



Turn a double task into multiple advantages ...

... with some of the world's most refined citrus fruit processing solutions.

In this specialist field, there's often a dual focus. Not only is it crucial to produce the best possible juice or concentrate with the most attractive colour – it's also important to get the best yield of high-value peel oil.

We help you achieve both, with supreme efficiency.

Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineered solutions. Our equipment, systems and services are dedicated to helping customers to optimize the performance of their processes. Time and time again.

We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com

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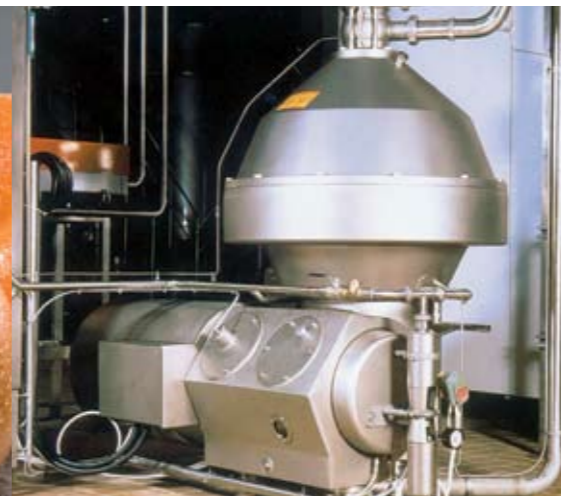
Essential citrus

Alfa Laval solutions for processing citrus fruit into juice



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Best of all worlds



Wide spectrum

There are normally two focal points in the commercial processing of citrus fruit – the juice itself and the oil extracted from the peel.

The many kinds of juice that can be extracted from citrus fruit are normally processed into either concentrate or high-quality NFC (Not From Concentrate) juice, which can normally be sold at a premium. Not surprisingly, therefore, it is NFC-based juice that is currently experiencing vigorous sales growth on a worldwide scale.

Regardless of whether you run a single-fruit processing operation or a multi-fruit installation, Alfa Laval can help you achieve quality levels that boost the market price for your products.

Concentrated taste

The vast majority of citrus fruit processing installations focus on producing concentrate. However, there is growing consumer concern about whether juice made from concentrate can really live up to the quality and taste provided by NFC products.

Alfa Laval processing equipment helps you make sure that juice made using your concentrate output closely resembles juice based on NFC processing.

Peel dividend

Extracting peel oil is often a crucial part of a juice production set-up. The valuable oil is either mixed back into the juice for added taste, or used in other well-known beverages.

It can also be used as an ingredient in products such as bakery products, cosmetics and pharmaceuticals.

Specialists where it counts

Alfa Laval is a world leader in the fields of separation and heat transfer. In citrus fruit processing, we have always been well-known for equipment that separates oil from the peel and for installations that pasteurize the juice during processing.

But Alfa Laval's specialist processing know-how – and the fact that we can now provide the complete spectrum of citrus processing equipment – have resulted in plants for customers on every continent.

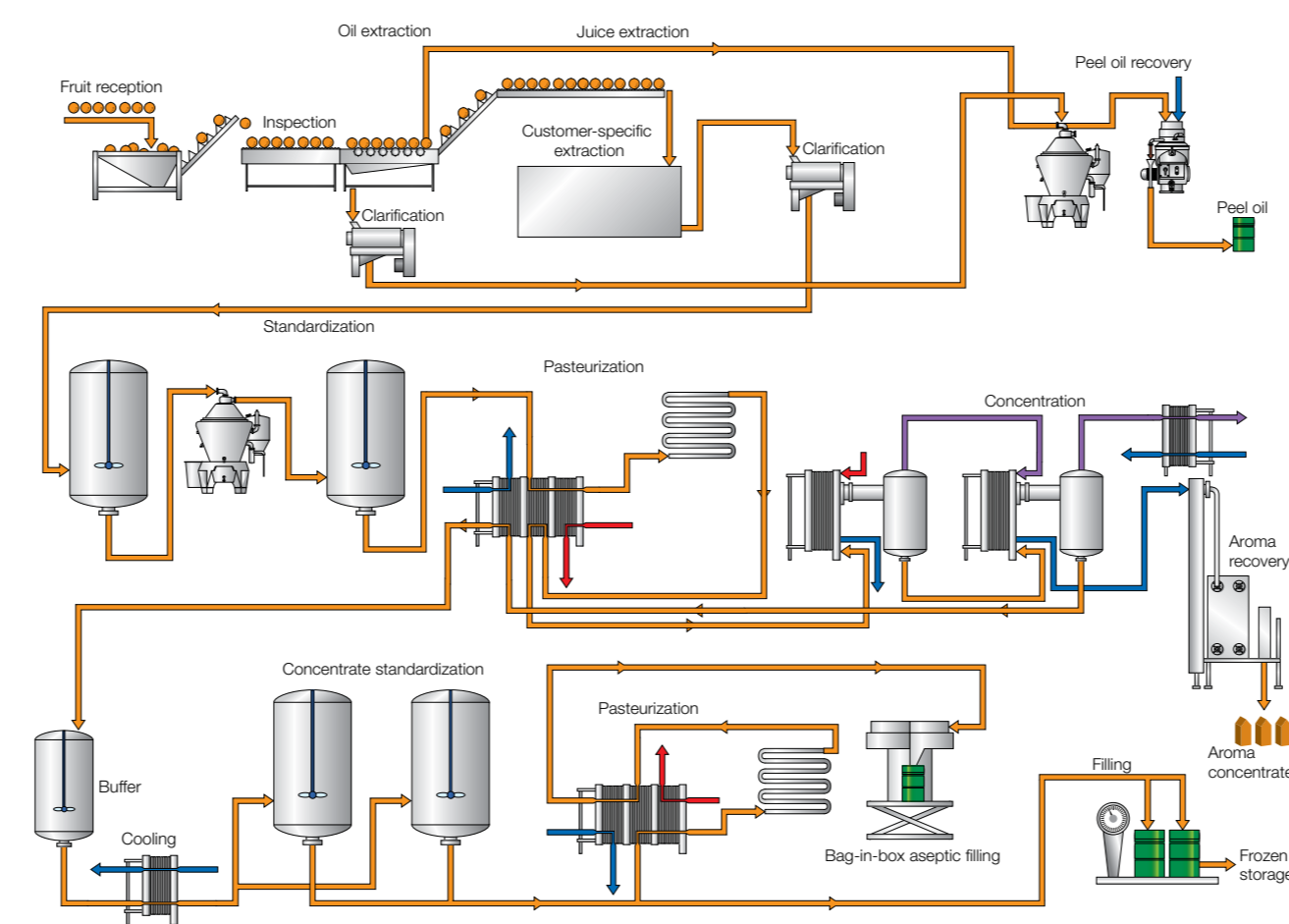


AlfaVap cassette evaporator

Use Alfa Laval equipment in your processing set-up for citrus fruit to

- consistently get the most – and the best – out of the citrus fruit you process
- achieve maximum versatility, so your company is less vulnerable to fluctuations in the world markets for citrus crops and the juices produced from them
- ensure exceptional plant reliability with maximum effective production time
- ensure that the fruit juices and peel oils get the gentlest possible treatment, with a minimum of thermal impact
- maintain stringent hygiene management to achieve the best possible quality, and the best prices
- make sure your plant is easy to update and extend, to comply with your changing needs.

A typical high-quality continuous processing line for juice concentrate from citrus fruit



After washing and inspection, the fruit passes to the oil recovery unit to remove the oil from the peel. The oil emulsion passes to a special recovery system that ensures clear, pure peel oil.

Once the fruit has been sorted by size, the juice is extracted by squeezing or reaming. The extractor and its efficiency

determine the resultant yield and quality.

The extracted juice is clarified in two steps to remove any particulates and to standardize the pulp content. The pulp passes on to pulp recovery or reaming.

The vast majority of citrus juices are produced as concentrate, in which case the juice passes to an AlfaVap cassette evaporator for rapid, low-temperature concentration. With the addition of a special aroma recovery unit, this helps ensure juice of the best quality.

The juice concentrate is normally packed in drums and stored at very low temperature. It can also be packed aseptically in bag-in-box containers.

With the addition of an Alrox de-aerator, the line can also be used to produce NFC juice.

Versatility counts

Alfa Laval equipment, expertise and experience can play a key role in helping you boost the results you achieve with your citrus processing line – with one crop or many, as you prefer. With Alfa Laval solutions, you can use almost identical processing equipment for a wide range of different fruits.

We can provide you with all the equipment you need for the continuous production of concentrate up to 65° Brix. Oranges, lemons or grapefruit are the most common source crops, but the versatility of Alfa Laval technology enables you to process almost all citrus fruit with either hard or soft peels.

Designed for revenue

Alfa Laval equipment is designed to deal with high-acid products, and we help you avoid unscheduled stoppages and downtime via our Planned Preventative Maintenance agreements. This means you can make sure your citrus processing operation spends more of its time generating revenue.

Better quality, better price

By combining top processing performance, operating reliability and premium-quality results, we help you make sure of achieving the best possible juice yield from any citrus crop. And that the resultant product has a colour, aroma and taste that enable you to get the best possible price – regardless of current market conditions.

Experience the benefits

We have more than 40 years' experience in meeting the needs of the citrus processing industry. This is backed by the benefits of the R&D resources, materials technology and specialist know-how available from the world's foremost specialist in heat transfer and separation technologies.

Alfa Laval provides complete processing lines for processing citrus fruit into high-quality NFC or concentrate, along with all relevant engineering work, as required.

Alfa Laval equipment for processing citrus fruit includes

- Washing, inspection and conveyor equipment
- Peel oil recovery system
- Juice extraction system
- Alfa Laval disk stack centrifuge
- AlfaTherm pasteurizer
- Finisher
- Alrox de-aerator
- AlfaVap cassette evaporator
- Alvac aroma recovery system
- BaseLine/FrontLine™ plate heat exchangers
- Standardization tanks for concentrate
- Cold filling station
- SteriTherm pasteurizer
- Aseptic bag-in-drum filler
- AlCip cleaning module
- Flow handling and tank cleaning equipment
- Alfa Laval control and automation systems.

These are backed by a full range of Alfa Laval training and support services.