL STAINLESS STEEL THAT GUARANTEES ITS OPTIMAL DURABILITY AND PERFORMANCE RATE.



Preventive anti-oxidation product treatment

The machine is designed to work with two possible inert environment options: steam treatment for hot extraction, and nitrogen treatment for cold extraction. For both processes, the design allows for the displacement of air content inside the body of the machine, this way avoiding product oxidation.

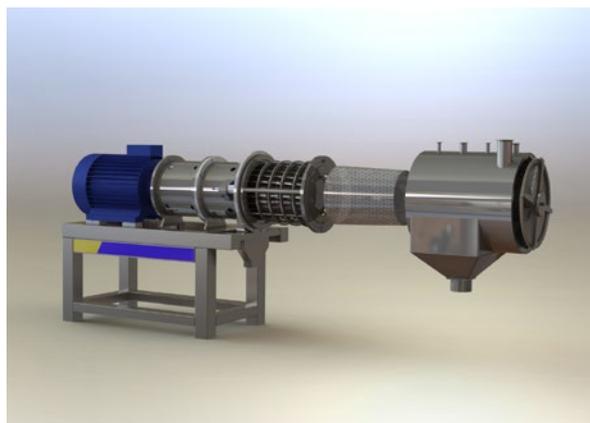
MATERIALS

All areas of contact with the product are made with high quality stainless steel, and further treated to increase their endurance. This guarantees optimal durability and preservation under challenging conditions.

Furthermore, the axis is designed with a special type of steel that contributes to decreased wear-and-tear, and more importantly, to more stable and with less vibrations rotation speeds.

The bedframe is made with AISI 304 steel and includes rings for ease of transport. Seals and O-rings, included with the machine, are made of Teflon or Viton.

All materials used are FDA (Food and Drug Administration) approved.



PERFORMANCE AND CONSUMPTION

MODELS	TOMATO t/h PRODUCTION		FRUIT t/h PRODUCTION		MOTOR POWER*	RPM (Min-Max)	N° ROTOR BLADE
	MAX HOT EXTRACTION	MAX. COLD EXTRACTION	MAX. EXTRACTION	MAX. REFINEMENT			
TX 100	90	70	30	25	90 kW	1200-2000	24
TX 50	20	15	8	6	30 kW	1500-2400	16

*Power based on 50 Hz – 380-400 V conditions

*Performance subject to the physical and chemical properties of products.

WEIGHT AND DIMENSIONS

MODELS	A	B	C	MACHINE WEIGHT
TX 50	1150 mm	1950 mm	900 mm	900 Kg
TX 100	1200 mm	2600 mm	900 mm	1600 Kg

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 Gémima, 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. Gémima 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.
- Gémima 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

Gémina 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 pectolytic 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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Collaboration projects:



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