

Gémima[®]

TROPICAL FRUIT JUICE EXTRACTOR



Gémima[®]
Procesos Alimentarios, S.L.

PRINCIPLE OF OPERATION

The principle of working of this machine consists on breaking the fruit through two pinch rolls, which turn in opposite directions. After this, a blade located in the middle helps to spread out the fruit pieces towards the two sieve areas. The rolls drag the fruit pieces against a perforated sieve filtering the pulp and removing peels or rinds through a side ramps.

The remaining pieces are collected in a perpetual screw transport and are directed to a pulp finisher for extracting the remaining pulp and juice.

The product strained by the sieve is placed in an accumulation hopper, which is connected to a lobe pump that sends the product to the next process stage.

The machine has a safety system for possible fruit accumulations, avoiding obstructions in the pinch rolls entry.

The cleaning of the machine is carried out in a simple and fast way. It has accesses to the inside area for cleaning the sieve manually, being possible to remove all the processed fruit remains. The equipment also has automatic cleaning nozzles for removing the remains stuck to the pinch rolls.

APPLICATIONS

This machine is used for extracting pulp and juice of a big variety of fruits of medium/big size, mainly:

- Boneless fruits such as watermelon, melon and pineapple.

The machine design allows to adjust the separation between rolls and the sieve elevation respecting the rolls. The equipment can be adapted to the different fruits to deal with, considering that the thickness of the peel/rind is not the same in a pineapple, a melon or a watermelon. The design pattern of the sieve perforations can be adapted to the particular needs of each fruit.

ADVANTAGES

Gémina fruit juice extractor offers great advantages considering that the product obtained through its process stands out among its competitors. This is because the product is grinded without mixing rind and pulp. Rind substances which add colour, as chlorophyll, or those which add odd flavours to the juice do not mix with the fruit pulp. Therefore, a first quality juice is got extracting only fruit pulp, which has not mixed with rind pieces or particles during its process.

After extracting the pulp from the fruit, the next stage in the process is removing seeds through a finisher, getting a juice whose fibre content can be adjusted in a refiner in the last stage of the process previous to mixings or adjustment and/or pasteurization.

MAIN FEATURES

Reliability:

The machine does not present failures thanks to its simple construction and the robustness in its design. The only interventions required are maintenance operations programmed by the manufacturer and cleaning tasks.

All machines undergo rigorous tests in Gémina facilities, testing their operation, possible defects in their assembly and mechanical stability in relation to vibrations during long working periods.

The machine is delivered along with its manuals of instructions and maintenance, besides of the CE certification and the safety systems fixed by legislation.



Efficiency and quality:

The strong points of the machine are its high efficiency elaborating juice and the high quality in the resulting juice.

To increase the performance of extracted juice regarding the original fruit, in a first stage, the most of pulp is extracted, leaving the rest which is stuck to the rind. After, the remains of rinds with pulp are sent to a second stage of processing in a pulp finisher module.

The adjustment of both stages allows to make the most of the fruit without contaminating the juice with rests of peels and rinds.

Adjustment:

A mechanical system of manual adjustment allows to adjust the separation of the rolls and the elevation of the sieve, allowing to adapt the machine to different thickness of peels/ rinds of the fruits to deal with. The fitting of these adjustment systems is simple and fast thanks to a direct access through a gate.

Finisher rejection



melon



watermelon

Extractor rejection



melon



watermelon

Cleaning:

The machine has access gates (back gate and side gates) for going into the machine and cleaning the area between sieve and rolls. It has also cleaning nozzles at the top part and mid part of the rolls, which can be integrated through valves in a CIP system, in case it would be available.

FEATURES

Configuration	No pulp finisher	With pulp finisher
Dimensions		
Width [full line]		2500 mm
Length [full line]	7000 mm	12000 mm
Height [full line]		3800 mm
Weight (Extractor)		2000 Kg
Consumption		
Electric power	11 Kw	17 Kw
Compressed air: 7 bar		50 NL/min
Cip		4000 L/h
Production		
Processing capacity		10.000 Kg/h
Product Hopper volume		80 L

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 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®

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Collaboration projects:



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