## **Food Processing Plates**

The design of the Clip Plate series is based on many years of practical experience gained from what is really needed in food applications. The result is a well-balanced accommodation of all the demands imposed. A range of plates custom-designed for efficient thermal treatment of liquid food and sensitive products.

The excellent press depth and relatively few contact points provide longer operating times without interruptions.

The unique distribution pattern assures an even flow over the entire plate.

The small ports mean that the plate heat exchanger can be cleaned in place (CIP) with the same flow used in the process itself – no need for special pumps or other units.

#### Clip Standard Plate

The famous and proven Clip-Plates have a chevron pattern for

maximum strength at high working pressure. Different chevron designs are available to obtain optimal heat transfer and low pressure drop. The unique distribution area provides an even flow over the entire plate surface. The hanging system enables easy handling of the plates in the frame. The corner guidance secures a strong plate pack.

#### Clip WideStream Plate

WideStream is a plate with very few contact points, resulting in long operating times. The plate is specially developed for pasteurization of products containing pulp and fibres, such as fruit juices.

#### Clip Gemini Plate

With its double walls, Gemini combines optimal heat transfer with increased protection against the mixing of fluids.

Clip Standard Plate

Clip WideStream Plate

Clip Gemini Plate

#### The Clip-On gasket

The plates are supplied with glue-free Clip-On gaskets. These are very reliable, and at the same time, are easy to replace even with the plates still hanging in the frame. The Clip-On gasket has a roof-top design for effective sealing.

Clip-On gasket

#### 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



## Sanitary Heat Exchangers

### The Complete Line



IB68218EN 0411



## Everything you need, everywhere you need it

Alfa Laval is a world-leading supplier of heat exchangers for a wide range of sanitary applications within the food, dairy, beverage, bio-pharm and personal care industries. Our products are developed not only to meet your exacting demands for safety, efficiency and hygiene, but also to ensure the careful handling of your products.

One of the features that distinguishes us from our competitors is our breadth of application. We can supply components for all stages of your process – besides heat exchangers, our sanitary range includes valves, pumps, installation material and tank equipment.

This brochure includes the following Alfa Laval line of high-quality heat exchangers:

- Gasketed Plate Heat Exchangers
- Tubular Heat Exchangers
- Fusion-bonded Plate Heat Exchangers
- Brazed Plate Heat Exchangers
- Air Products

For more detailed technical information and specifications of our products, please refer to the relevant product sheet provided by your local Alfa Laval supplier, or to our website, www.alfalaval.com

## Gasketed Plate Heat Exchangers

Our Sanitary Heat Exchanger range is specially designed for pasteurizing and general cooling/heating of beverages, dairy, brewery and viscous products, as well as utilities. No matter which product you select, you will acquire a proven, reliable, compact and hygienic design that will carry out its tasks effectively for many years to come. Using our plate heat exchangers very high levels of product safety and cost-effective production will be achieved.

Plates are available in a wide selection of geometries and patterns for different applications. Many of the plates can also be supplied in a choice of materials – stainless steel, SMO or titanium.

The glueless Clip-On-gaskets can be replaced quickly and easily on site with the plates hanging in the frames. The food grade gaskets can be delivered in a range of materials (NBR, EPDM) for different temperatures and applications. The units are held together by sturdy, pressure graded frames with many smart, hygienic and labor-saving features. All frames offer great flexibility for expanding and rebuilding the plate heat exchangers.

#### FrontLine

This is a top-of-the-line plate heat exchanger that has "every-thing" including a superior and flexible design for easy handling and modification. FrontLine contains the famous and well-proven Clip plates and has a precision cut stainless steel frame. Both connections and plates can be supplied in alternative materials for particularly challenging food-processing tasks.

#### BaseLine

The best choice for duties in process and utilities. The costeffective frame design makes this a very competitive alternative for heating/cooling and small flow rates of pasteurizing duties. Suitable for pressures up to 10 bar (g).

#### TCG M

The TS6-M plate geometry is thermally optimized for steam condensation duties – whether for heating water or CIP solution by means of steam. It is available either with stainless steel or epoxy painted frames.





BaseLine

#### M-series

This proven workhorse offers efficient solutions for general cooling/heating duties in the sanitary industry. It is also perfect for heating and cooling service media. This model is only available with epoxy painted frames.



## **Tubular Heat Exchangers**

#### Pharma-X

The Pharma-X tube in tube heat exchanger has been developed especially to meet the need in the pharmaceutical industry where there is a requirement for a high quality sanitary heat exchanger for point of use cooling with no risk of contamination between the product and the cooling media.

There are many areas of application for the Pharma-X heat exchanger including: Point of use cooling on WFI (Water For Injection) ring mains, cooling/heating of pure water in pharmaceutical industry and cooling/heating of distilled water/WFI for processing equipment.

#### PharmaLine

Pharma-line is a high-quality shell & tube heat exchanger especially developed to meet the high hygienic demands of the pharmaceutical industry. The design of the Pharma-line makes it easy to drain and clean, and there is no risk of cross contamination associated with conventional heat exchangers.

Since the unit is so flexible, both in design, size and material, it could be used for any sanitary application with high demands, such as: point of use cooling on WFI (Water For Injection) ring mains, heating of WFI, product cooling and condensing.



# Fusion-bonded Plate Heat Exchangers

#### ΔlfaNov

AlfaNova is a completely new type of plate heat exchangers, the world 's first PHE made of 100% stainless steel. It is based on Alfa Laval's new revolutionary technology, AlfaFusion, the art of joining stainless steel components together.

Typical applications for the AlfaNova heat exchangers are heating of water or CIP solution by means of water or steam. It can also be used in general heating and cooling duties.



Fusion-bonded Plate Heat Exchangers

## **Brazed Plate Heat Exchangers**

These are the perfect heat exchangers for utilities like heating water with steam. The Alfa Laval Brazed Heat Exchangers are extremely compact. This is achieved by high heat transfer coefficients, small hold-up volumes and the use of thin materials

Instead of using gaskets, the stainless steel plates are brazed to a package with copper or nickel as the brazing material. The rectangular and compact shape and front positioned connections make the units easy to fit and install.

The thermally efficient design reduces operating costs. All parts of the brazed plate heat exchanger are made in AlSI 316 stainless steel, which guarantees a high corrosion resistance. The durable design makes it less vulnerable to vibrations and more resistant to high temperatures and pressures.



### **Air Products**

Alfa Laval offers a wide range of state-of-the-art unit coolers for cooling storage areas. A specially developed fine geometry design means compact construction and a fast defroster function. Our unit coolers can be provided with a number of options for easy adaptation to different applications – one to suit every need.

Alfa Laval also offers a range of liquid coolers and air-cooled condensers with exceptionally high heat transfer capacities, low power consumption and low noise level.



Pharma-X Heat Exchanger