

# Alfa Laval AQ10

## AlfaQ™ AHRI-certified plate heat exchanger

### Applications

Plate heat exchanger for general heating and cooling duties.

### Standard design

The plate heat exchanger consists of a pack of corrugated metal plates with portholes for the passage of the two fluids between which heat transfer will take place.

The plate pack is assembled between a fix frame plate and a movable pressure plate and compressed by tightening bolts. The plates are fitted with a gasket, which seals the interplate channel and directs the fluids into alternate channels. The number of plates 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.

The plate and the pressure plate are suspended from an upper carrying bar and located by a lower guiding bar, both of which are fixed to a support column.

Connections are located in the frame plate or, if either or both fluids make more than a single pass within the unit, in the frame and pressure plates.

### Typical capacities

Liquid flow rate.

Up to 350 kg/s (5600 gpm), depending on media, permitted pressure drop and temperature program.

### Plate types

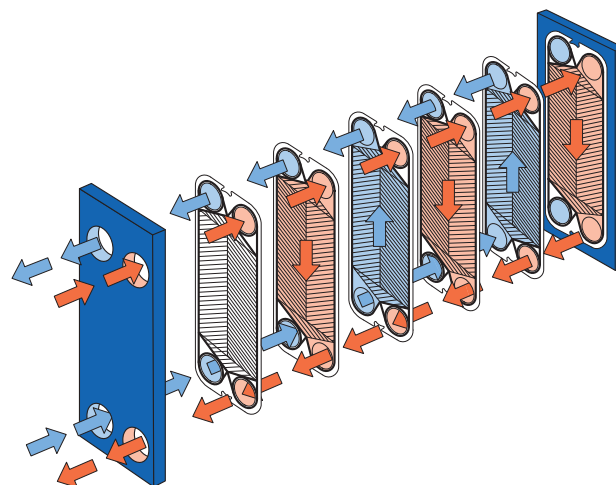
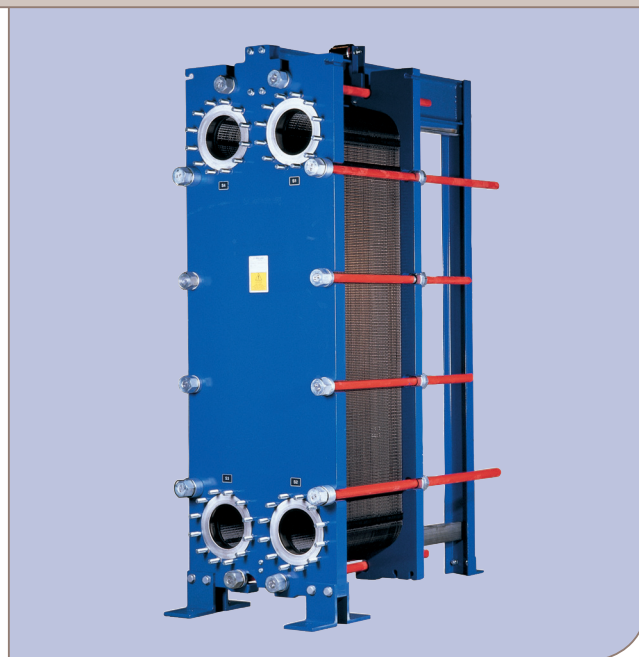
AQ10, AQ10M plates

### Frame types

FMS, FGS, FG, FD and FS

### Working principle

Channels are formed between the plates and the corner ports are arranged so that the two media flow through alternate channels. The heat is transferred through the plate between the channels, and complete counter-current flow is created for highest possible efficiency. The corrugation of the plates provides the passage between the plates, supports each plate against the adjacent one and enhances the turbulence, resulting in efficient heat transfer.



Flow principle of a plate heat exchanger

### По вопросам продаж и поддержки обращайтесь:

Архангельск (8182)63-90-72  
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Эл. почта: [afm@nt-rt.ru](mailto:afm@nt-rt.ru) || Сайт: <http://alfa-laval.nt-rt.ru>

## STANDARD MATERIALS

### Frame plate

Mild steel, Epoxy painted

### Nozzles

Carbon steel

Metal lined: Stainless steel, Titanium, Alloy C276, Rubber lined: Nitrile, EPDM

### Plates

Stainless steel Alloy 316, Alloy C276, Alloy 254 SMO or Titanium Other grades and material available on request.

### Gaskets

Nitrile, EPDM or Viton

Other grades and material available on request.

## TECHNICAL DATA

### Pressure vessel codes PED, ASME, pvcALS™

#### Mechanical design pressure (g) / temperature

FMS PED, pvcALS™	1.0 MPa / 180°C
FGS PED, pvcALS™	1.6 MPa / 180°C
FGS ASME	150 psig / 350°F
FG PED, pvcALS™	1.6 MPa / 200°C
FG ASME	150 psig / 350°F
FD PED, pvcALS™	2.5 MPa / 210°C
FD ASME	300 psig / 350°F
FS ASME	400 psig / 350°F

### Connections

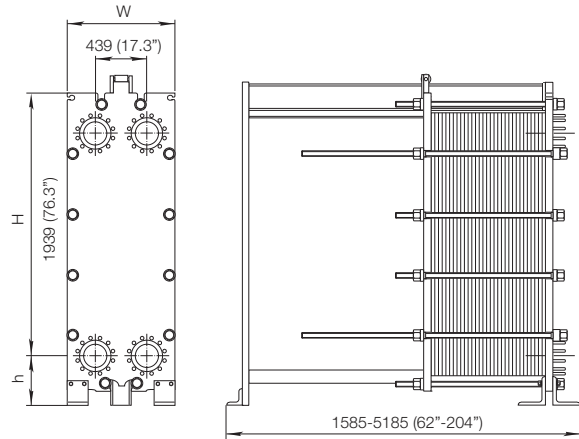
Size: DN200 / DN250 / NPS 8 / NPS 10 / 200A / 250A

FMS PED	EN 1092-1 PN10, ASME B16.5 Class 150
FMS pvcALS™	EN 1092-1 PN10, ASME B16.5 Class 150, JIS B2220 10K
FGS PED	EN 1092-1 PN16, ASME B16.5 Class 150
FGS pvcALS™	EN 1092-1 PN16, ASME B16.5 Class 150, JIS B2220 10K, JIS B2220 16K
FGS ASME	ASME B16.5 Class 150
FG PED	EN 1092-1 PN16, ASME B16.5 Class 150
FG pvcALS™	EN 1092-1 PN16, ASME B16.5 Class 150, JIS B2220 10K, JIS B2220 16K
FG ASME	ASME B16.5 Class 150
FD PED	EN 1092-1 PN25, ASME B16.5 Class 300
FD pvcALS™	EN 1092-1 PN25, ASME B16.5 Class 300, JIS B2220 20K
FD ASME	ASME B16.5 Class 300
FS ASME	ASME B16.5 Class 400

### Maximum heat transfer surface

940 m<sup>2</sup> (10000 sq. ft)

## Dimensions



## Measurements mm (inch)

Type	H	W	h
AQ10-FMS	2595 (102")	920 (36.2")	325 (12.8")
AQ10-FGS	2595 (102")	920 (36.2")	325 (12.8")
AQ10-FG	max 3103 (122.2")	920 (36.2")	435 (17.1")
AQ10-FD	max 3103 (122.2")	940 (37")	435 (17.1")
AQ10-FS	max 3103 (122.2")	940 (37")	435 (17.1")

The number of tightening bolts may vary depending on the pressure rating

## Particulars required for quotation

- Flow rates or heat load
- Temperature program
- Physical properties of liquids in question (if not water)
- Desired working pressure
- Maximum permitted pressure drop
- Available steam pressure

The thermal performance is third party certified through the AHRI Liquid to Liquid Heat Exchangers certification program



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