



PROCESSING LINE FOR FRUIT PULP / JUICE

Your Trusted Partner for Consultancy and Turnkey Project Execution



COMPANY OVERVIEW

Salvin Industries is a leading engineering, technology and consulting conglomerate, working closely with diversified industries spanning across food processing, agriculture, plastics, chemicals, metals healthcare, packaging, Dealer, distributor, super stocks, marketing plan, product analysis and other industries and business sectors offering complete turn-key solutions including advanced engineering, Industry 4.0 solutions, digital transformation and expert technical and management consultancy. With 10+ years of experience and global presence in 8+ countries, Salvin Industries is serving from the most demanding to the most distant customers across the globe. We empower them for rewriting their future with our depths of knowledge, unique ideas, technical expertise, creative solutions and enduring results, all at the most optimal costs, right at their doorsteps.

Armed with the eminence in technological expertise, global capabilities and a process driven approach, we have the ability to take on any challenging project. Crossing the geographical borders & cultures and living up to our core values Excellence, Respect, Care & Joy, we propel innovation to engineer solutions that build & foster equality. Working together as one team with all our business partners & associates, we are transforming industries, fueling economies, developing sustainable solutions and thereby elevating societies, globally. We realize the need to respond to the dynamism & speed with which the world is changing all around us and understand the need to anticipate

Process

Line For Fruit Pulp / Juice

In this section, the fruits are inspected, sorted and washed. The fruits are transferred to the Roller Conveyer so that the rejected fruits are removed manually. The sorted fruits are transferred in to the washing machine where the fruits are washed by clean water.

Pulping Section

The fruits are then subjected to peeling, cutting and transferred to pulping section by using slat or bucket elevator. The peeled and cut fruits are passed through coarse and fine pulper to give good quality pulp by separation of juices and seeds. The fine pulp is collected in tanks and fed to the processing section.

Process Section

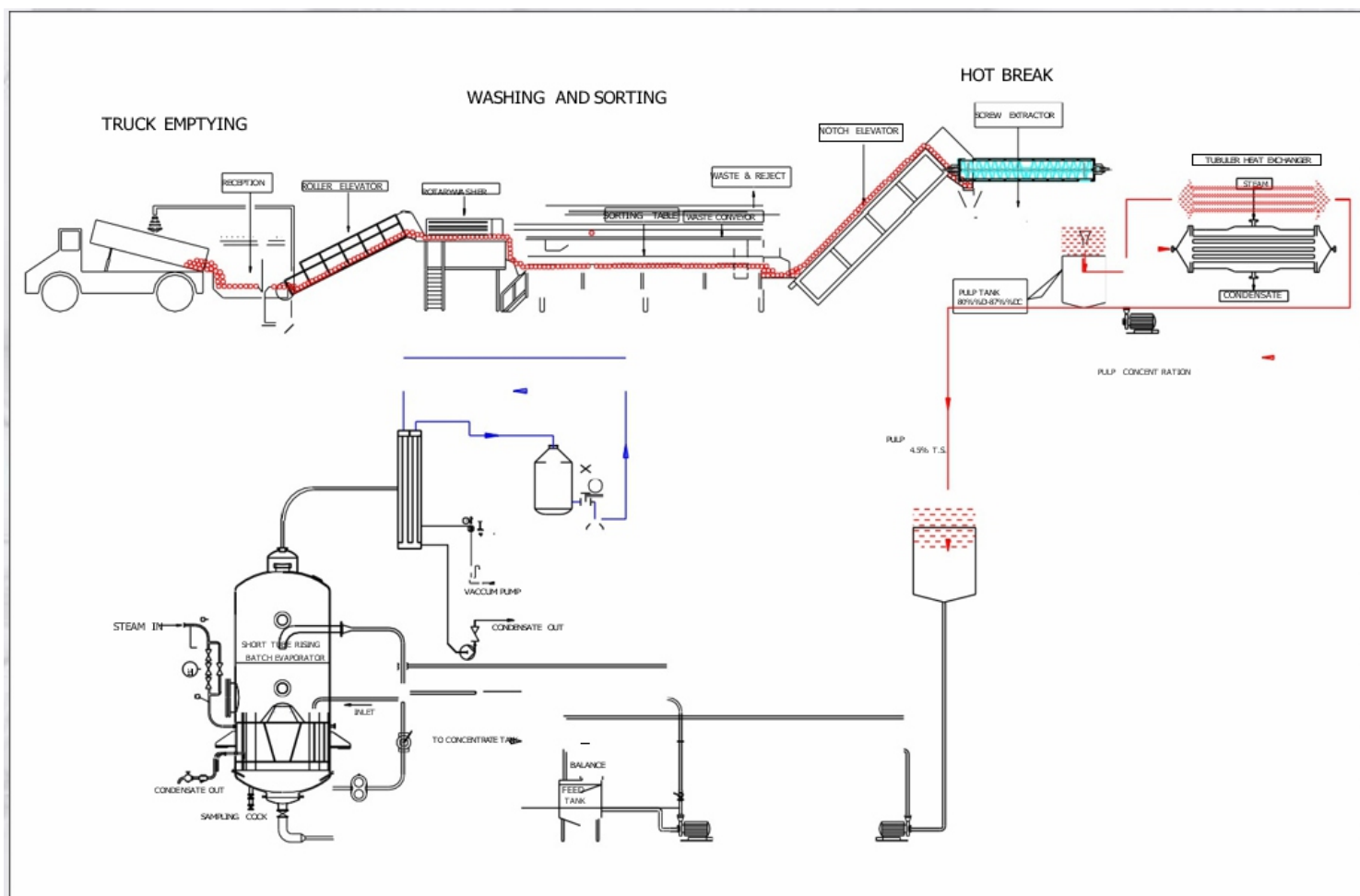
The fine pulp is then pasteurized. The pasteurization is done either through Tubular/ Spiral flow type / Scrapped surface heat exchanger. The Hot pulp is then fed to the filling / packaging section.

Packaging Section

The pulp is filled to the cans through Rotary pump filler/Vacuum Filler. This section is also consists of equipments like can seamer, body reformer, can lid bidding, hand flanging and date embossing machine. The filled cans are fed into retorts to sterilize the products.

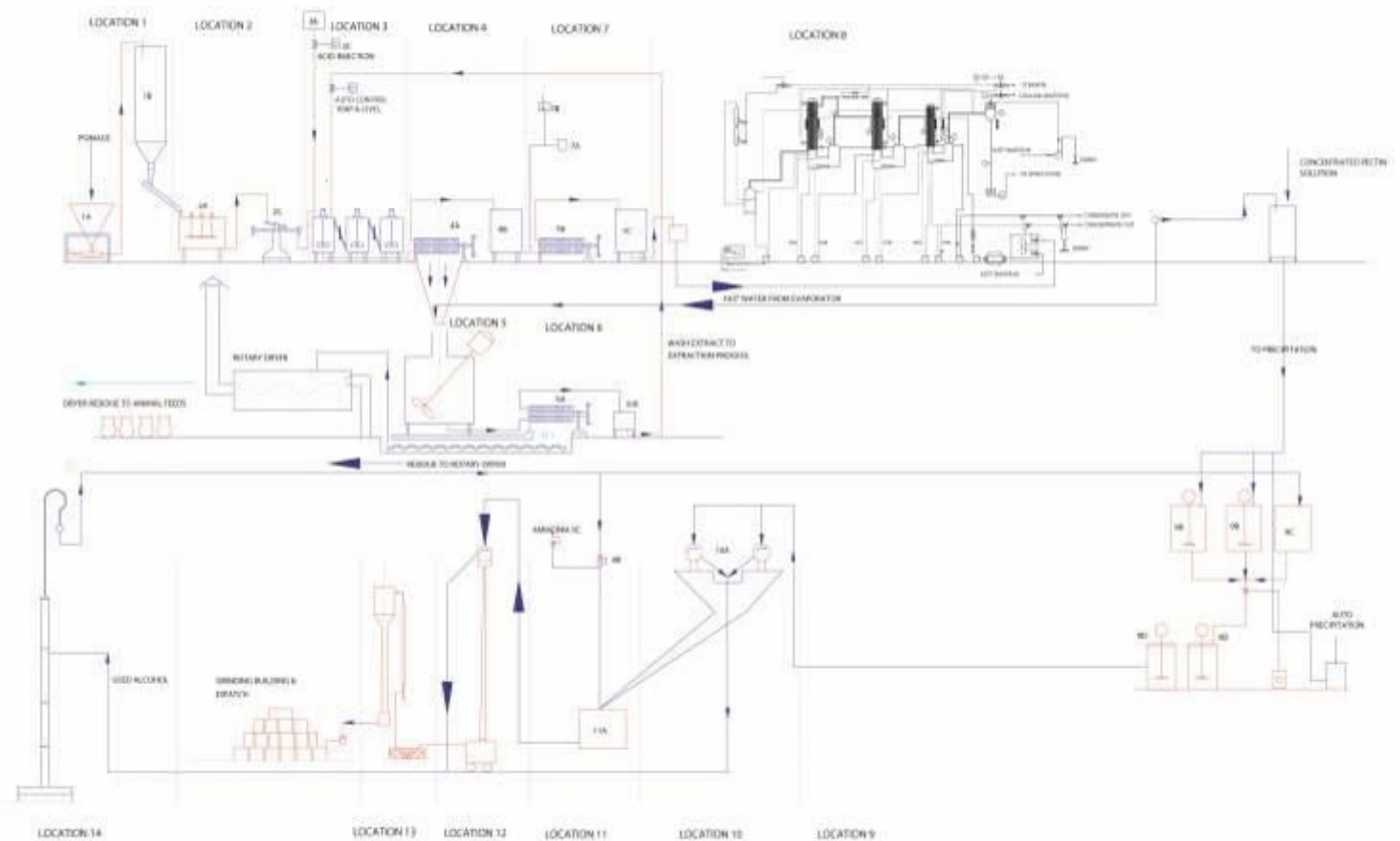
P&I DIAGRAM

FRUIT AND VEGETABLE



Lime / Pomace Pectin Processing Line

P & I FOR LIME PEEL/POMACE PECTIN PLANT



Washing Crushing & Processing

Lime fruits, pomace washed in washing tank or in running water spray. After washing the fruits are crushed to juice & peel. After thorough washing, Pomace is processed to remove excess water content.

Drying Process

The Lime Peels and Pomace are dried in continuous hot air bins to have safe moisture level to store for further use.

Lime / Pomace

Pectin Processing Line

Extraction Process (Dry & Wet)

Material is extracted by using chemicals & require heat treatment under controlled pH.

Clarification Demineralization

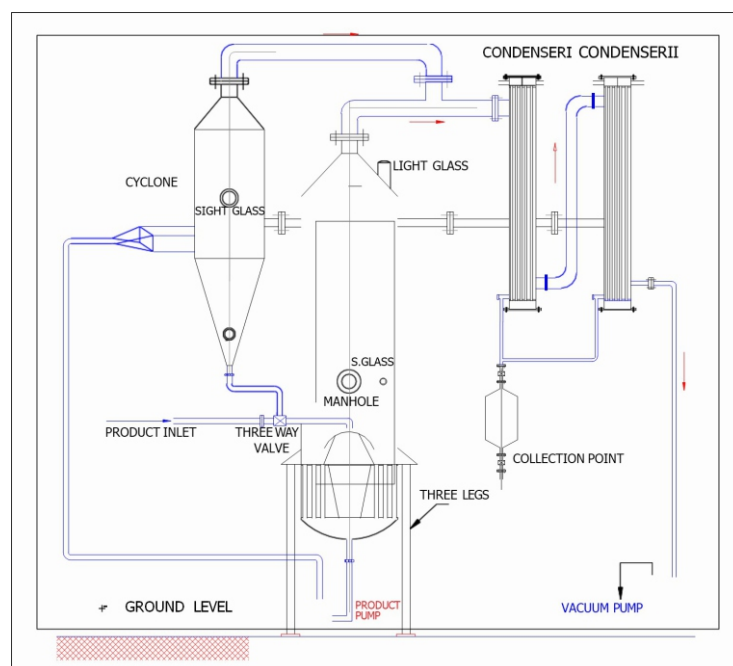
The filtrate passes through various stages to get clarified & de-colored Pectin solution.

Precipitation

Precipitation is done by adding alcohol to the concentrated material.

Drying Powdering and Grading

Most of the organic components of flavors have low boiling point hence, during process due to high temperatures this flavor components are lost causing loss in flavor of the final products. Recovery System is necessary initially to recover all flavor components and add back to the final product to retain the natural flavor.



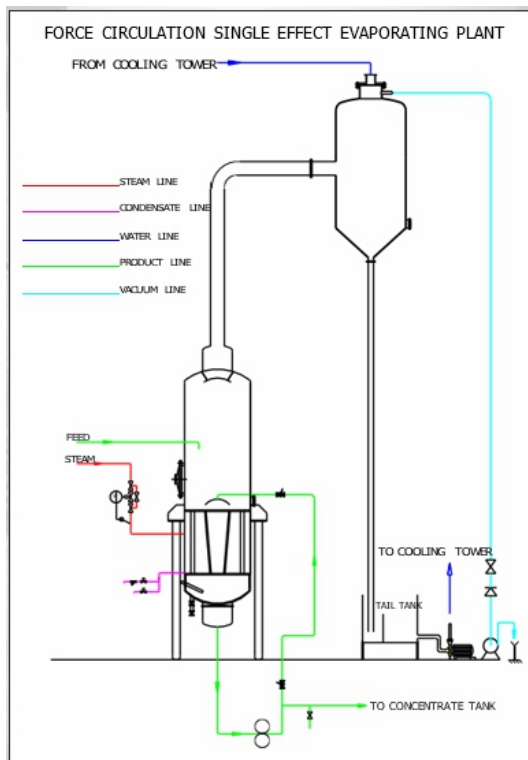
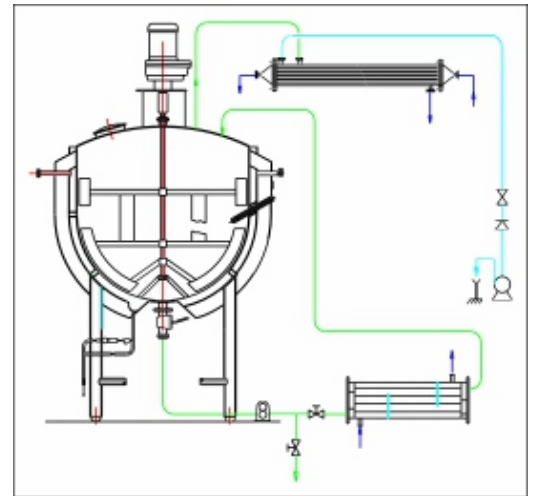
AROMA RECOVERY SYSTEM

Juice

Concentration System

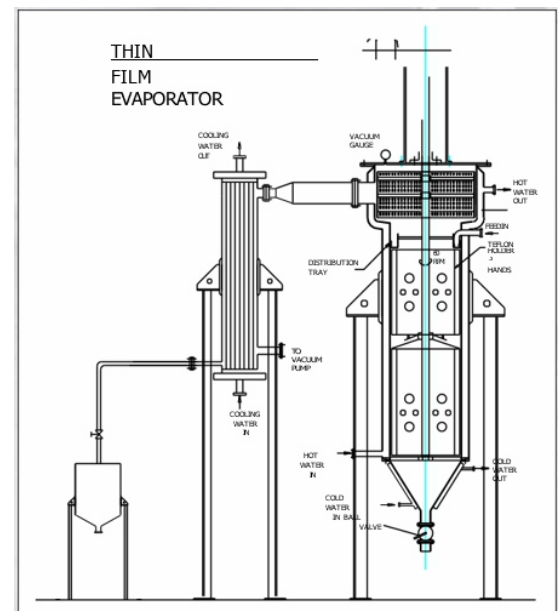
Vacuum Pan Evaporator

It consists of heating surface, vapor space, entrainment separator, condenser and vacuum pump. It also consists of various accessories so as to increase the efficiency of the system. Used for the concentration of products to high viscosity



Sort tube Rising Type Vaporator

This type of evaporator is useful for High Viscous pulps & Juices. The calandria with short tubes are provided with vapour space, connected through duct to vacuum system to remove the vapours at regular intervals, to pass through Shell & Tube or Barometric condenser. It is also provided with Digital indicator to indicate Temperature, Gauge to indicate Vacuum and manhole for regular maintenance.



Thin Film Evaporator

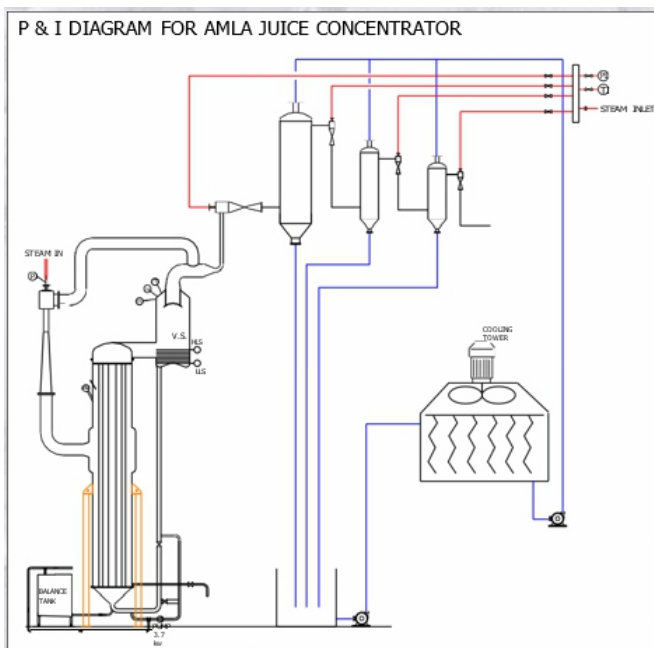
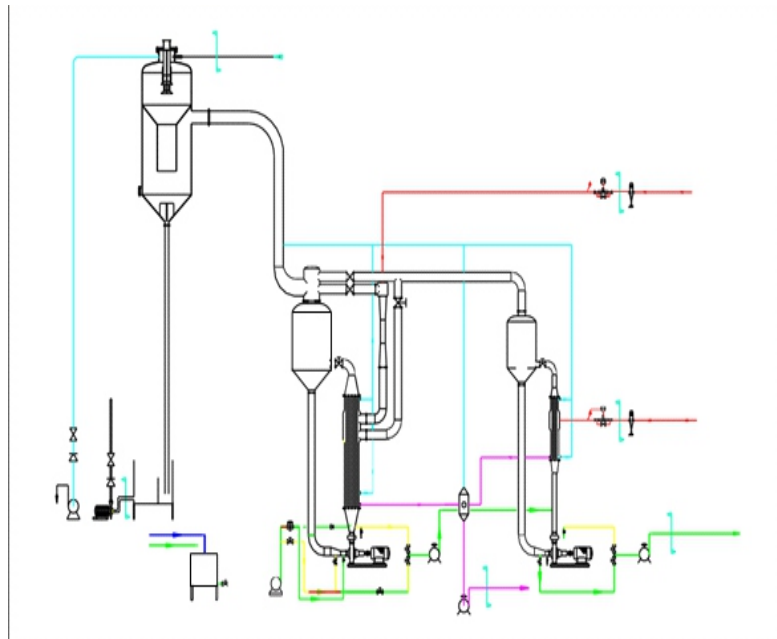
Applicable to high viscous fluid of fruit pulp and herbal extracts, having falling film type with high speed rotary blades to remove product continuously from the surface of walls. Various models and capacities are available.

Juice

Concentration System

Rising Film Evaporator

These types of evaporators are used where highly viscous materials are to be concentrated. Feed is fed from bottom and the concentrate removed continuously. Product rises in the tube driven up by vapor bubbles from the boiling liquid. Mixture of vapor and concentrate overflow at the top into the vapor separator. Temperature difference between the steam space and evaporator space is large and product is returned by means of circulation tubes. Biggest advantage of this evaporator is frequent cleaning of the tubes are not required. Burning of the product is eliminated. However average residence time of the product is relatively long



Amla Juice Concentrator

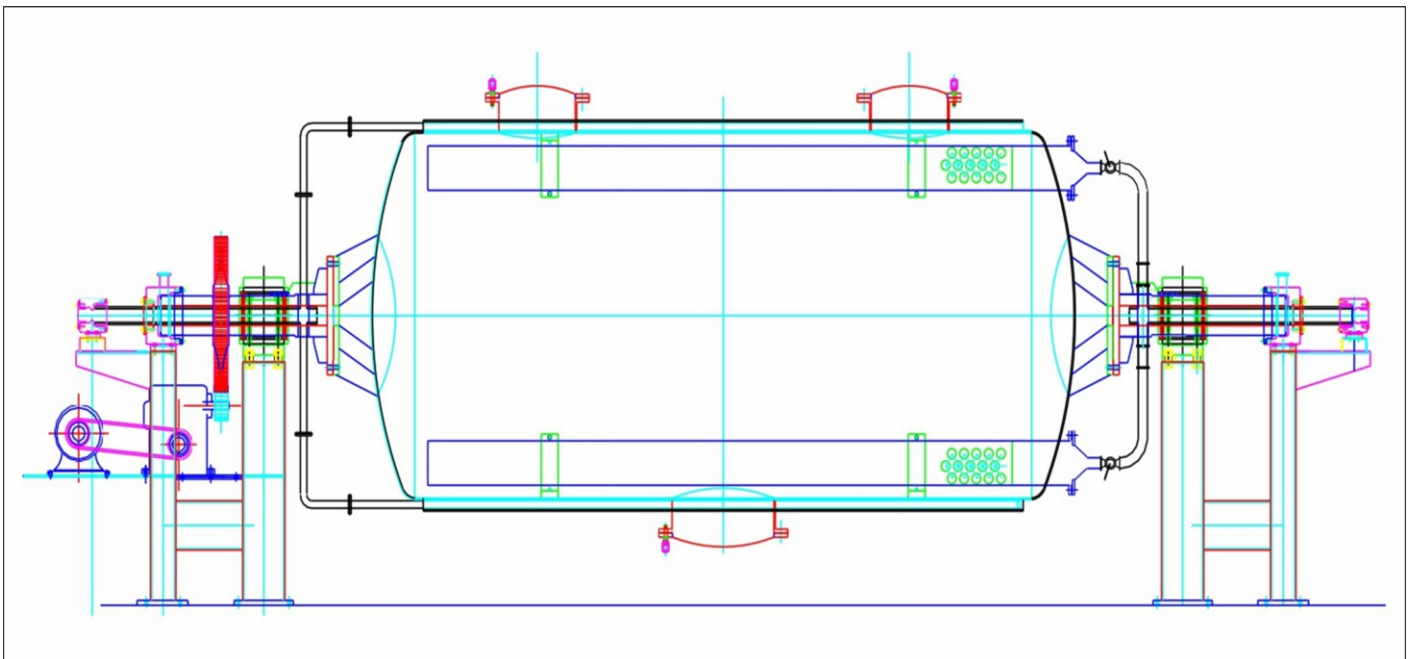
Amla fruit juice is rich in ascorbic acid and is thermo liable hence, the design parameters are taken into consideration to safe guard the characteristics of amla to run the system at low temperature

Juice

Concentration System

Rotary Extractor with liquid Concentration system cum Solvent Recovery Unit.

Herbal / other products are extracted from leaves, roots, bark and continuously removed through the compressed air pressurization system. Also desired temperature for efficient extraction is maintained using controlled steam indirect heating. Extracted liquid are concentrated in rising type evaporator or wiped film evaporator and spray dried or vacuum tray dried. Solvent is recovered and purified by distillation for further use



Rotary Extractor

DEHYDRATION LINE OF FRUIT & VEGETABLES

Washing Sorting

The Fruits / Vegetables are thoroughly washed to remove dirt, sorted to separate spoiled & damaged one.

Blanching

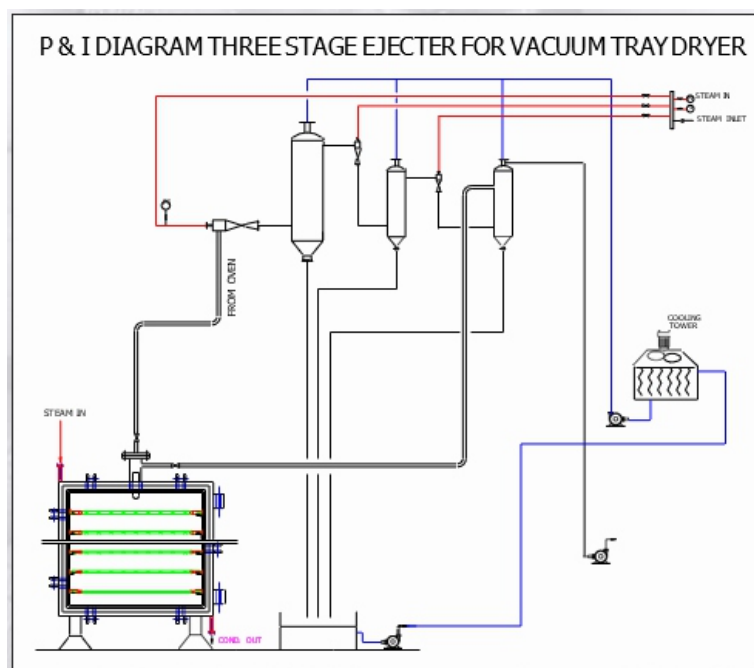
After cutting the fruits/vegetables are dipped in hot water either containing Sodium Chloride, or any other chemical to avoid enzymatic action, thus, safeguard the quality of product. Remove excess water before keeping in oven for drying.

Drying Dehydrating

The fruits/vegetables are then placed in the dryer. The dryer used for the purpose depends on the type of product to be dried and the final product desired.

Types of dryer used are:

Vacuum Tray Dryer of various capacities



P & I DIAGRAM FOR VACUUM TRAY DRYER

DEHYDRATION LINE OF FRUIT & VEGETABLES

Types of dryer used are:

Oven Tray Dryer:

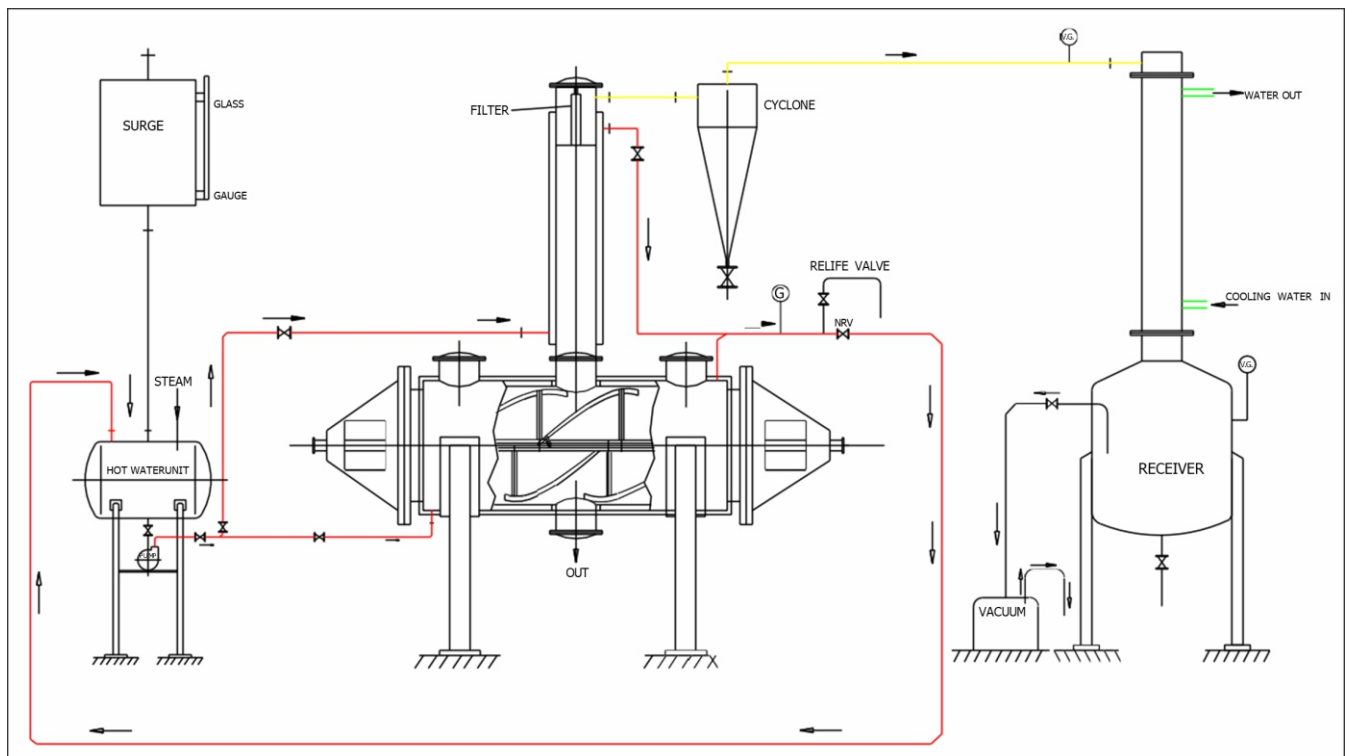
Dryer specially designed for drying fruit & vegetables in vacuum system. The fruit/vegetables of desired quality are placed on the trays. The trays are then placed on the platten of the dryer. The steam flows inside the platten and the desired temperature is maintained. The process is carried out in vacuum. The dried material removed and packed as it is or grinded to powder before packing

Advantages

- Low temperature
- Safeguard characters of fruit and vegetable
- Greater ascorbic acid retention

Horizontal vacuum Dryer

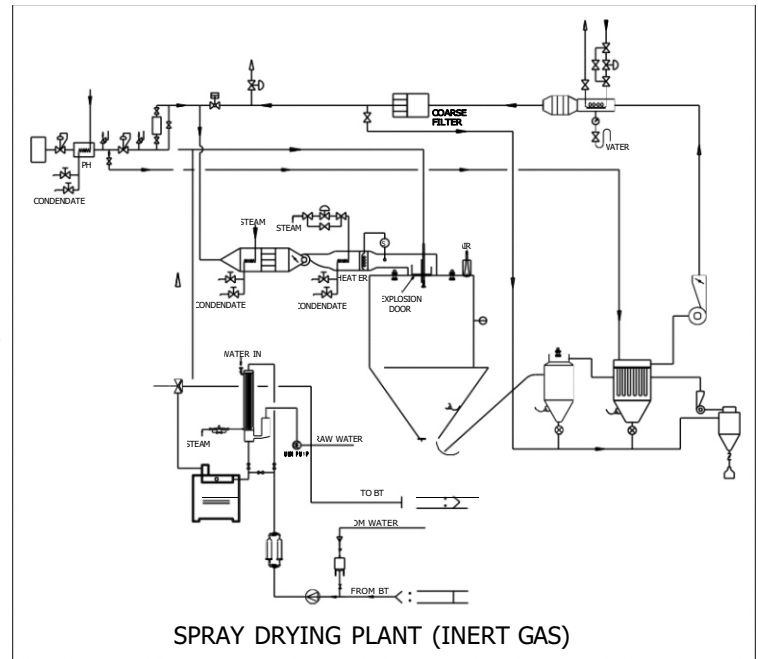
Normally these driers are batch size in nature, consists of cylindrical shell mounted horizontally in which a set of agitator blades mounted on a revolving shaft stirs the solid being treated. Heat is applied by circulation of hot water or steam. The blades are very close to body so as to scrape the product not allowing sticking to the dryer. Vacuum is created and maintained by any of the conventional methods.



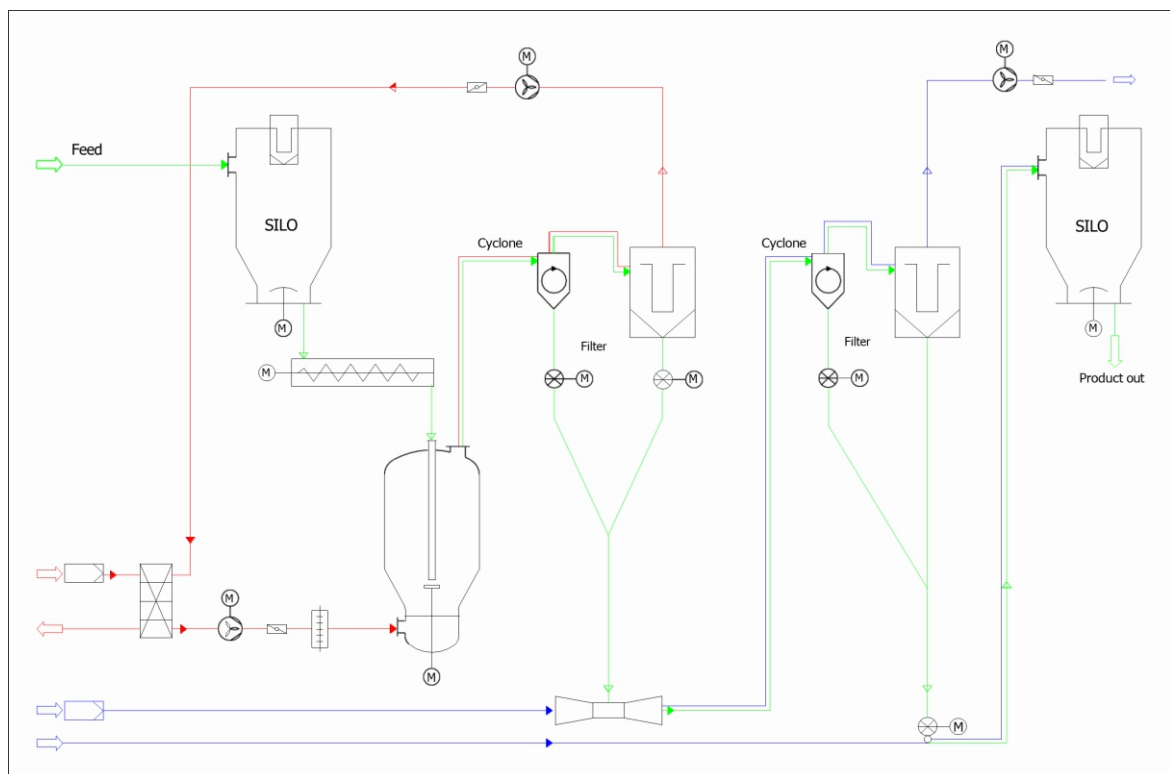
DEHYDRATION LINE OF FRUIT & VEGETABLES

Spray Dryer

Single stage spray dryer with fireproof system. Spray Dryer is designed and provided with fireproof accessories (inert gas) completely automatic system to meet any eventuality of fire hazard of any natural in spraydryer.



Agitated Flash Dryer

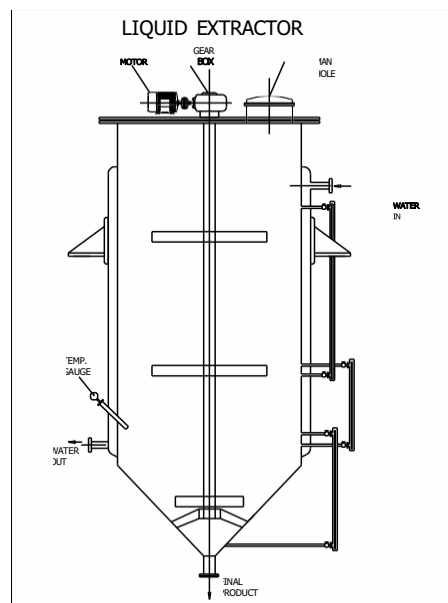


Specially designed dryer for the product like pharmaceutical grade product, Starch powder, glucose power, etc. Design capacities vary as per the requirement.

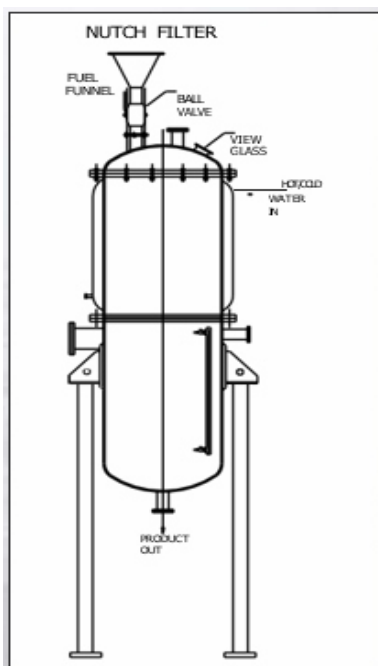
DEHYDRATION LINE OF FRUIT & VEGETABLES

Liquid Extractor

Liquid Extractor is made from SS 304 /SS 316. A set of agitating blades is mounted on a shaft rotated by gear motor. Liquid extractors are mainly used for the proper mixing of products and solvent in order to achieve phase mixing and also the product can be heated or cooled by jacket as per the requirement to improve the coalescence. Liquid Extractors are used to separate water, product, and solvent by settling down the product after mixing.



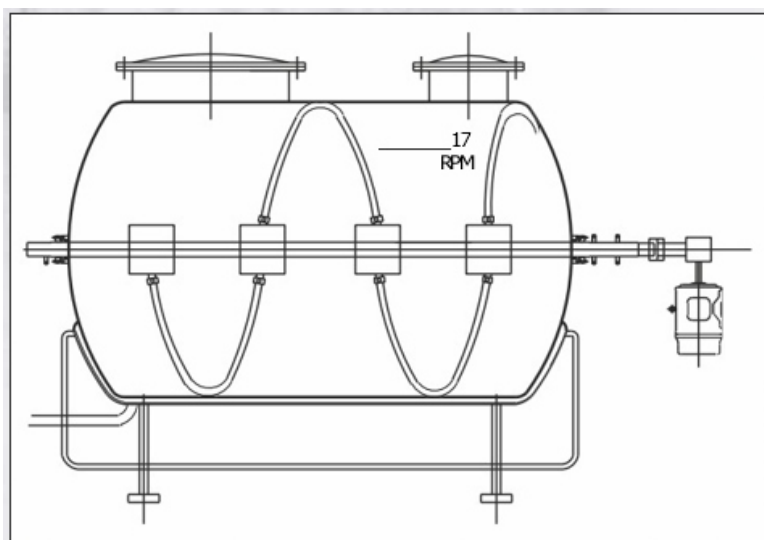
Nutches Filter



Constructed either with SS 304 & SS 316. It has a perforated filter plate at the middle. It is mostly used for filtering the herbs products. Heating and cooling is also possible through the jacket for the proper filtration and separation of product from impurities and leaves roots, etc.

Crystallizer

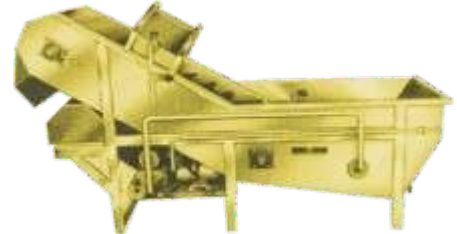
A crystallizer is an equipment in which environment is created suitable for the formation and growth of crystalline materials. Paramount in the design of such equipment is the means, which are chosen to create super saturation at a temperature level, which produces a desired or proper hydrate or composition of the product crystals. For materials of very steep solubility cooling type crystallizers are used and for the materials with normal but moderate slope many choices are available like evaporative cooling, surface cooling, and constant temperature evaporation



DEHYDRATION LINE OF FRUIT & VEGETABLES

Washer

Suitable to wash fruits and vegetable with agitation action with roller conveyers. Various models and capacities available.



Fruit Mill

Multi purpose, fully automatic machine suitable for crushing hard fruits eg. Pine apple, Leafy Vegetables. All contact parts SS 316 to SS 304

Double Stage Pulper

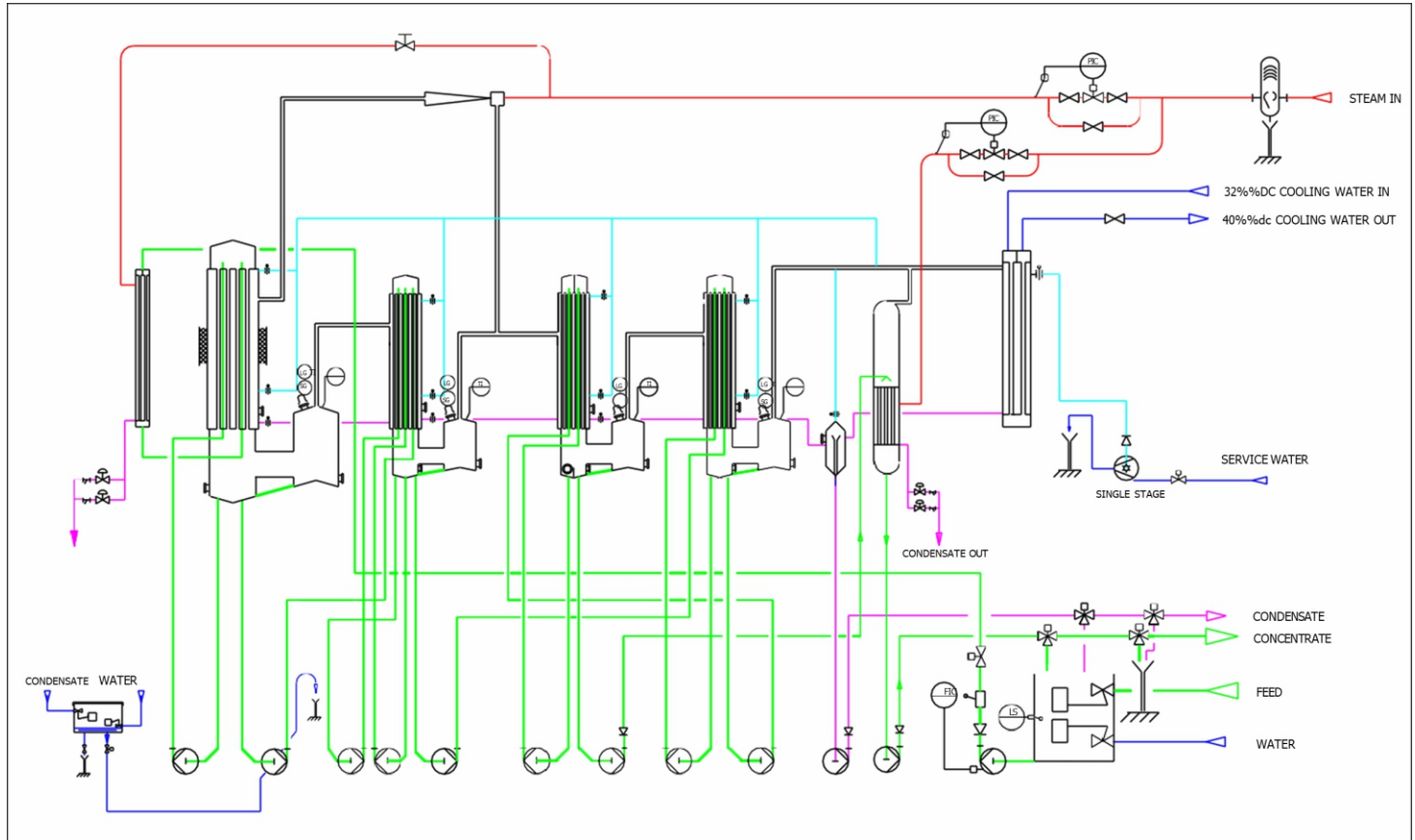
Applied to separate fruit pulp to peels. Stainless steel Body Suitable Drive
Nylon Fibre Brushes, SS perforated mesh
Capacity: 50 kg/hr to 15MT/hr.



Jacketed Steam Kettle

Available in both tilting and stationary type models of different capacity. equipped with steam safety valve temperature gauge, pressure gauge.

Evaporating Plant for Industrial Effluent suitable for Fruit Juice Processing & Other Industries



To recover organic matter and to have zero discharge effluent system. Water recovered through this system can be reutilized for processing and other purposes, eliminating discharge problems.



LET'S WORK TOGETHER



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