



# FusionLine

## Sanitary plate heat exchanger

### Applications

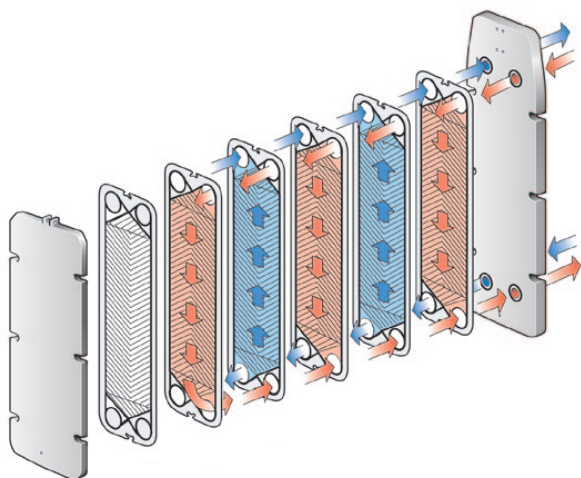
The Alfa Laval FusionLine range of sanitary heat exchangers are well suited for pasteurization and general cooling and heating of dairy, food and beverage products that contain pulp, fibers and particles. It is also ideal for processing other low to medium viscosity products.

### Working principle

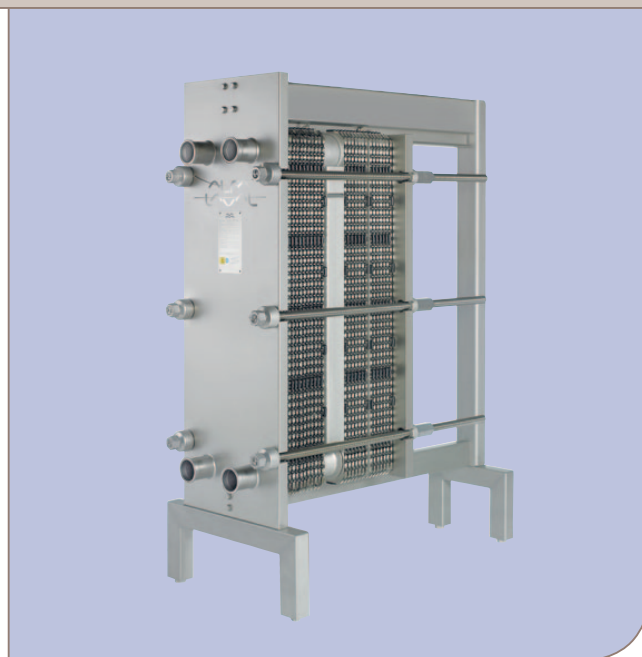
The working principle is similar to a traditional plate heat exchanger. The plate pack is obtained with a series of corrugated plate cassettes sealed using special thicker gaskets which allow a truly open channel for the whole width and length of plate. The corner ports are arranged so that the two media flow through alternate channels.

Heat is transferred through the plate between the channels, and complete counter-current flow is created for the highest possible efficiency.

The plate pack is assembled between a fixed frame plate and a movable pressure plate and is compressed by tightening bolts. The number of cassettes is determined by the flow rate, physical properties of the fluids, pressure drop and temperature program. The plate corrugations promote fluid turbulence and support the plates against differential pressure.



Flow principle of FusionLine plate heat exchanger



FusionLine

### Frame

The cassettes and the pressure plate are suspended from an upper carrying bar and located by a lower guiding bar, both of which are fixed to the supporting column. The tightening bolts are equipped with ball bearing washers in order to facilitate the opening and closing of the unit. The frame and the support column have adjustable feet. Connections may be located in the frame and pressure plates. One unit may contain several sections, separated by connection plates with interchangeable connections.

### Plates

Alfa Laval FusionLine plates are designed to meet the highest requirements in food processing. The plates have a special pattern. Every other channel is bonded to form a cassette, and every other channel is gasketed. The gasketed channels have no contact points between the plates, which allows products with pulp, fibres or particles and/or low to medium viscosity products to easily pass through. The plate design provides longer operating time without interruptions. The ports have a diameter that enable Cleaning-in-Place (CIP) using the same flow rate as the process itself.

## Gaskets

The plate cassettes are supplied with glue-free Clip-On gaskets, which are easy to replace without having to remove the plate cassettes from the frames. Gasket material promotes safe processing in connection with food and pharmaceutical products.

## Plate Types

Fusion8

## STANDARD MATERIALS

### Plates

Stainless steel AISI 316

### Gaskets

NBR-FDA, EPDM-FDA, Clip-On design

### Frame

Frame and pressure plate in cladded stainless steel. Movable nuts on the tightening bolts in chromium-plated brass. All wetted parts in acid-proof stainless steel.

## TECHNICAL DATA

### Mechanical design pressure (g) / Temperature

RM Clad in stainless steel 10 Bar/150°C (302°F)

RH Clad in stainless steel 16 Bar/150°C (302°F)

## Optional

- Thermometer pocket and nib with ventilation cock\*
- Thermometer pocket\*
- Connection for 51-mm pressure transmitter\*
- Protection sheet
- Bolt protection of stainless steel
- 3-A finish
- Extended legs
- Extra standard wrench or pneumatic tightening tool
- Test certificates and material certificates
- Testing by authorized inspection companies

\*At pass- through corners in connection plates.

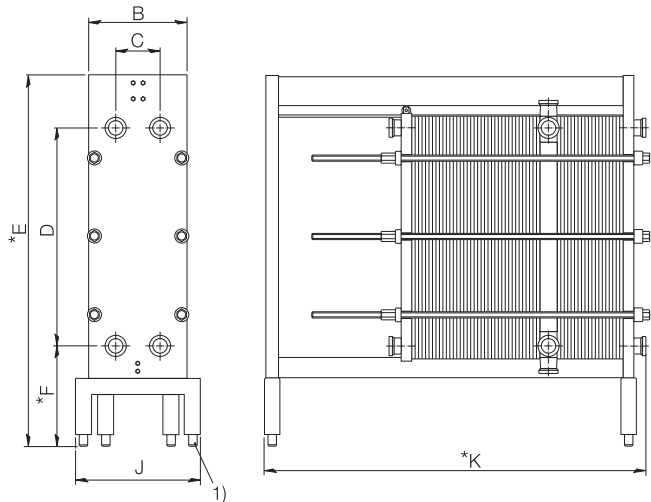
## Connections

DIN, SMS, Tri-Clamp, BS/RJT and IDF/ISO male parts.

Other connection types available upon request.

Connection	Fusion8
Diameter mm (inch)	76 (3)
Capacity l/h	
Pasteurization	20,000
Heating/cooling	35,000
Water	75,000

## Dimensions mm (inch)



1) Adjustable feet +/- 40 mm (1.57 inch).

Measurements mm / (inch)	Fusion8
B	492 (19.4)
C	220 (8.7)
D	1095 (43.1)
E*	1850 (72.8)
F*	500 (19.7)
J	670 (26.4)
K* min.	1440 (56.7)
K* max.	3860 (152)

\* Variable dimension depending on various components

Recommended free space around the unit is 1.5 m (5 ft) at sides and frame head end.

## 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](http://www.alfalaval.com)