



SENPRONICS
Sensor Processing Electronics



AGRO & FOOD PROCESSING LINE

www.senpronics.com

Our Service

Grenzen engaged in a wide range of machine business, we provide best quality machines & solutions for global users in food processing machines such fruit vegetable washing machine, cutting machine , juice extractor machine , nut roasting machine, peeling machine, chopping machine & production lines. We not only provide professional machines & service but also suitable solution for your business.





Table Of Content

Automatic Fruit & Vegetable Processing & Packaging Plants

**Semi-Automatic Machines for Fruit & Vegetable Processing
& Packaging**

Automatic Bottling Plant for Water & Juice

Machines for Canning, Bottling and Labeling

Milk & Dairy Processing and Packaging Plants

Medicinal Herb Dehydrator Drying Machine

**Individual Quick Freezing Machine
&
Multi-Level Impingment Freezer**

Automatic & Semi-Automatic Machines for Fruit & Vegetable Processing & Packaging

International quality plants and machines from Senpronics can treat most fruits & vegetables, be it atropical fruit, deciduous fruit, citrus fruit or tomato for the production of:

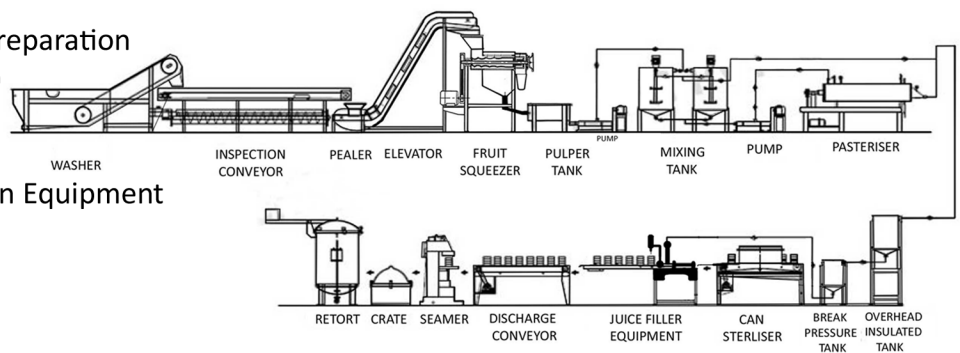
- | | |
|---------------------------------------|--|
| 1.Single strength pulp/juices | 8.Juice/pulp concentrates |
| 2.Fruit Juices/Jams | 9.Canned fruit |
| 3.Fruit salad | 10.Tomato puree/paste |
| 4.Tomato sauces and ketchup | 11.Ginger, garlic & onion paste |
| 5.Dehydrated fruits & vegetables | 12.Vacuum freeze dried products |
| 6.Condiments/salsa/mustard/mayonnaise | 13.End packaging for above products in cans/bottles. |
| 7.pouches and aseptic packaging | |



We offer medium to large scale plants ranging from 1 to10 MT per hour capacity.These plants are custom built and setup on turnkey basis with complete installation and commissioning. Various end-packaging options are offered like PET bottles,cans and aseptic packaging.

Automatic Fruit & Vegetable Processing & Packaging Plants include following stages,

- STAGE -1.Inspection/Cutting/Sorting/ Preparation
- STAGE -2.Washing /Preparation Section
- STAGE -3.Fruit Juice/Pulp Extraction
- STAGE -4.Concentration & Evaporation
- STAGE -5.Pasteurization and Sterilization Equipment
- STAGE -6.Filling And Packaging
- STAGE -7.Utility And Accessories
- STAGE -8.Dehydration Equipment



STAGE -1. Inspection/Cutting/Sorting/ Preparation

This is the first stage of any fruit and vegetable processing plant where the raw material (Fruits & Vegetables) are fed.The Fruits & Vegetables undergo manual inspection. The Rotten or damaged products are removed manually and then conveyed to next stage. these equipment are also used for separation of fruits & vegetables in two different categories.

The major equipment includes:-



In-feed Conveyor /
Screw-type Conveyor



Roller Fruit Sorting
Conveyor



Bucket Elevator

STAGE 2 - Washing /Preparation Section

Senpronics understands the health and hygiene are one of the most vital parameter in designing of any food processing plant. The company invests a lot of time and effort in designing different designs of washers and preparations equipments. Available in capacities from 1 MT to 5MT/hr.

There exists a large variation in shape, size, geometry & texture of different fruits & vegetables which requires special skills to design the equipment. The expertised design and engineering team of Senpronics ensures that the fruits & Vegetables are thoroughly cleaned before they are processed.

The company offers a variety of Fruit & Vegetable washer, which include:-



Continuous Roller Brush Washer



Roller Drum Washer



Fruit & Vegetable Washer

STAGE 3 - Fruit Juice/Pulp Extraction

The Heart of Fruit & Vegetables processing plants lies in the Art of pulp/juice extraction. Our Senpronics engineering team conducts a lot of Research to develop the Pulp Juice extraction equipment in such a way that there is minimal wastage & maximum yield can be achieved. There exist a variety of seed or seedless F&V, for which different machines are to be used.

The company has developed State of Art technologies where in the juice can be extracted without crushing of seeds. There are some hard F&V which are required to be crushed before they are fed in to pulp juice extraction machines



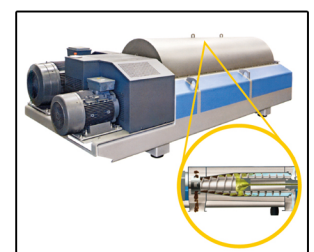
Destoner



Multi-fruit Juice Extractor



Belt Press



Decanter



Screw Type Blancher



Hot Break System /
Pulp Preheater



Hammer Crusher



Pulper

STAGE 4 - Concentration & Evaporation

The concentration & Evaporation of Pulp/Clear Juice requires a state of art engineering. The viscosity, velocity and concentration of the product has to be appropriately calculated to enable the desired concentration of the finished product .

The segment includes the machines as below:-



Forced Circulation Evaporator



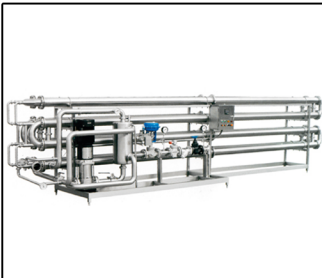
Falling Film Evaporator

Suitable for concentration of all clear juices. Available in single/double for low to medium capacity plants & triple/quadruple effect with TVR (Thermal Vapour Re-compression) on first effect for large capacity plants. Sometimes these are used in series with falling film evaporator as finishing effect for achieving higher concentration.

STAGE 5 - Pasteurization and Sterilization Equipment

The shelf life of any product is dependant upon the precision in pasteurization and sterilization of the product. The process involves a thermo physical treatment of Juice, Concentrate, Pure & Paste to cease bacterial growth of increase shelf life. Senpronics offers Tube-in-Tube, Tube nest, Scrape Surface, & Plate Type to suit different products with variable viscosities.

The segment includes the machines as below:-



Multi-tube Coaxial
Heat Pasteurizer



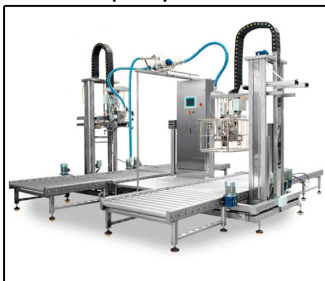
Sterilizer

Suitable to sterilize juice/ concentrate/ puree/paste by thermo physical treatment to reduce bacteria and ensure shelf-life. Can be designed in tube-in-tube, tube nest scrape surface, plate type to suit different products. Available from 1 to 10 MT/hr capacities. Multi-tube Coaxial Heat Pasteurizer are particularly suitable for pasteurizing and/or cooling of products having medium to high viscosity like pulp , puree etc.

STAGE 6 - Filling And Packaging

Our Senpronics offers a variety of packaging solutions for Pulp, Puree, Paste and Juice concentrates as per the market demand. We manufacture machines for different packaging options like bottles, cans, Aseptic Drums (Bag-In-Drum), Bag-In-Box, Sachet, Spout Pouches etc. This includes a huge range of packaging size variations ranging from a few grams sachet to 220 Kgs. Bag-In-Drum.

The company offers following filling and packaging options



Aseptic Filler (Bag in Box)



Aseptic Filler (Bag in Drum)



Automatic Filling/Seaming
Machine



Counter Pressure Sterilizer
(Retort)

STAGE 7 - Utility And Accessories

For operating a fruit and vegetable processing plant efficiently, a large no. of utilities and peripheral machines, tanks and accessories are required..

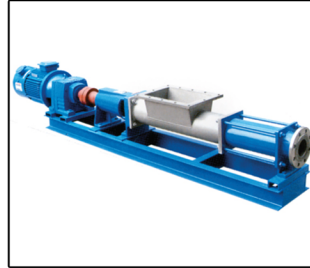
The segment includes the machines as below:-



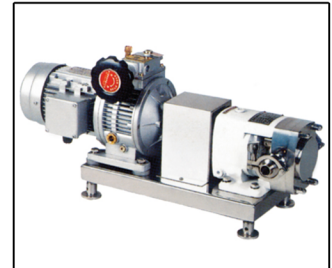
Stainless Steel Tanks(For Storage/Blending/Dispensing)



Centrifugal Pumps



Positive Displacement Screw Pumps



Rotary Lobe Pumps

STAGE 8 - Dehydration Equipment

Dehydration of fruits and vegetables is one of the oldest form of food preservation techniques. In earlier ages, sun drying was one of the most common used method. With the advancement of technology the electric dehydrators has bee developed. Grenzen Technologies offers some of the most advanced, efficient and reliable dehydrators to suit industrial requirements. These dehydrators can be operated in a large range of temperatures as per F&V requirements.The company offer following type of dehydrators.

The segment includes the machines as below:-



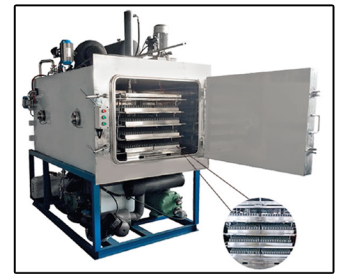
Batch Type Dryer (Hot Air Type)



Vacuum Dehydrator



Continuous Belt Dryer



Vacuum Freeze Dryer

Labeling/Batch Coding



BOPP Label Applicator (Hot melt glue type)



Shrink Sleeve Label Applicator



Bottle Collating / Shrink Wrapping Sealer



Automatic Bottling Plant for Water & Juice

Senpronics offers complete plant and machinery for Processing and Bottling of Beverages like Water, Carbonated soft drinks like Cola & Lemon and Soda, Mango and other Juice plants upto final Packaging in Glass, PET, HDPE Bottles with various capping options. Following are some of applications supplied.

The segment includes the machines as below:-



Water Purification Plant
(RO Plant)



SA 24 Bottle Rinser



GD Series Pressure Filler
(for carbonated beverages)



Semi-automatic
Carbonated Drink Filler



Semi-Automatic Blow-
Moulding Machine



Fully-Automatic Blow-
Moulding Machine



Automatic Blow-Moulding
Machine (with Hand-fed Preform)



Milk & Dairy Processing and Packaging Plants

Senpronics offers complete projects for liquid milk processing. The projects consist of different sections like reception, homogenization, pasteurization, storage and packing. BPL offer complete projects for pasteurized milk.

Curd/Yoghurt : Senpronics process lines for Curd/Yoghurt as per modern automated processes. The yoghurt can be packed in PP cups or plastic pouches. The line consists of the following equipments.

Butter/Ghee : Senpronics process lines for Butter/Ghee as per modern automated processes. The Butter /Ghee can be packed in PP cups or plastic pouches. The line consists of the following equipments.

Flavoured Milk : Senpronics offers flavored milk manufacturing in Glass, HDPE and PP bottles.

Liquid Milk : Senpronics offer complete projects for pasteurized milk.

We offer small to medium scale plants :

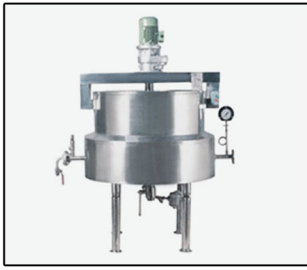
- Ranging from 100 to 1000 kg
- Milk input per hour capacity.
- On turnkey basis with complete
- Installation and commissioning
- Offered like glass or PET bottles, cans,
- Pouches and HDPE containers.



Bulk Milk Cooling Tanks



CIP System (Clean-in-Place)



Milk Boiling / Mawa /
Khoa Kettle



Milk Collection / Storage
/ Heating/ Blending Tank



Homogenizer



Pasteurizer Plate Type

Medicinal Herb Dehydrator Drying Machine

Generally, the requirements of medicinal materials are very high. Traditional methods of drying herbal medicines can easily lead to the contamination of medicinal materials, which will affect the medicinal value of medicinal materials to a certain extent.

Senpronics herb drying machine can dry fresh herbs very well, and can be carried out at low and medium temperatures, so that it will not affect the medicinal value of the medicinal materials. It retains the smell of herbs and tastes better.



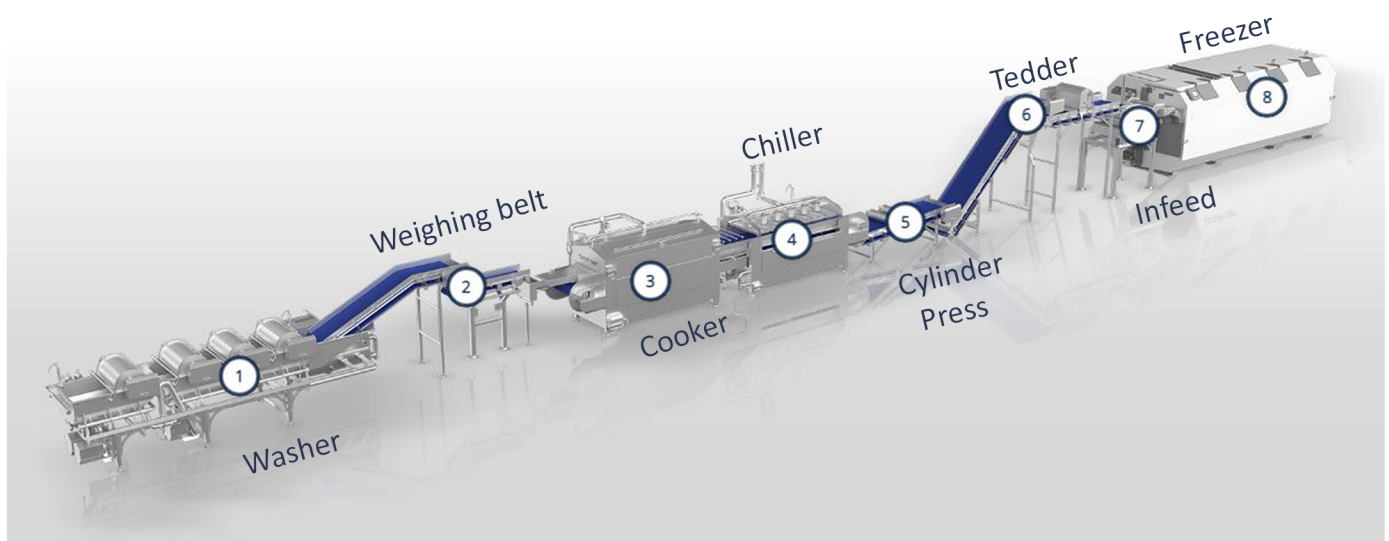
How to dry herbs in a dehydrator?

1. Cleaning herbs
2. Place the herbal block on the tray and put it in the dryer.
3. Set the temperature to 50°C and the humidity to 10% for 90 minutes. According to customer requirements, the water content was reduced from 25% to 10%.

Different herb thickness will have different dehydration time, the thinner, the shorter the dehydration time. The temperature and of drying can be adjusted according to the needs of customers.

Individual Quick Freezing Machine & Multi-Level Impingement Freezer

Vegetables are usually stored using a variety of freezing techniques. Frozen foods have excellent quality and nutritional value. In fact, some frozen vegetables, such as green peas and sweet corn, may outperform fresh produce in flavor. The high quality of frozen food is mainly due to the development of a technology called "IQF Food"





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