

# Tetra Alvap<sup>®</sup> CT

- a flexible evaporator of superior efficiency



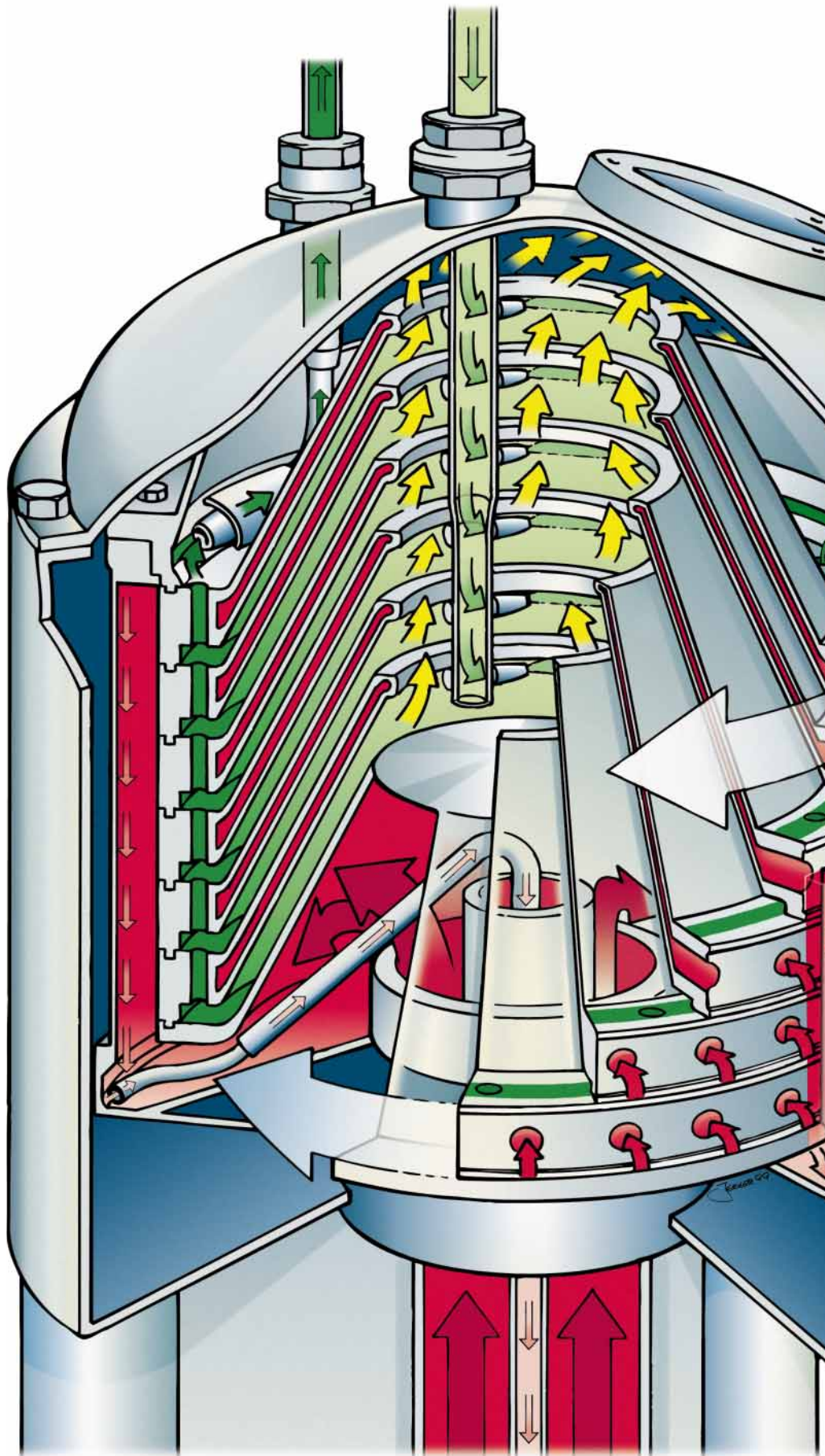
# Lower temperature Higher quality

Many delicate products are highly sensitive to damage. Excessive heat treatment will affect the quality of the product, and consequently its value. To avoid spoilage it is essential to have an evaporator that is dedicated to gentle treatment, and higher quality.

Tetra Alvap CT is an evaporator that uses centrifugal technology in combination with low temperature to achieve efficient and gentle evaporation. In addition, the centrifugal technology ensures a short residence time and no other evaporation technology can provide such premium quality.

The Tetra Alvap CT can be used for a wide range of applications – from fruit juice concentration to pharmaceutical and biotechnical processing.

*The product to be concentrated is fed to the rotating cones where it is distributed onto the inner surface and, due to centrifugal force, forms an even, thin film. Heating is carried out using low-pressure steam resulting in gentle boiling and removal of solvent/water. By further use of centrifugal force, the product is brought to the lower edge of the cones and is picked up by a paring tube to be let out of the evaporator. The vapour rises and is led out of the machine to the final condenser.*



# A model for each need

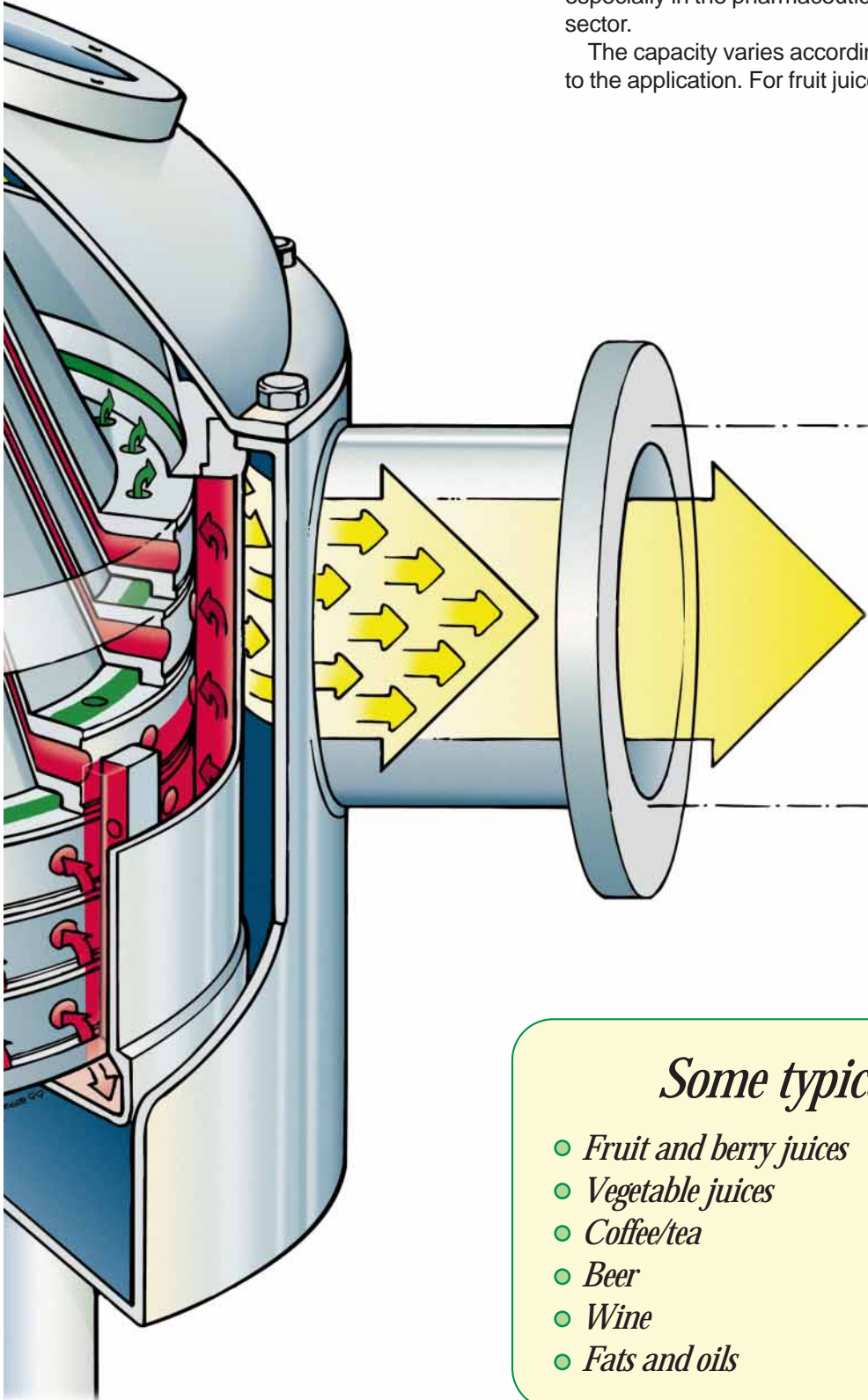
Four model sizes are available: CT-1B-2, CT-6, CT-9 and CT-12. The smallest model, CT-1B-2, is an excellent pilot plant and research unit but is also used for smaller, commercial applications, especially in the pharmaceutical sector.

The capacity varies according to the application. For fruit juice it

can be up to 5 000 kg/hour, for beer up to 120 hl/hour, and for organic solvents up to 10 -15 tons/hour.

Tetra Alvap CT is easy to start up as well as shut down, and requires a minimum of operator attention. The evaporator is very service-friendly and hygienic, including CIP.

Tetra Pak has so far delivered more than 1 000 units to users all over the world for well over 200 different applications.



## A wide range of applications

Tetra Alvap CT is an extremely flexible evaporator. It is suitable for products with particularly stringent requirements. No other evaporator can offer so many opportunities for use – without having to compromise quality – as the Tetra Alvap CT.

### *Some typical applications*

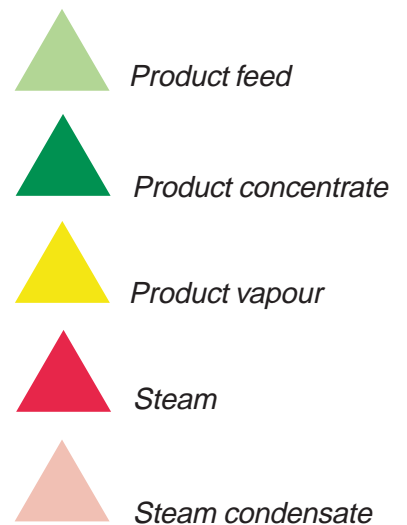
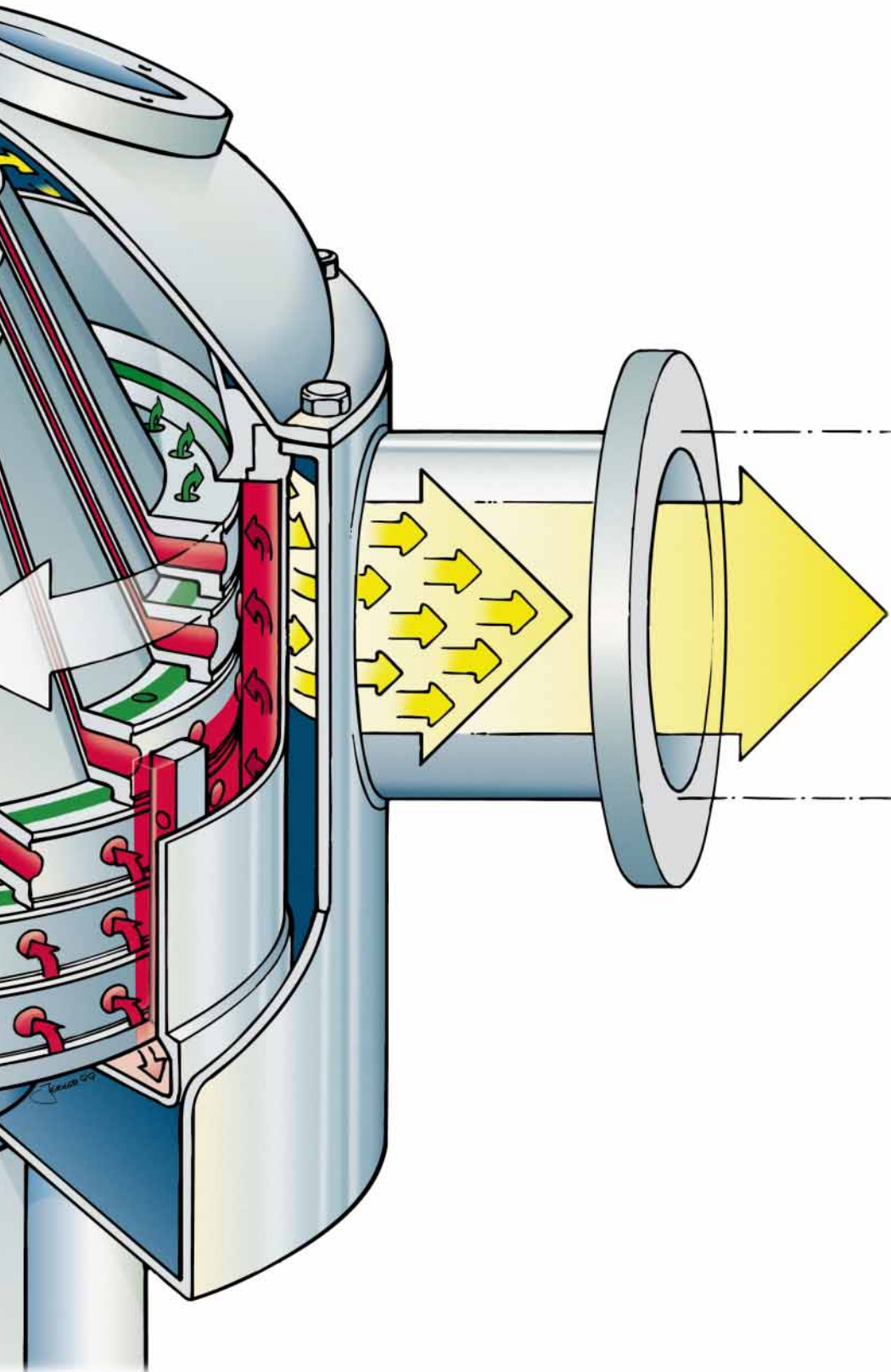
- *Fruit and berry juices*
- *Vegetable juices*
- *Coffee/tea*
- *Beer*
- *Wine*
- *Fats and oils*
- *Pharmaceuticals*
- *Herb and plant extracts*
- *Chemical products*
- *Biotechnical products*
- *Fine chemical products*
- *Organic solvents*

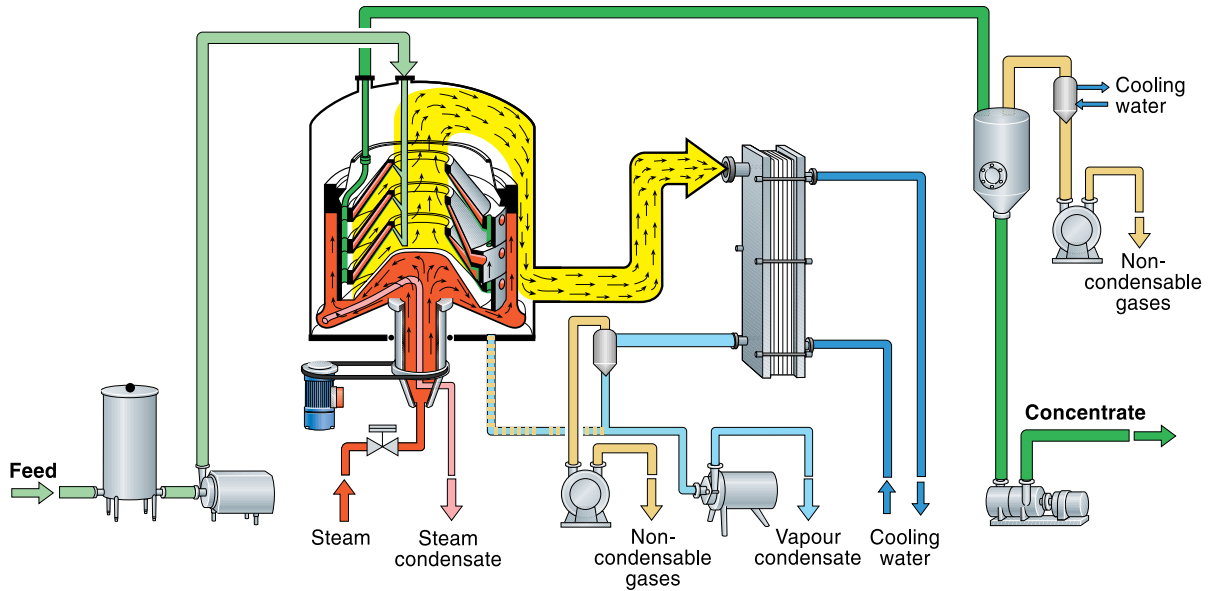
# Rapid, gentle and efficient

Due to the centrifugal force of Tetra Alvap CT the liquid feed is converted into a very thin film which is evenly spread on the heating surface of the rotating cones – resulting in a rapid, gentle and efficient treatment.

The process takes place under vacuum with a boiling temperature as low as 30-50°C. Together with the short residence time (1 sec), the low temperature ensures that the original qualities of the product are preserved.

With its high thermal efficiency the Tetra Alvap CT evaporates considerably more water per unit area than conventional evaporators. In addition, it is possible to achieve an extremely high concentration ratio of product in a single pass, not seen in any other evaporator.



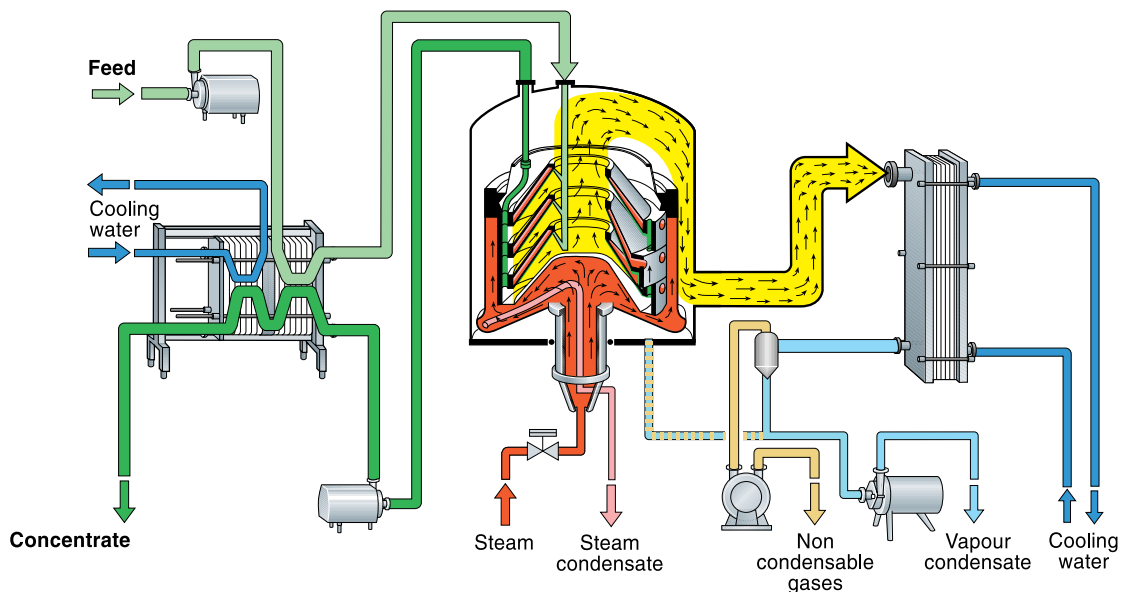


## Numerous options

Tetra Alvap CT centrifugal evaporator is a flexible system offering numerous options that can be completely customised to the demands of the individual application.

The upper flow chart includes an expansion cooler and a positive concentrate pump. The installation is suitable for viscous product concentrates, e.g. fruit juices, vegetable juices, various extracts and pharmaceutical applications.

The lower flow chart shows Tetra Alvap CT including an indirect heat exchanger and a centrifugal concentrate pump. It is suitable for non-viscous product concentrates, e.g. brewery products and wine, and also for some chemical and pharmaceutical products.





## Important user benefits

- Gentle product treatment
- Especially suitable for premium products
- High product concentration ratio in a single pass
- Low temperature and short residence time
- Versatile to suit almost any application
- Rapid start-up and shut-down
- Easy and stable operation
- Low maintenance cost
- No product losses

## Some noticeable options

- Explosion proof execution
- Choice of gasket materials
- Choice of auxiliary equipment

